

WeldOffice® Software

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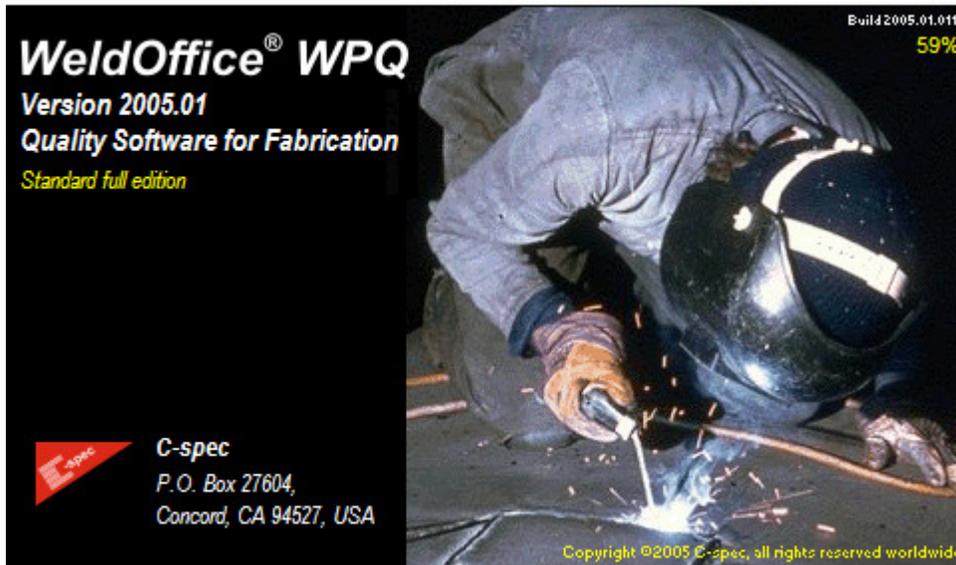
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1 About the WeldOffice® Software

Information about the programs

1.1 WeldOffice® WPQ Module



Qualifying and managing welders is an essential and expensive part of the QA system for any fabricator. It follows that the documentation associated with the welder performance qualifications should be up-to-date and well organized.

Scope

WeldOffice® WPQ is designed to manage welder performance qualifications (WPQs) and welder maintenance logs (WMLs). The data which can be stored within WeldOffice® WPQ are based on the most commonly used codes, including EN 287, ASME IX and AWS D 1.1. All of the variables associated with welding processes can be stored. The layout of the documents on screen and when printed have been designed specifically to allow the storage of multi-process documents and to allow these document layouts to be modified dynamically by the system depending on the process or processes being used. In addition, WeldOffice® WPQ can be customized to suit other layouts, such as recommended by other National and International Standards, or internal company standards.

Features and Benefits

WeldOffice® WPQ Checks the Code:

The most important aspects of managing WPQs are consistency and accuracy. While the user generates a WPQ, WeldOffice® WPQ's code checking makes sure the document complies with ASME IX, AWS D1.1, or EN 287. By supplying information straight out of the code, WeldOffice® WPQ keeps the user from having to search through the code for requirements, interpret the code and risk making a mistake, and it keeps the user from having to retype the information.

Generates Welder Performance Qualification (WPQ) automatically:

WeldOffice® WPQ generates ranges of approval automatically as the user enters the test details, reducing their work in referencing the codes.

Please note that the rules used by the software to interpret the codes are derived from the experience C-spec engineers in interpreting the codes. They are not official interpretations, which can only be obtained from the standards body or bodies in question. Individual auditors and inspectors may disagree with the code rules built into the software, so the software allows the user to manually override the information generated by the code logic.

WeldOffice® WPQ Minimizes Typing:

The software has several features that are designed to reduce the amount of information the user needs to enter manually. As well as generating documents automatically, most fields have drop-down menus so the user can select data from a list instead of having to type the same information many times. You can customize these drop-down menus while filling out a form. Also included is a Custom notes database. Any notes that are used more than once can be stored in this database and reused on other records without retyping.

Universal Form:

WeldOffice® WPQ was designed from ground up taking into consideration the needs of organizations dealing with multiple codes and standards. In the real world, piping and other pressure retaining components are usually supported by structures that have different design requirements as well as different qualification requirements. With the universal WeldOffice® WPQ forms, there is no need to keep separate formats for qualifications to ASME IX or AWS D1.1 or EN 287. The universal WeldOffice® WPQ forms contain all ASME Section IX, AWS D1.1 and EN 287 essential variables and test requirements. However, based on the code selection, only the applicable items are displayed dynamically on the screen and printed on the forms.

Welder Photographs:

WeldOffice® WPQ has the facility to include welders' photographs on WPQs. Once a welders photograph has been entered, each time the user creates a WPQ for that welder, the photograph is automatically imported.

1.2 WeldOffice® WPS Module



Scope

Developing and qualifying welding procedures is an essential and expensive part of the QA system for any fabricator. It follows that the documentation associated with the welding procedures and procedure qualification records should be up-to-date and well organized.

WeldOffice® WPS is designed to manage WPS, PQRs and Welding data collection sheets (PQRDs). The format of the screens which are used for data entry and viewing, and the hardcopy printouts, are based on the layout recommended by the most commonly used codes, including ASME IX, EN 288, and AWS D1.1. All of the variables associated with welding processes can be stored. In addition, *WeldOffice® WPS* can be easily customized to suit other layouts, such as recommended by National and International Standards, or internal company standards.

The most important aspects of writing procedures are consistency and accuracy. While the user writes a WPS/ PQR, *WeldOffice® WPS's* Code Checking makes sure the document complies with ASME IX, AWS D1.1, or EN 288. Additionally, by supplying information straight out of the code, *WeldOffice® WPS* keeps the user from having to search through the code for requirements, interpret the code and risk making a mistake, and it keeps the user from having to retype the information.

Generates Welding Procedure Specification (WPS) Automatically

WeldOffice® WPS uses a new code-intelligent weld test data collection sheet (PQRD) to provide the user with directions and to allow the user to record the exact parameters used, pass by pass, during the procedure qualification test.

WeldOffice® WPS can then write the procedure qualification record (PQR), and can also generate a welding procedure specification (WPS) directly from one PQR, multiple PQRs, or multiple welding procedures. The use of the PQR-D is entirely optional, however this invaluable tool will keep track of the entire qualification history, including material traceability.

Minimizes Typing

WeldOffice® WPS has several features that are designed to reduce the amount of information entered. As well as generating documents automatically, most fields have drop down menus so the user can select data from a list instead of having to type the same information many times. The user can customize these drop down menus while filling out a form. Also included is a Custom notes database. Any notes that are used more than once can be stored in this database and reused on another record without retyping.

Universal Form

WeldOffice® WPS was designed from ground up taking into consideration the needs of organizations dealing with multiple codes and standards. In the real world, piping and other pressure retaining components are usually supported by structures that have different design requirements as well as different qualification requirements. With the universal *WeldOffice® WPS* forms, there is no need to keep separate formats for qualifications to ASME IX or AWS D1.1. The universal *WeldOffice® WPS* forms contain all ASME Section IX as well as AWS D1.1 essential variables and test requirements. However, based on the code selection, only the applicable items are displayed dynamically on the screen and printed on the forms. The European EN287 welder certificate remains identical to the required EN287 format.

Joint Details

WeldOffice® WPS has a database of standard pre-drawn joint sketches for the user to select and edit to their requirements rather than draw their own. Alternatively, they can draw or import their own pictures and add them to the database for later use. For all of your drawing and editing needs, *WeldOffice® WPS* will integrate any OLE- compliant graphics/drawing program of the users choice.

Flexibility

WeldOffice® WPS has been designed to meet a wide variety of needs. Most users will find *WeldOffice® WPS* has more built-in features and functionality than they can possibly need. However, if the user requires additional power, features and functionality, the system is flexible enough to allow for customization to suit their exact needs. The system can be customized to include document layouts, links to other databases, 'intelligent' data generation routines, etc...

1.3 Features of Both Programs

Filler Metal and Base Metal Databases:

WeldOffice® WPQ and WPS include filler metal and base metal databases. The fully searchable databases for filler metals and base metals have over 4,000 code classified materials. With the powerful searching, sorting, and filter functions designed in our databases, finding the information needed is fast and easy even if given only minimal information about the materials being used. Once the filler metal or base metal is found, WeldOffice® WPQ and WPS will put all of the information straight onto the forms, such as:

- * P-numbers
- * S-numbers
- * Group numbers
- * F-numbers
- * A-numbers

Nominal pipe size, pipe schedule, diameters and wall thickness can also be automatically selected from the applicable tables with a single mouse click.

Turbo-IX and Turbo-INT:

WeldOffice® WPQ and WPS feature direct access to Turbo-IX. This allows the user to access the actual ASME Section IX code requirements, base metal and weld filler metal tables and all other Turbo-IX and Turbo-INT features in one click of the mouse button. (Turbo-IX and/or Turbo-INT are optional modules and must be installed in the system for these features to be active.)

“Why would I want Turbo-IX?” Because you need to justify why you did what you did, or what WeldOffice® WPQ or WPS did. Turbo-IX identifies and displays the actual code requirements and provides code justifications. WeldOffice® WPQ and WPS only applies the rules, and it does so transparently to the user. The two programs complement each other and provide you with unprecedented and unmatched computing power.

1.4 Hardware and Software

WeldOffice® Software requires Microsoft Windows 95, 98, NT, 2000 or XP.

2 Getting Started

2.1 Opening a WeldOffice® Software Program

There are two ways to open a WeldOffice® Software Program:

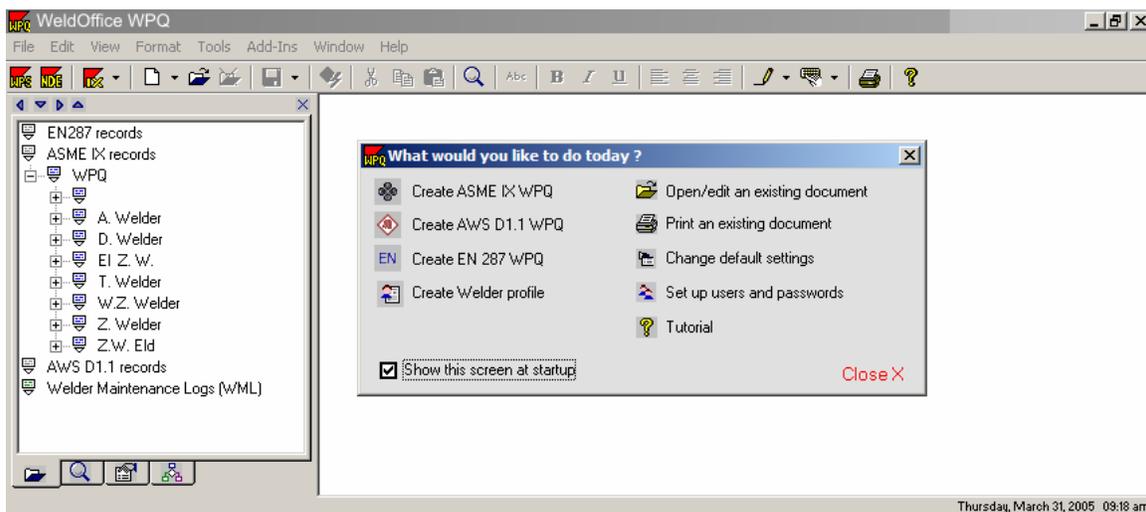
1. From the Desktop:



- A. From the desktop, double click on any **WeldOffice®** icon
- B. The WeldOffice® program will open.

2. From the Start Menu:

- A. Click **Start** in the lower left-hand corner of desktop.
- B. Click on **Programs**
- C. Click on **Weld Office®**
- D. Click on any **WeldOffice®** program
- E. The WeldOffice® program will open



Opening screen of WeldOffice® WPO

2.2 Demo Mode

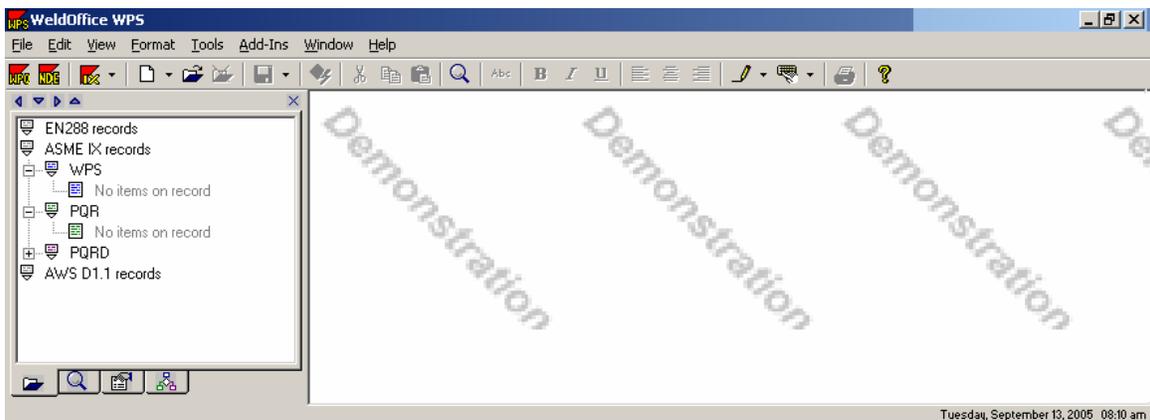
WeldOffice® Programs are available for download directly from the Internet, from C-spec's web-site (www.cspec.com) in 'demo' mode. However, there are restrictions on the use of the programs in demo mode:

- A maximum of five documents can be created.
- The tables of base materials and filler materials are significantly reduced.
- Any printouts will have a "demo copy" watermark.

To obtain the Registration Code(s) for full use of the WeldOffice® Programs, see the following section called "Registering WeldOffice®".

"How do I know if I have a demo version or a full version?"

In the demo mode, the screen will have demo watermarked across it, as shown below.

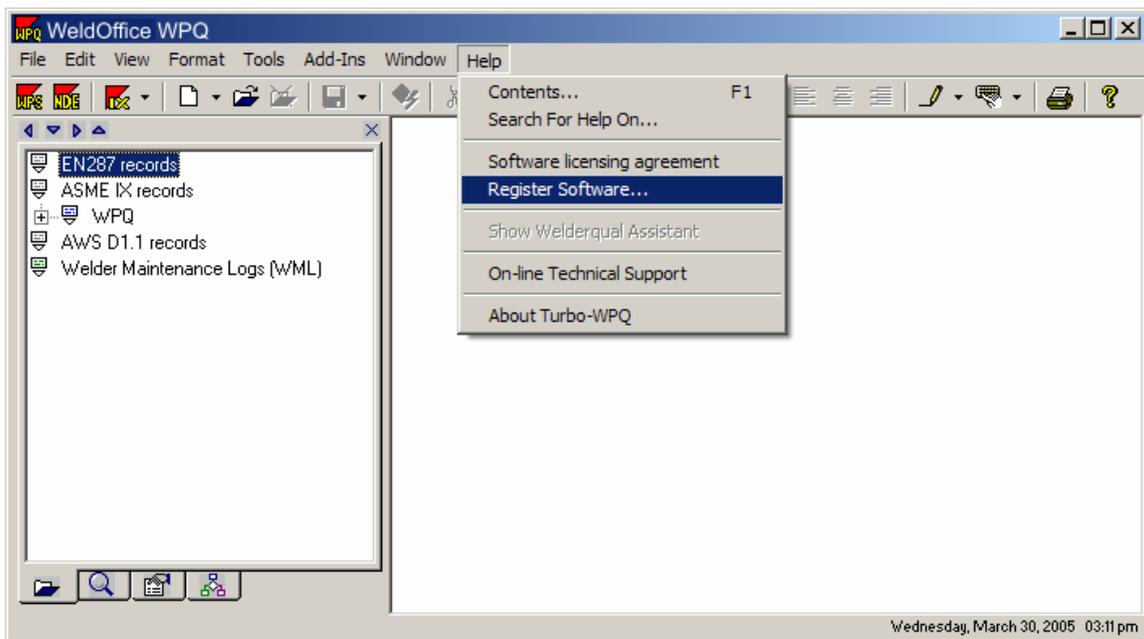


2.3 Registering WeldOffice® Programs for full use

To obtain the Registration Code(s) for full use of the *WeldOffice*® Programs, follow the steps below:

Note: All applicable Serial Numbers will be needed before being able to obtain the registration codes. After obtaining the serial numbers, start each in demo mode and generate the required License Codes to copy and paste into the REGISTRATION CODES REQUEST FORM below or simply email to registration@cspec.com. Technical support personnel will process your request and email the Registration Code(s).

1. Open a **WeldOffice**® program.
2. Click on **Help**.
3. Click on **Register Software**.

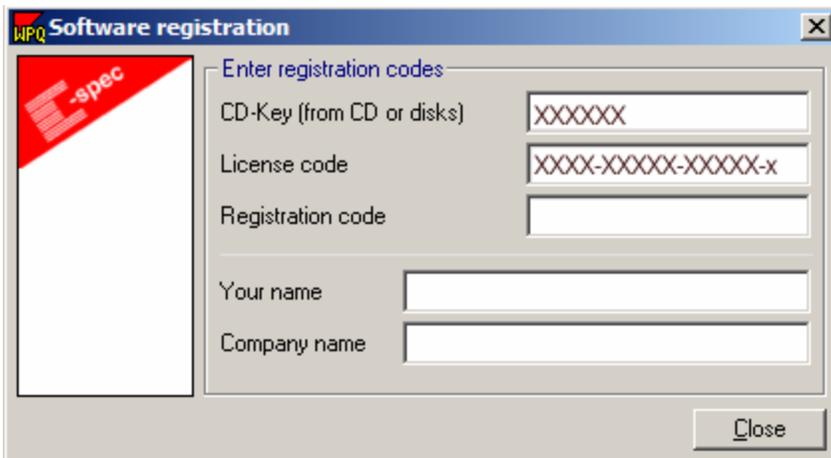


4. Type in the CD-key or Serial Number and press the *ENTER* key (This will be given to the user at the time of purchase)

(NOTE: Using the arrow keys or using the tab key to move to the next box will **not** generate the License code needed, the user must push the **enter key** on their keyboard.)



5. A License Code will be generated by your system, which is computer specific.



6. Copy and paste the CD-key/Serial Number and the License Code into the Product Registration Form, as shown below,
<http://cspec.com/registration/csp-rc.htm> or paste both codes into an email to:
registration@cspec.com.
(If you purchased multiple products, do this for each product)

7. Technical support personnel will process your request and will email you the Registration Code(s), usually within 30 minutes.

8. Copy and paste this registration code into the registration window and press the enter button. (The computer will let you know if the code is correct. If it is not correct please check for extra spaces or double dashes and try again. If the registration still fails, contact C-spec technical support at **registration@cspec.com**.)

9. Type in the user and company name to finish the registration process.

Note: The user must obtain all applicable Serial Numbers or CD-keys before they will be able to complete and submit this request form. After they obtain the serial numbers, start each in demo mode and generate the required License Codes to copy and paste into the REGISTRATION CODES REQUEST FORM below or simply email C-spec the serial number and license code.

REGISTRATION CODES REQUEST FORM

<http://cspec.com/registration/csp-rc.htm>

REGISTRATION CODES REQUEST FORM		
PRODUCT	CD-Key or Serial Number (vendor supplied)	License Code (generated by user's system)
WeldOffice® WPS	<input type="text"/>	<input type="text"/>
WeldOffice® WPQ	<input type="text"/>	<input type="text"/>
WeldOffice® NDE	<input type="text"/>	<input type="text"/>
Turbo-IX	<input type="text"/>	<input type="text"/>
Turbo-FMC	<input type="text"/>	<input type="text"/>
Turbo-INT	<input type="text"/>	<input type="text"/>
Turbo-INT Modules purchased: <input type="checkbox"/> A - Section I,II,IV,V,VII,X,B31.1/3 <input type="checkbox"/> B - Section III <input type="checkbox"/> C - Section VIII <input type="checkbox"/> D - Section IX <input type="checkbox"/> E - Section XI		Please make sure that the Serial Numbers used to determine the License Codes match the product(s) to which they were originally assigned. Registration Codes will not be issued if the serial number does not match the product.
Complete this form and click Submit Request or complete, print and fax this form to 925-889-4490		<h3>USER INFORMATION</h3> <p>*First Name <input type="text"/></p> <p>*Last Name/Surname <input type="text"/></p> <p>*Company <input type="text"/></p> <p>Address <input type="text"/></p> <p>City/Town <input type="text"/></p> <p>State/Province <input type="text"/></p> <p>Zip/Postal Code <input type="text"/></p> <p>Country <input type="text"/></p> <p>*E-Mail <input type="text"/></p> <p>Phone <input type="text"/></p> <p>Fax <input type="text"/></p> <p>*Proof of Purchase (e.g. Purchase Order or Invoice no.) <input type="text"/></p> <p>Comments <input type="text"/></p>
<p>Technical support personnel will process this request and provide all eligible customers with the Registration Code by email.</p> <p>Technical Support:</p> <p>C-spec Technical Support +1-888-673-9777 toll free +1-925-385-2110 voice +1-925-889-4490 fax contact us</p>		<p><input type="button" value="Reset"/> <input type="button" value="Submit Request"/></p>

2.4 Setting Up the WeldOffice® Programs

The WeldOffice® Programs have been designed to be as flexible as possible to meet a range of requirements and industry practices. However, the user can configure the system to suit their individual requirements. Although a number of parameters can be set up 'on-the fly', for maximum efficiency these should be set up before entering any qualifications or records.

The following parameters can be configured:

- 1. Program Directories**
 - Setup the links to where the data is stored.
- 2. Security Settings**
 - Set up users, passwords, access rights and electronic signatures
- 3. Default settings**
 - Default code and units of measurement
 - Electronic signatures and password activity
 - Document print set-up, the use and justification of logos and page numbering
- 4. Selection lists**
 - Define the items listed in reports and search managers to help the user customize various screens and reports
- 5. Amend Menus**
 - Add, edit or delete the contents of drop-down menus
- 6. Notepad**
 - Add, edit or delete shortcuts to the users commonly used notes
- 7. Keywords**
 - Set up shortcuts to keywords/definitions that are commonly used

2.4.1 Program Directories

Specifying the program directories

WeldOffice® Programs allow the user to define where they want to store the welding document data, the contents of the drop-down menus and the details of each *WeldOffice®* user profile. This allows the user to operate the *WeldOffice® Programs* either on a stand-alone computer, or as a multi-user system on a local area network (LAN).

When the *WeldOffice® Program* was installed, the installation software prompted the installer to enter the directory path for the program. If the installer accepted the recommendation of the installation software, this was set to c:\Program Files\WeldOffice. As a default, the database files are kept in a directory called

'records' (i.e. C:\Program Files\WeldOffice\WPS\Records), the contents of the drop-down menus are kept in a directory called 'menus' (i.e. C:\Program Files\WeldOffice\Common\Menus) and the users profile settings are held in a directory call 'settings' (i.e. C:\Program Files\WeldOffice\Common\Settings).

If the user wants to change the directories for a *WeldOffice*[®] Program or use it in multi-user mode over a LAN, they can change the data, menu and configuration directories as follows :

1. From the WeldOffice[®] Program main page, click on **Tools** and then **Options** to open the options window. Click on the first tab called **Directories**.

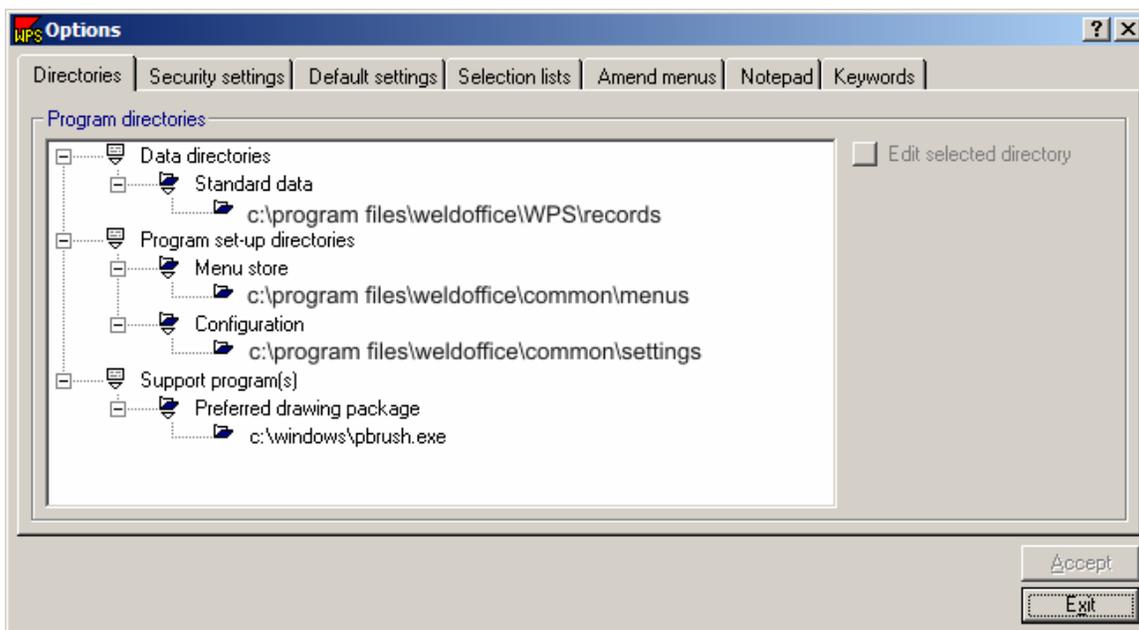
Three database directories will be listed: Standard Data, Menu Store and Configuration.

Standard Data is the path to the user's main record database.

Menu Store is the path to the user's custom drop down menus.

Configuration is the path to the user's profile settings.

The three databases **MUST** be shared by all users when the software is to be shared on a network.



WPS Main Screen/Tools/Options screen showing the directories.

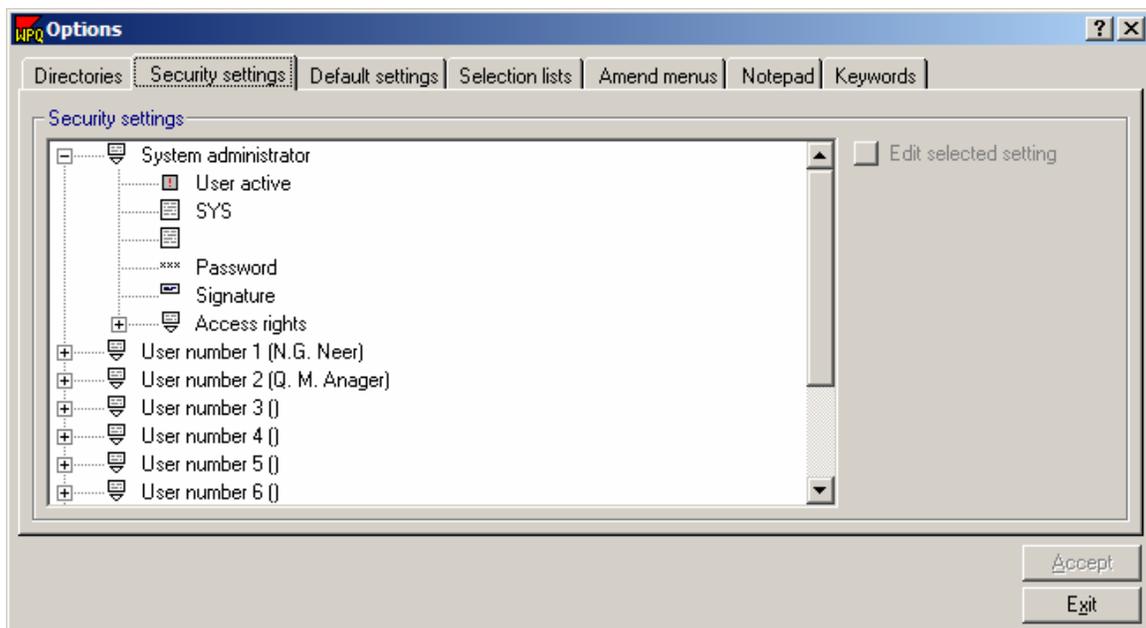
2. Click on any directory listed.
3. Click on the **Edit selected directory** button and, using the standard Windows directory selection dialog, select a directory path. For multi-users over a LAN system, select a directory path to which all users should have **FULL** access from their computers.
4. Repeat steps 2 and 3 for the other files to ensure all users are set up in the same way.
5. Click **Accept**, before moving on, otherwise the changes will be lost.

2.4.2 Setting up Users

Specify the user details and security access

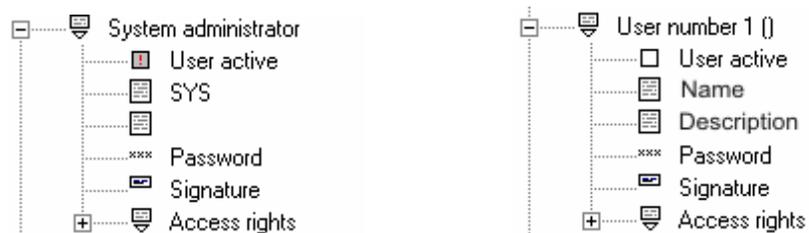
The security settings tab holds all of the details of each user that has access to the WeldOffice® software. With a new installation, one user profile is already established for the System Administrator or SYS. This is a profile that holds the highest level of security clearance, allowing the ability to make critical changes to system settings that no other user may change. The person(s) given access to the Administrator Password should be selected appropriately.

From the WeldOffice® Program main page, click on **Tools** and then **Options** to open the options window. Click on the second tab called **Security Settings**.



WPQ Main Screen/Tools/Options screen showing the Security settings.

The security settings tab lists the settings for each user. To look at the settings for the System Administrator or any other user, make sure the box to the left of the title has a minus sign in it. This means that the user is looking at all the items listed under the System Administrator or user. There are 6 fields that need to be filled out for each user and these are described below.



2.4.2.1 User Active

The system administrator must be active at all times, so the user will not be able to change this setting for the administrator. For any other user, place a red "x" in the User Active box to activate the user. Click on "User active" to toggle the box between blank and having an "x" inside.

User active System Administrator - the system administrator will always have an exclamation mark in the box showing that it is active and can not be modified.

User active User **not** active

User active User is active

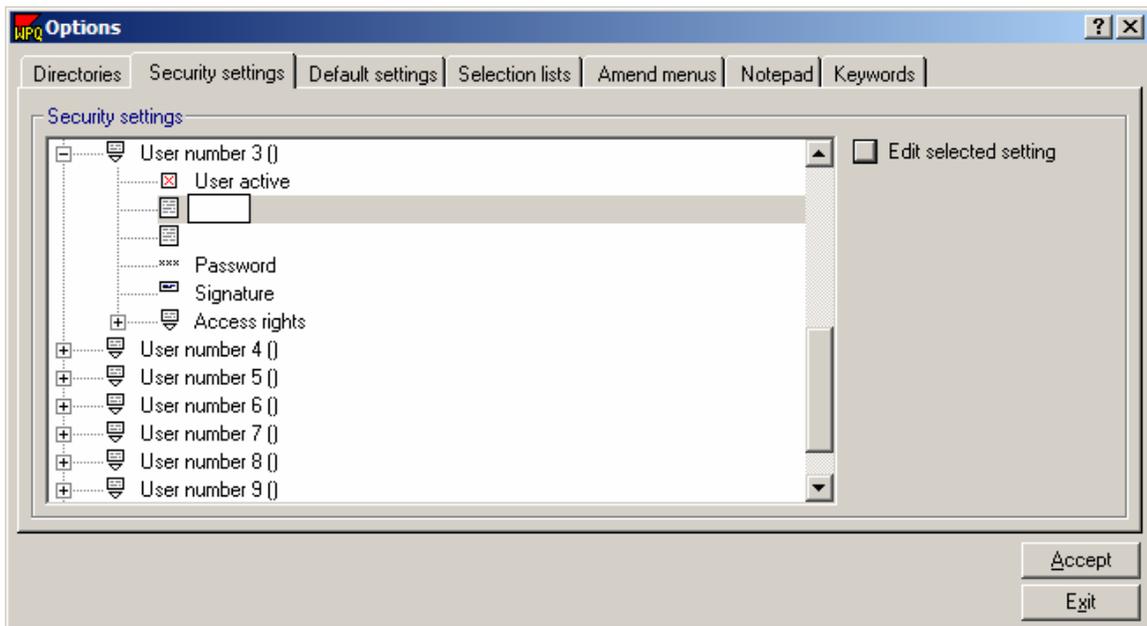
2.4.2.2 Name Field

The second setting is the user name. For the system administrator it is SYS by default and for all other users it is left blank until filled out. This is usually a personal name and is used when starting the software to tell the WeldOffice® Program who is using the program.

To change the name:

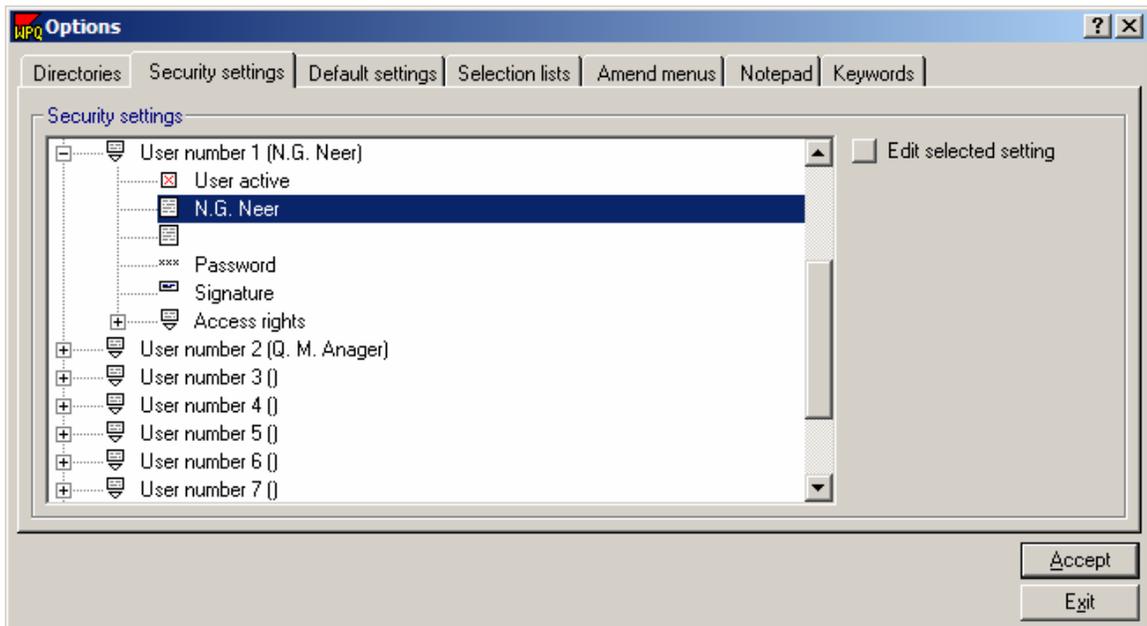
1. Click on the **Name field** (second box down for each user).
2. Click on the **Edit selected setting** button.

3. A blank field will open with the cursor inside allowing the user to type the name.



4. When finished typing the name, click on another field.

5. To make changes to the name, follow steps 1-4.



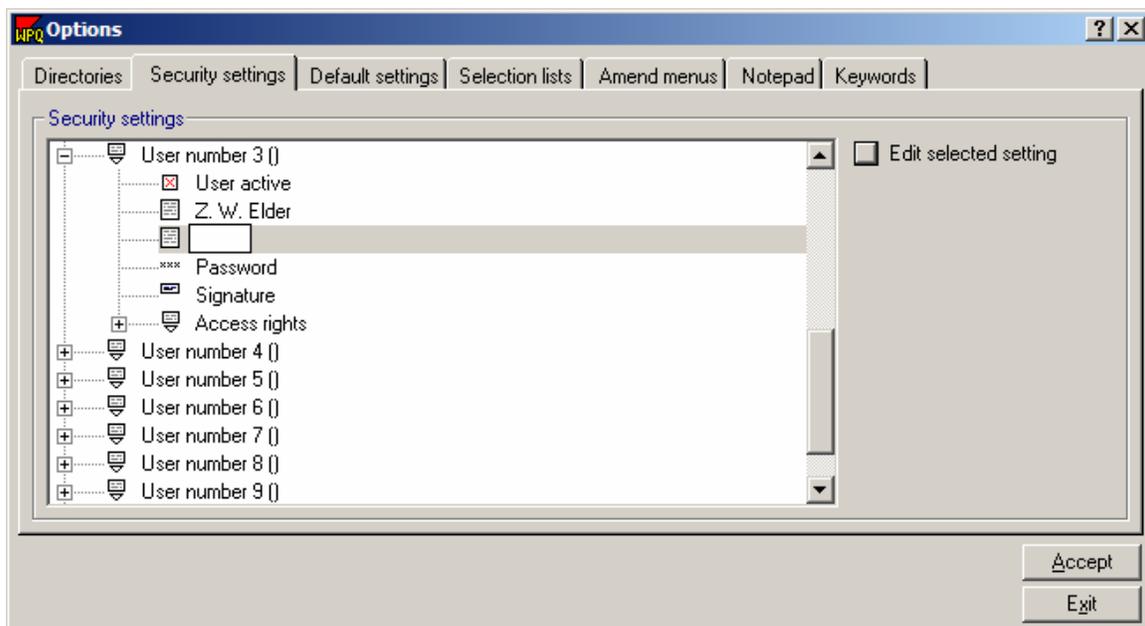
Screen capture showing the name of User 1

2.4.2.3 Description Field

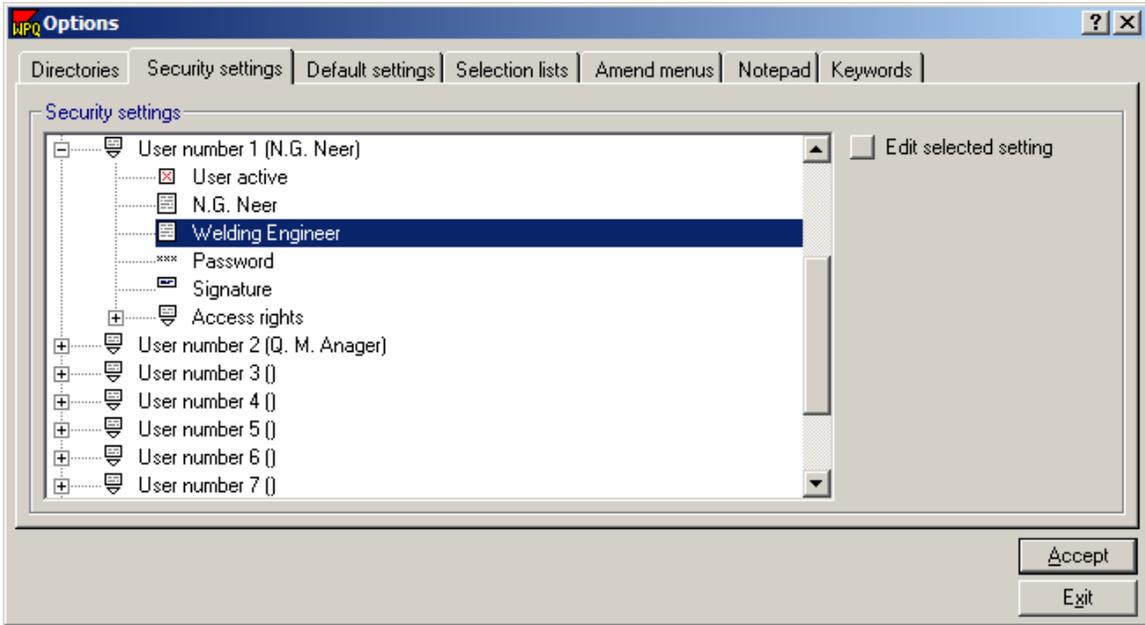
This is a longer description of the user. It is usually used for a Job description (e.g. Welding engineer).

To change the description:

1. Click on the **Description field** (third box down)
2. Click on the **Edit selected setting** button.
3. A blank field will open with the cursor inside allowing the user to type the description.



4. When finished typing the description, click on another field.
5. To make changes to the description, follow steps 1-4.



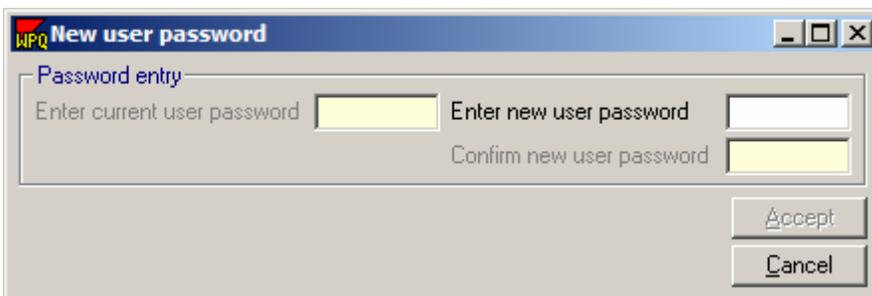
Screen capture showing the description of User 1

2.4.2.4 Password Field

The password for each user would normally be set by that user, but the System administrator can also set all passwords.

To change or set the password:

1. Click on the **Password field** (fourth selection in the list)
2. Click on the **Edit selected setting** button .
3. A New User Password screen will open.



4. Enter the current password, then press **Enter**.
(If this is the initial setup, there is no existing password, the cursor will default to the Enter new user password box.)

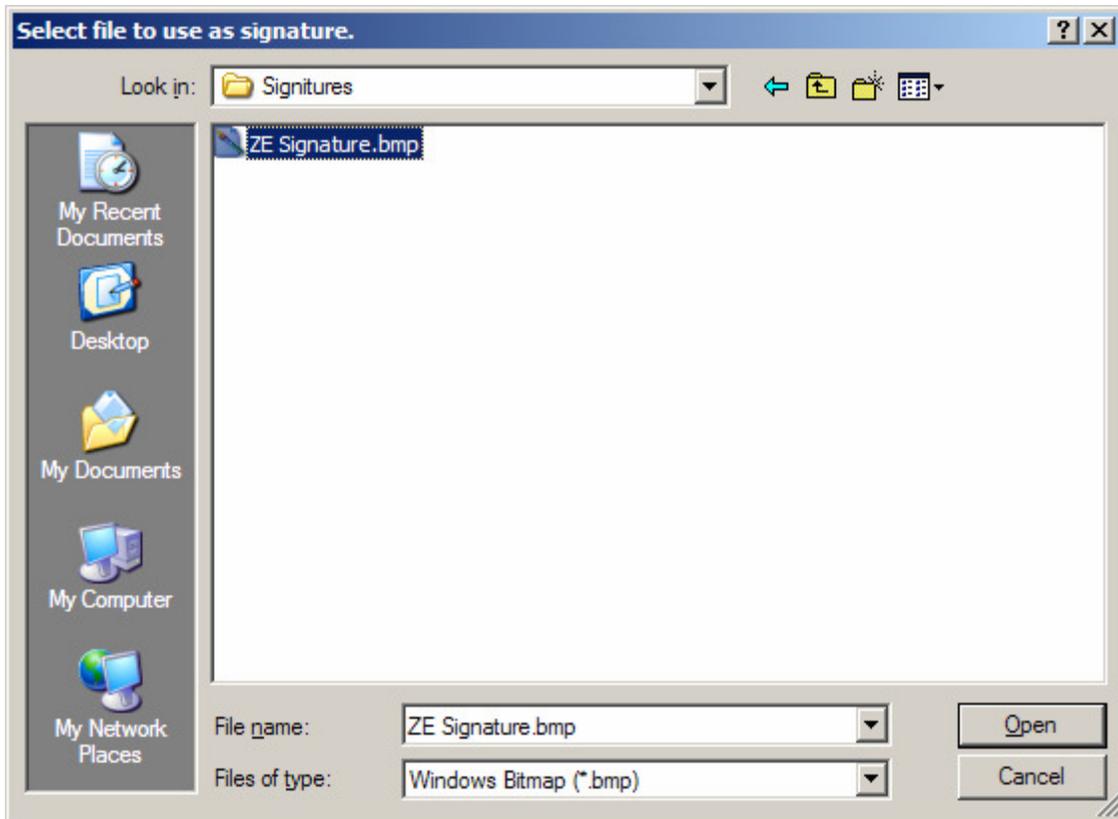
5. Type the new password into the Enter new user password field, and then press **Enter**.
6. Press **Enter** when finished typing the password the first time to be taken to the Confirm new user screen where the user will type the password in again.
7. When finished typing the password the second time, press **Enter**, and then click on the Accept button.
8. To make changes to the password, follow steps 1-7.

2.4.2.5 Signature Field

The WeldOffice® Programs feature optional use of electronic signatures. Bitmaps of each user's signature can be stored in the WeldOffice® database, and on the click of a mouse button can be added to documents on screen, or on printed forms. Providing users are managed properly and passwords are maintained responsibly, it is only possible to put the current user's signature on a document. Consequently this facility is equally or more secure than a written signature.

To assign or change a signature bitmap:

1. Click on the **Signature field** (fifth box down)
2. Click on the **Edit selected setting** button .
3. A *Select file to use as signature* screen will open.



4. Specify the path and filename of the relevant signature bmp (bitmap) file and then click on **Open**.
5. This will take the user back to the options screen and display the signature image in the preview pane.
6. Click **Accept** when finished.

2.4.2.6 Access Rights Field

This section determines whether a given user has read or write access (note that read or write access is global, not specific to certain documents) and which signature boxes the user is able to sign. Only the system administrator is able to change access rights.

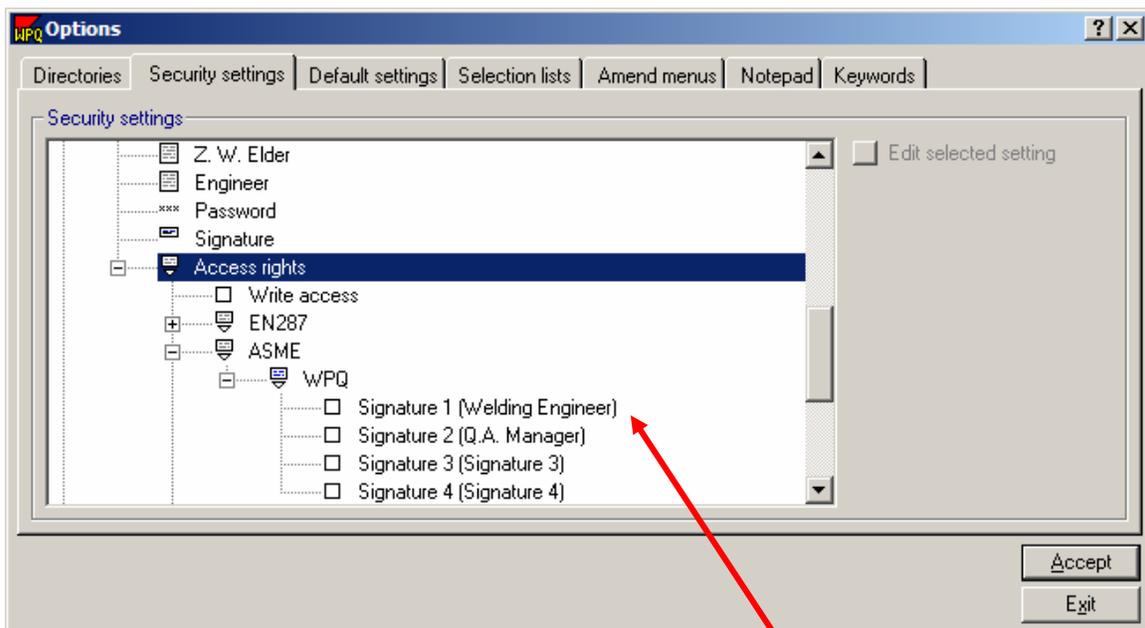
Note that It is possible for a user not to have write access but still have the ability to sign records.

Read and write access is assigned simply by clicking in the Write access check box. Write access is signified by the presence of a red 'X' in the box. Click **Accept** before moving to another field.

Signature box access is assigned per signature box, per record. This is so users can have access to only certain boxes on certain documents.

To assign a user signature rights as the Welding Engineer, follow the steps below:

1. Click on **Access rights**.
2. Click on the report to assign access rights to.
3. Click on the **Signature 1 (Welding Engineer)** to switch to an "x" in box which means the user has access.
4. Click on the **Accept** button when finished.



To change the titles of the signature fields listed under each record, see the section under the specific program (WPS or WPQ) titled, 'Default settings- Form settings (3.1.4 for WPQ and 4.2.4 for WPS).

2.4.3 Default Settings

Specifying the program default settings

There are four main sections to the default settings for any WeldOffice® program:

- Program Wide Settings
- Initial Record Settings
- Printing/Screen Defaults
- Forms Settings

1. Click on **Tools** and then **Options** to open the options window. Click on the third tab called **Default Settings**.
2. Click on a setting to edit.
3. Depending on how the setting is set up, there are a couple of ways to change the setting.

A. Once the setting is highlighted, then Click on the *Edit selected setting* button  *Edit selected setting* if it is illuminated. Or

B. It is simply a check box, and clicking on the setting will toggle between a red "x" in the box (meaning that the setting is on or active) and a blank box (meaning that the setting is not on or not-active). For example:

Use selected company banner , the company banner will be displayed.

Or

C. It is a toggle switch between a number of choices. For instance:



There are three choices for the "Company logo justification". By clicking on right justify, the red circle would move to that option, but one of the options must have the red circle in front of it.

The default settings for each program are described in later sections under each program.

Default Settings for WeldOffice® WPQ (Section 3.1)

Default Settings for WeldOffice® WPS (Section 4.2)

2.4.4 Selection Lists

Specifying the fields displayed in the reports and lists

The selection lists tab in the Options is used to specify which fields will appear on various reports and lists in the WeldOffice® software. These include:

- **Record Selection List:** The "manager" window that appears when selecting a record to open, delete, print, export, etc.
- **Main Summary Form:** The form that prints when creating a summary of one or more records.
- **Search list:** The fields available to search upon when using the Record Search Manager.
- **Summary Card List:** The wallet-sized summary form that prints when creating a Summary Card.
- **Qualification reports contents (WPQ program):** The items that are included on qualification reports for individual welders.
or
- **Welder instruction sheet (WPS Program):** The printout of basic WPS details that can be provided to the welder.

Details on how to change the selection lists for each program are listed in the following sections:

WPQ selection lists (section 3.2)

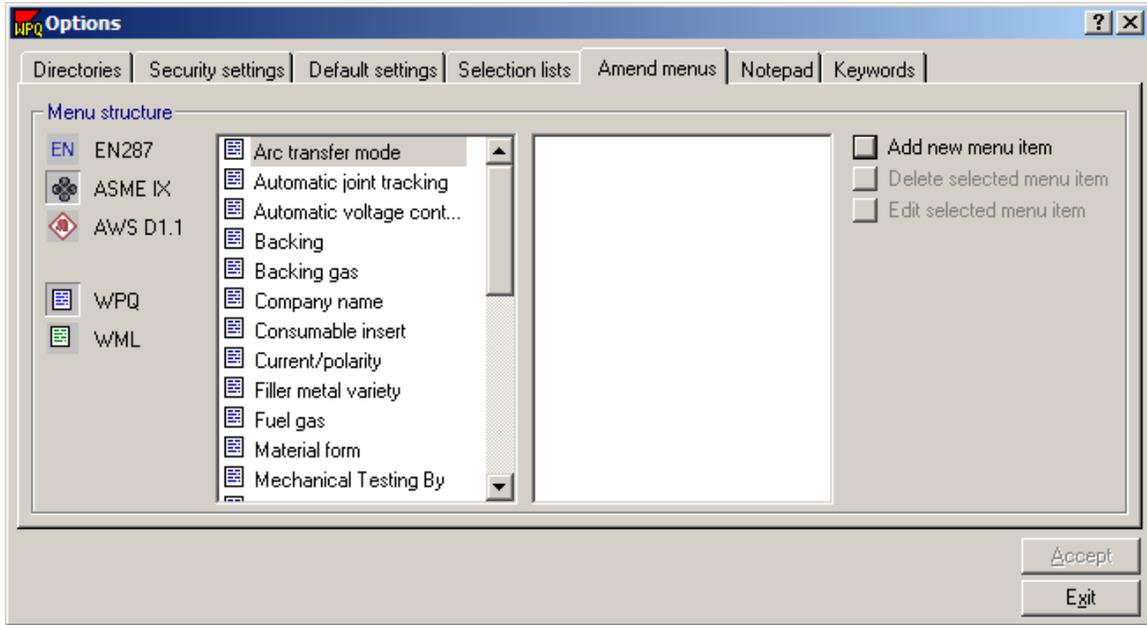
WPS selection lists (section 4.3)

2.4.5 Amend Menus

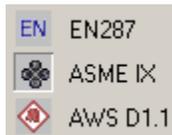
Change the content of the drop down menus

The Amend Menus tab allows modification of the content that users add to any drop down menu available on all WeldOffice® forms.

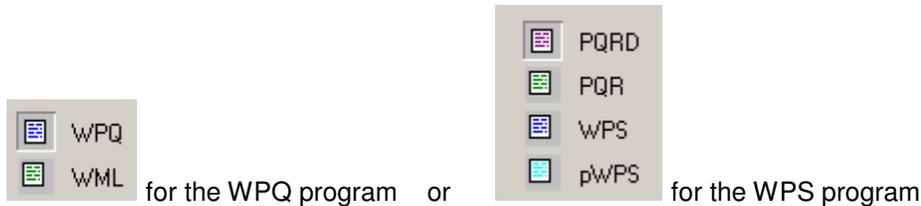
1. Click on **Tools** and then **Options** to open the Options window. Click on the fifth tab called **Amend Menus**.



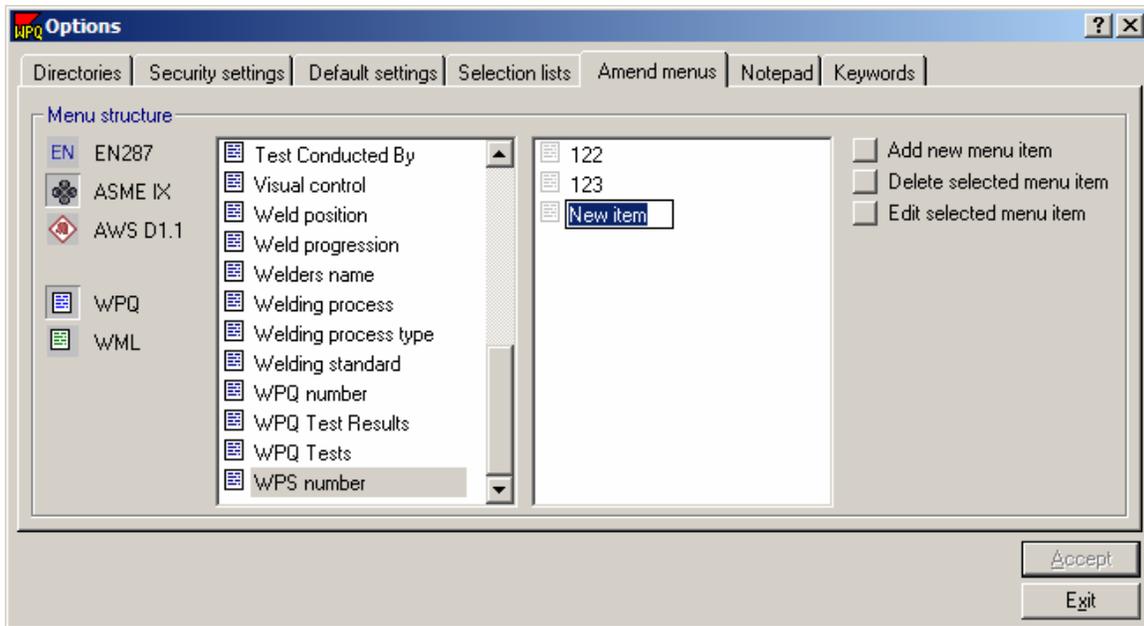
2. For each available report, a specific list of menu fields will appear. First select the applicable code.



3. Then select the applicable record type.



4. With a specific record type selected, all fields will appear that have user definable drop down menus. Select one of the fields to make changes to its menu content. For instance WPS Number.



5. If there is any content of that field that has been defined by the user, they will appear in the right hand window. To edit or delete an item click on that item and then select **Edit selected item** or **Delete selected item**.

6. To add an item click on **Add new item**.

7. This opens a New Item text in the right hand window. Type the item that the user would like to appear in the drop down menu. For instance: 124

8. Click **Exit** when finished.

9. When the user opens a new WPQ, in the drop down menu for WPS number, they will see the numbers shown added, as shown below.

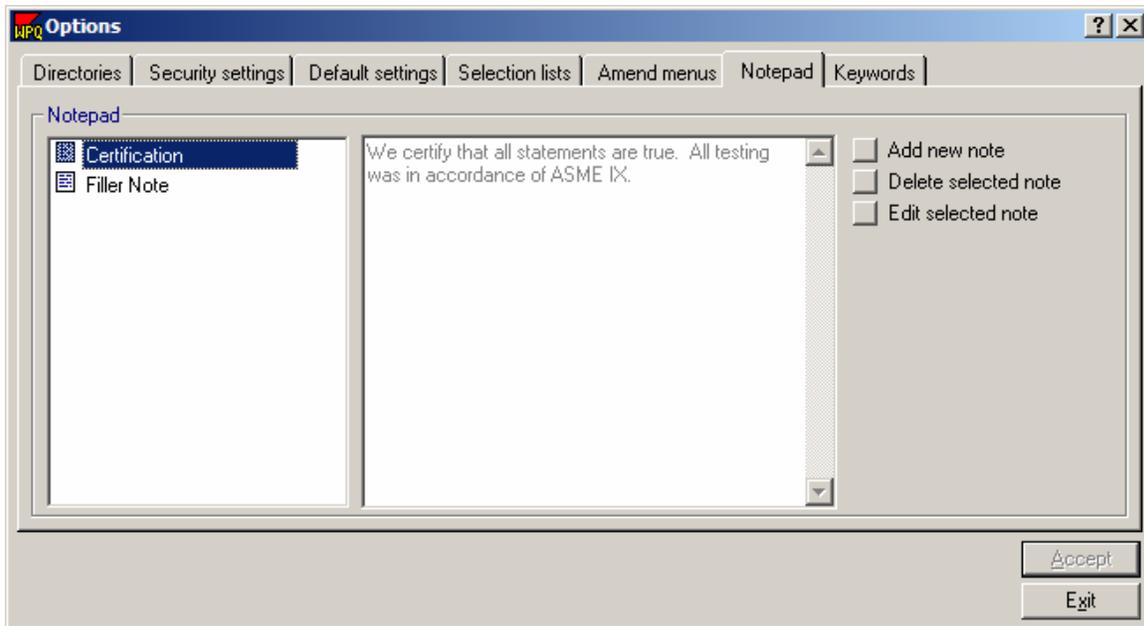
The screenshot shows a software window titled 'Welder Performance Qualification' with a sub-tab 'Additional information'. The header area contains a logo placeholder 'YOUR LOGO HERE', the company name 'C-spec', and contact information: 'P.O. Box 27604, Concord, California 94527, +1-877-977-7999'. Below this is the title 'Welder Performance Qualification (WPQ)' and 'C-spec WeldOffice® Software'. The main form area is divided into several sections: 'Welder's name', 'ID Number', 'Date of birth', 'Stamp number', 'Company name', and 'Division' are on the left; 'Welder's picture' is a large empty box in the center; 'Test date' is set to '4/6/2005'; 'WPQ record number', 'Standard test no.', and 'WPS record number' are on the right, with 'Rev.' fields next to the last two. A 'Qualification code' dropdown menu is open, showing options '122', '123', and '124', with '123' selected.

2.4.6 Notepad

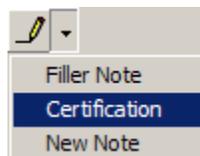
Specifying the content of the Notepad database

The WeldOffice® software allows the user to store typical notes eliminating the need to produce these items more than once. A typical note may be instructions for cleaning strategies for different metals or standard statements on welder approval requirements.

1. To access the Notepad database, click on **Tools** and then **Options** to open the options window. Click on the sixth tab called **Notepad**. (Another way to access the notepad is to click on the pencil icon  on the toolbar)



2. To add a new note, click on **Add new note**.
3. Type in the name of the note. This will be seen in the drop down menu on the main screen of the WeldOffice® Program.
4. Then click over to the right hand side window and type the contents of the note.
5. To edit or delete a note, select the note and then click **Delete selected note** or **Edit selected note**.
6. When all of the desired changes have been made, press the **Accept** button.
7. To access the notepad, click on the drop down arrow next to the pencil icon  and then click on the note to be inserted. The note selected will be inserted wherever the cursor was located in the document before clicking on the note to insert.

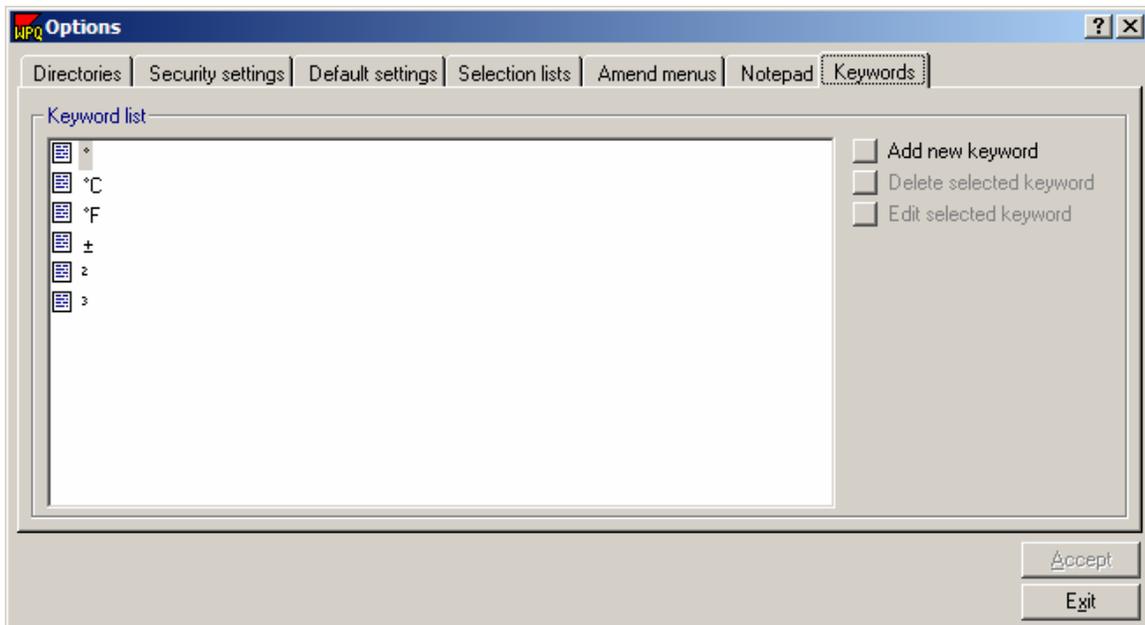


2.4.7 Keywords

Specifying the content of the keywords database

The WeldOffice® software allows the user to store hard to find characters eliminating the need to produce these items more than once.

1. To access the Keywords database, click on **Tools** and then **Options** to open the options window. Click on the seventh tab called **Keywords**. (Another way to access the notepad is to click on the keyboard icon  on the toolbar)

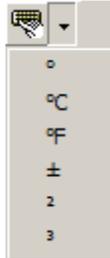


2. To add a new keyword, click on the **Add new keyword** icon.
3. Enter the new keyword or character by using the Windows paste feature or by pressing the appropriate ASCII character code.

For more information on ASCII Characters, look up [Character Map](#) in the Windows help system.

4. To edit or delete a keyword, select the keyword by clicking on it and then click **Delete selected keyword** or **Edit selected keyword**.
5. When all of the desired changes have been made, press the **Accept** button.

6. To access the keyword list, click on the drop down arrow next to the keyword icon  and then select a keyword listed. The keyword will be inserted where the cursor is in the report.



3 Using WeldOffice® WPQ

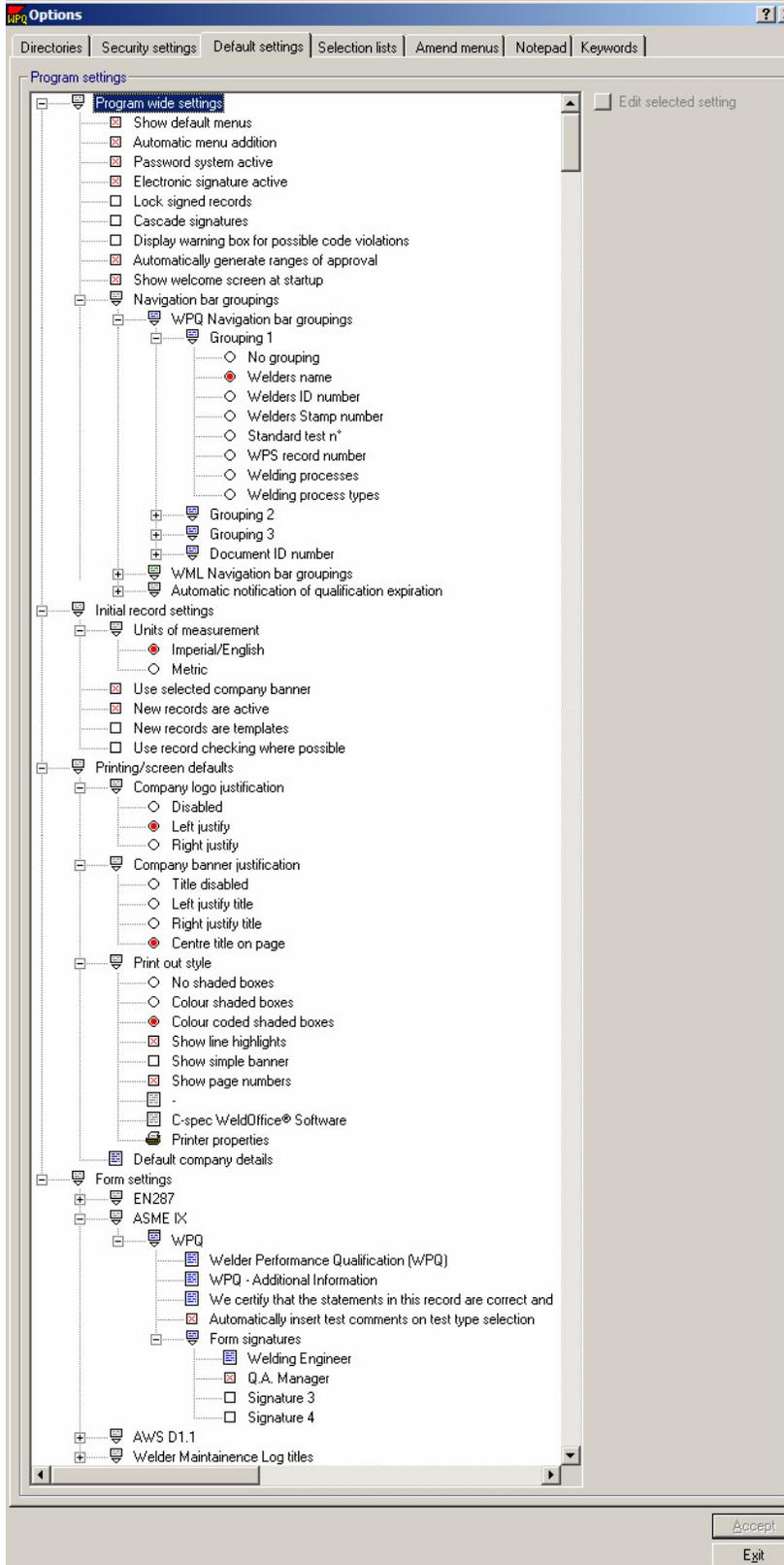
3.1 Default Settings

The functionality of the Default settings tab was described in an earlier section of this manual. This section goes into detail about each item under the default settings tab. The figure shown below, highlights the number of customizing options that are available.

The main sections of the WPQ default settings are:

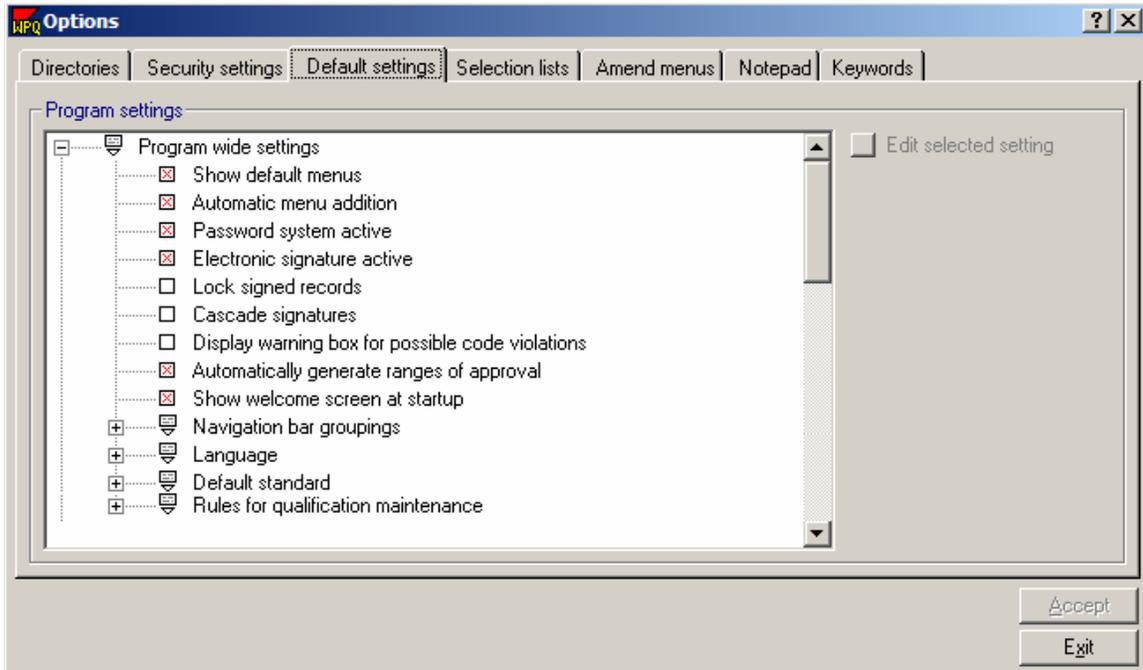
- Program Wide Settings**
- Initial record settings**
- Printing/Screen defaults**
- Form Settings**

These main sections will be discussed below.



3.1.1 Program Wide Settings

The *Program wide settings* under *Default settings* can be used to set up defaults throughout the WeldOffice® WPQ program.



The headings under Program wide settings are:

1. Show Default menus
2. Automatic menu addition
3. Password system active
4. Electronic signature active
5. Lock signed records
6. Cascade signatures (Hierarchy of signatures)
7. Display warning box for possible code violations
8. Automatically generate ranges of approval
9. Show welcome screen at startup
10. Navigation bar groupings
11. Language
12. Choose a default code/standard
13. Rules for qualification maintenance

Each topic will be described below.

3.1.1.1 Show Default Menus

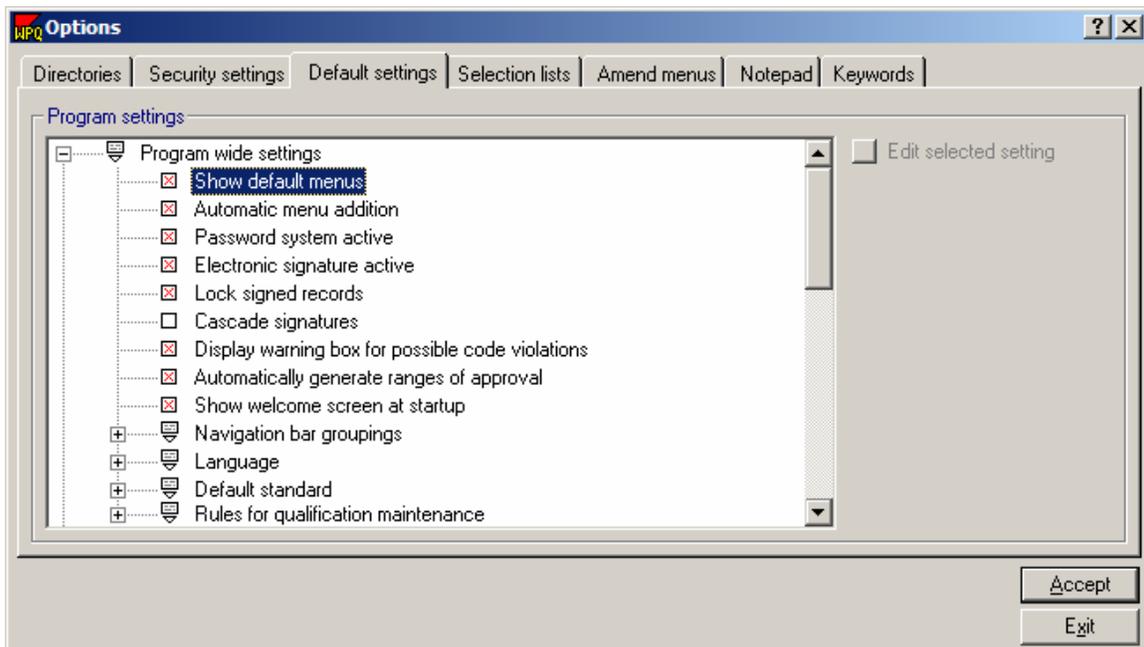
Specify drop down menus

WeldOffice® WPQ is supplied with a set of default drop-down menus for many variables. Whenever the user is entering data into a WPQ document, the system displays a drop-down list for all variables with an associated menu. WeldOffice® WPQ allows the user to add items to all these menus, but it distinguishes between the default menus supplied with the software and those the user have added. This is so that upgrades to the software do not overwrite the items added by the user.

We recommend that the user always use the default menus and the default terminology whenever possible as the code rules built into the software rely on using consistent terminology. This is particularly important for variables such as welding process(es) or joint type, as a large number of code rules depend on these variables.

However, if the user does not want to take advantage of the code rules built into the software, they can use their own drop-down menus.

This option is used to turn off the default menus, so only the items the user has added are displayed.



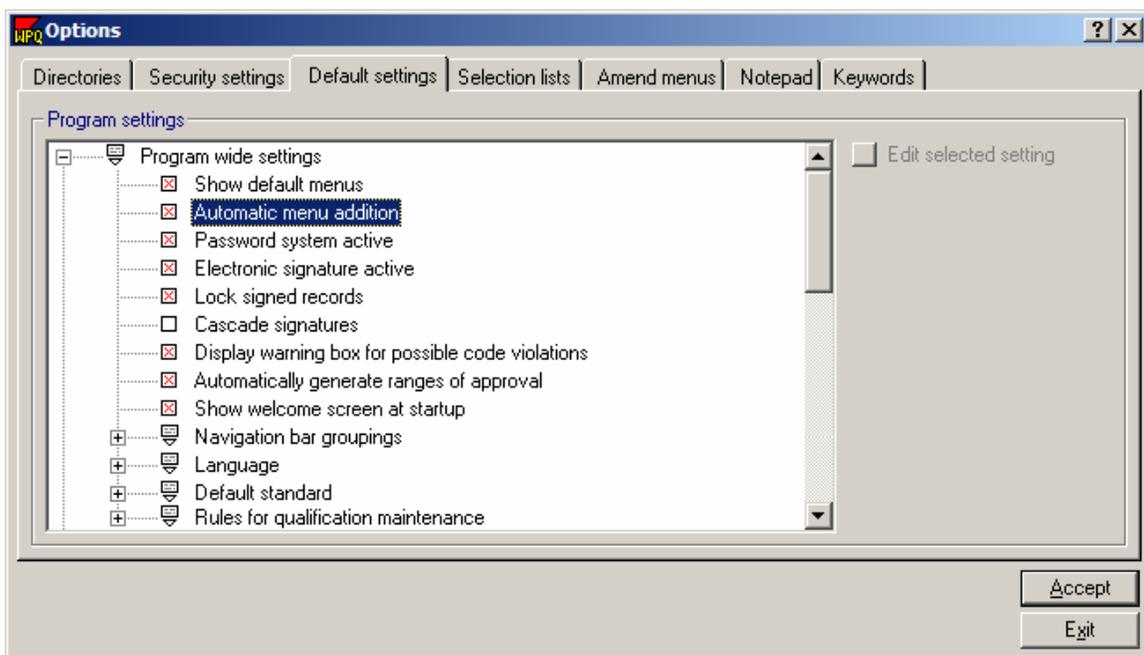
Click on **Show default menus** (or the box in front of the text) to toggle this option on or off. A red 'X' in the box signifies the item is on (i.e. the default menus are displayed).

3.1.1.2 Automatic Menu Addition

Add additional items to the drop down menus

Almost all of the variable boxes which have drop-down menus, allow the user to type their own value into the box. If set to on, this option will automatically ask the user if they want to add the new item to the menu, if the value typed is not already present in the menu. For consistency of data entry, we recommend that the default drop-down menus and variables be used wherever possible.

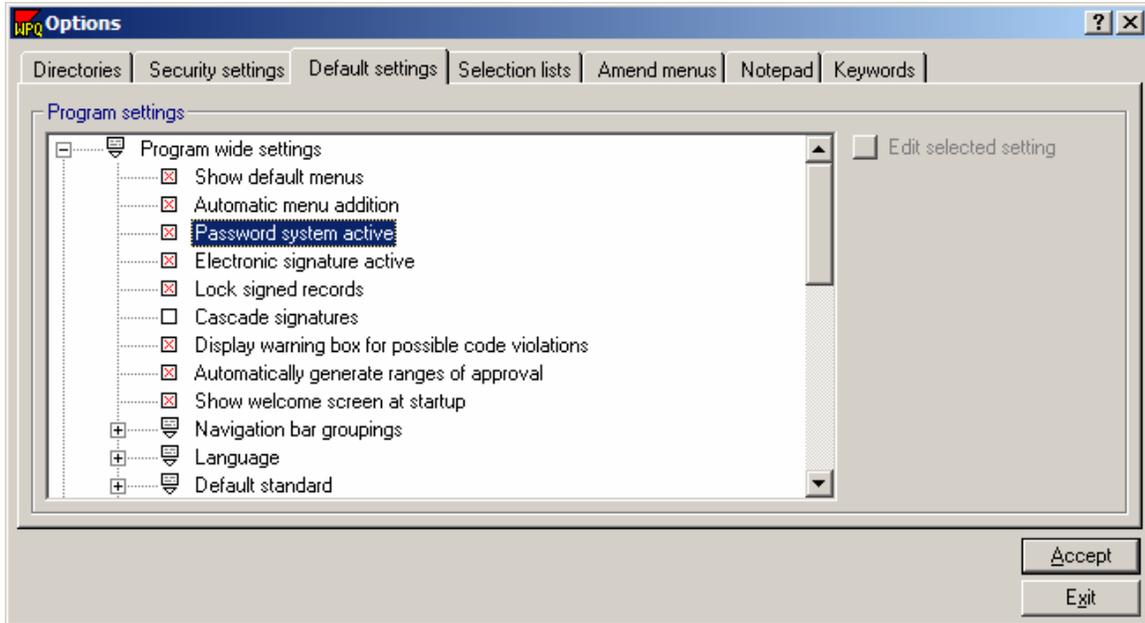
Click on **Automatic Menu addition** or the box to toggle this option on or off. A red 'X' in the box signifies that this setting is on and that the user will be prompted to add the new item that was just typed to the drop down menus.



3.1.1.3 Password System Active

Allows only authorized personnel to sign documents

WeldOffice®WPQ features a sophisticated security system, which allows the user to use electronic signatures to verify and authorize documents. This system relies on the use of passwords to verify that only authorized personnel can sign documents. Only the System Administrator can change this setting.



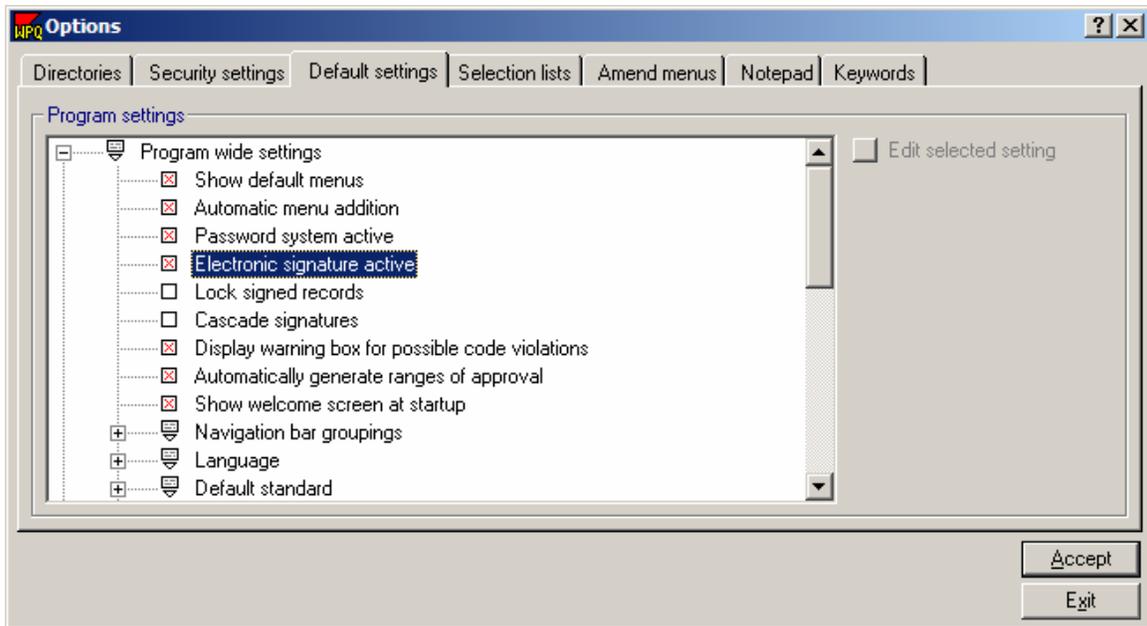
If the user does not need to have a sophisticated password system, they can turn the system off. To toggle this option on or off, click on **Password system active** or in the box in front of the text. A red 'X' signifies that this setting is on.

3.1.1.4 Electronic Signature Active

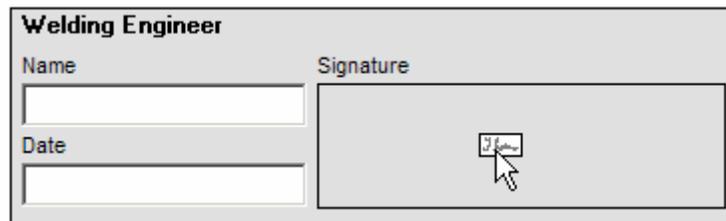
Inputs a signature by clicking in the signature box

The user can turn off the electronic signature facilities if there is no need for this feature. If this option is turned off, the user will not be able to electronically sign a document simply by clicking in the signature box.

If this option is turned on, the user can sign documents by clicking in the signature box. Note that a 'signed' document does not have to have a bitmap signature. A signed document (which can optionally be locked) simply has a name in the box entitled 'Name' at the bottom of the document. See the section of *Security Settings/Signature (2.4.2.5)* to select a bitmap of a Signature to be automatically imported upon clicking in the Signature box.



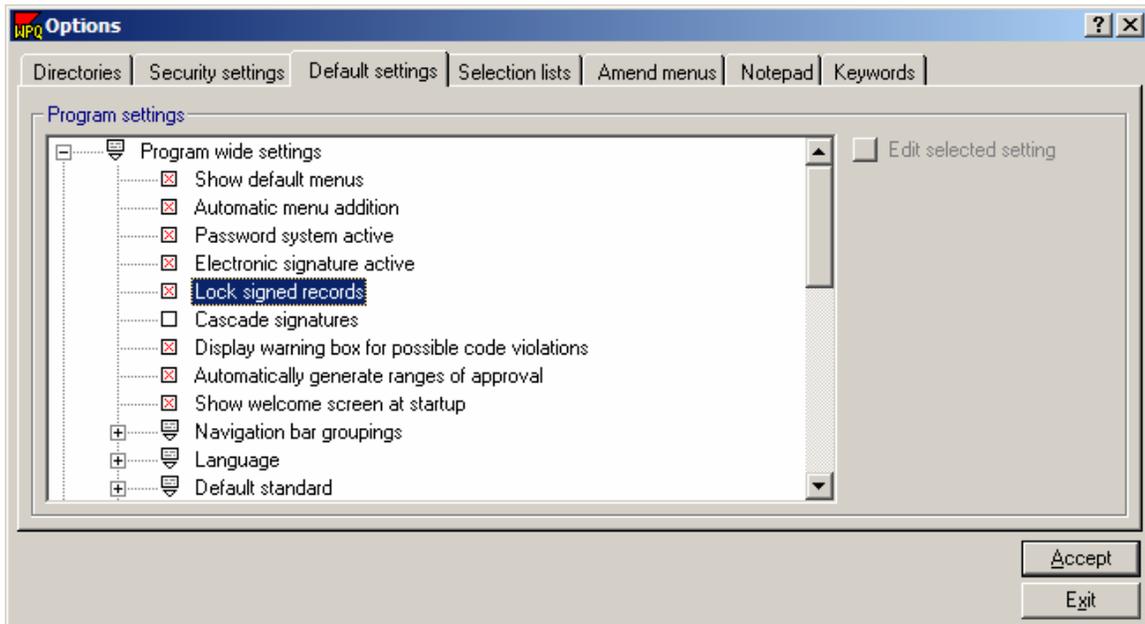
Click on **Electronic signature active**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.



If **Electronic signature active** is on, the mouse will turn into an icon of a signature when moved over the signature box.

3.1.1.5 Lock signed records

This option allows the user to define whether the addition of one or more signatures to a document will lock that document. If a document is locked, it cannot be edited unless the signature(s) are removed by the person who added the signature(s) (or the System Administrator).



Click on **Lock signed records**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on, and records will be locked once signed.

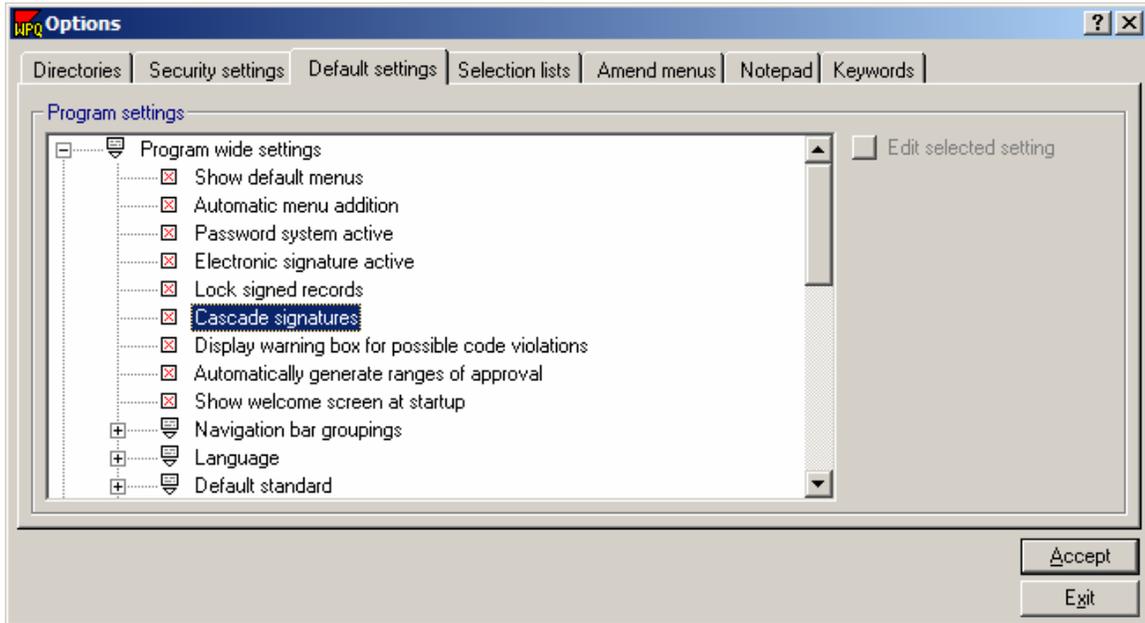
3.1.1.6 Cascade Signatures

Determine the hierarchy of signatures

Each document type in WeldOffice® WPQ can have between one and four signatures depending on the document type. This option allows the user to define whether the signatures need to be placed in a hierarchy (Signature 1 is on the form before Signature 2 can be put on the form and so on). If this option is set to on, signatures must be added in order. It will not be possible to add signature two unless signature one has been entered, etc.

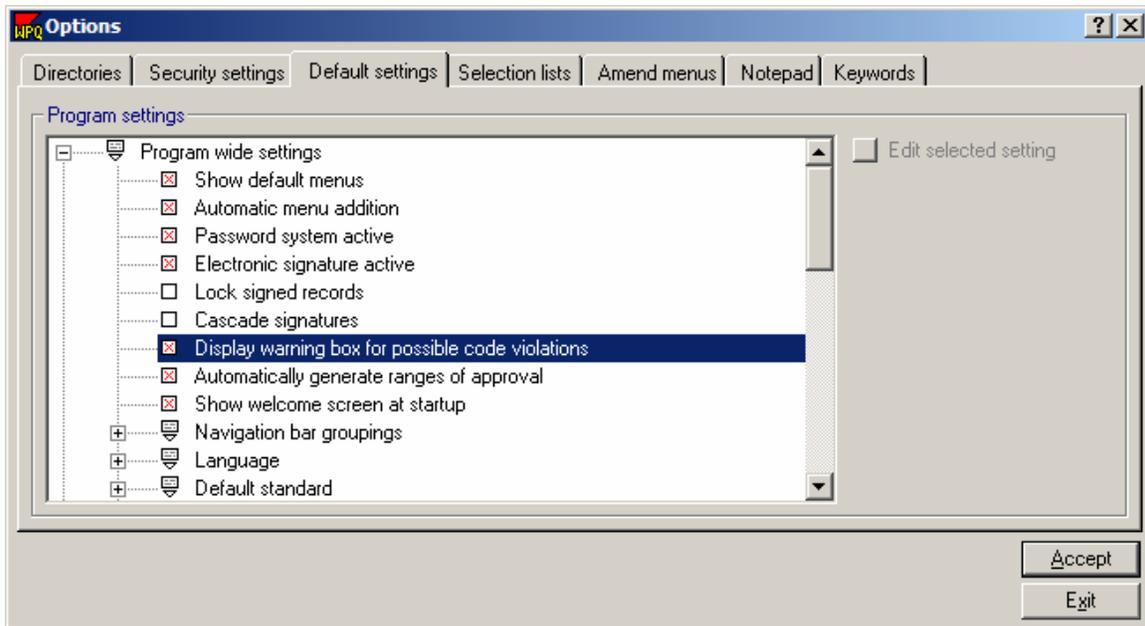
In addition, if the user wants to change a document which has already been signed off, the signatures must be removed in reverse order.

Click on **Cascade signatures**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.



3.1.1.7 Display Warning Box for Possible Code Violations

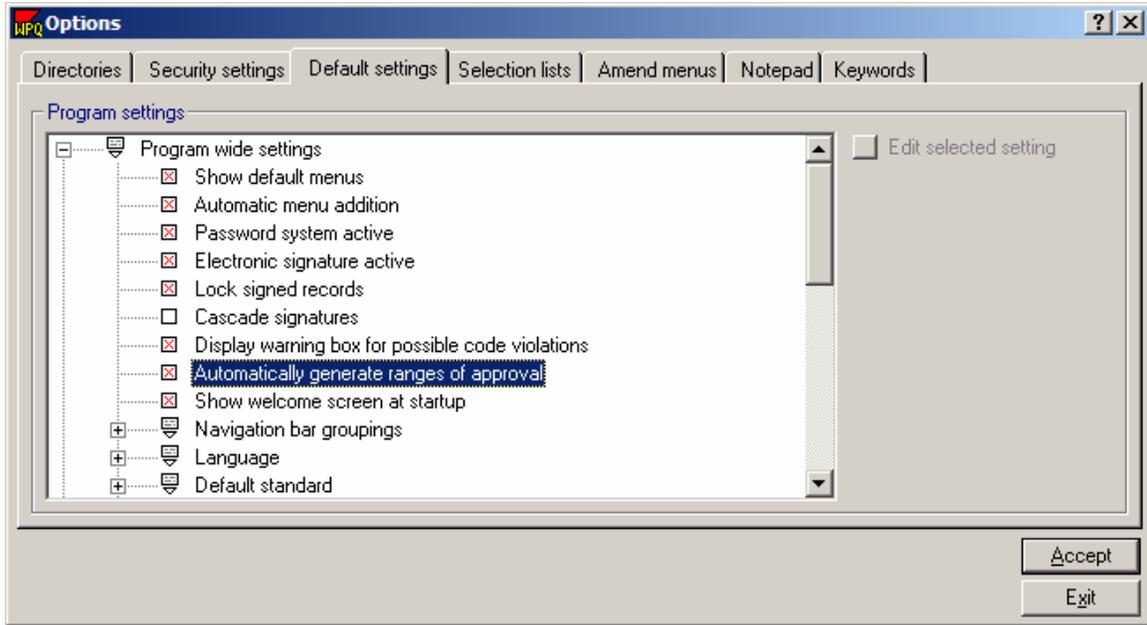
WeldOffice® WPQ has a large number of built-in routines which reflect the rules of the relevant code/standard. For example, the software knows which variables are essential, non-essential and supplementary essential for each process. As the user enters data into a document, the program checks to ensure the codes are not being violated. This option (if active) additionally displays a warning box which must be acknowledged before the user is allowed to continue.



Click on "**Display warning box for possible code violations**" or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.

3.1.1.8 Automatically generate ranges of approval

This option allows the program to automatically generate ranges of qualification, based on the code/standard selected.



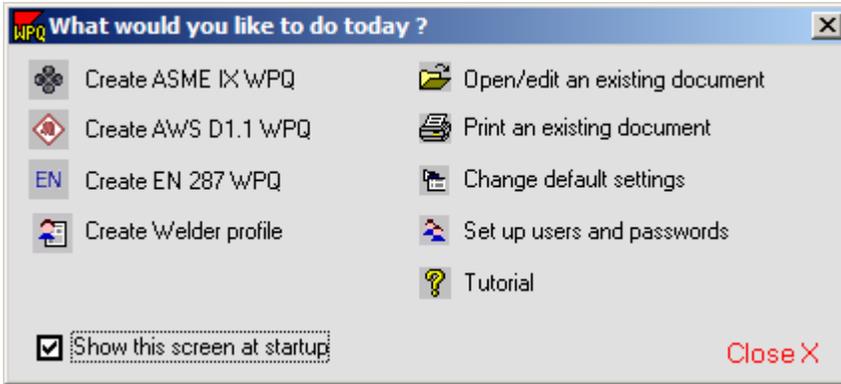
Click on **Automatically generate ranges of approval**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.

Shown below is an actual WPQ with range qualified section that was automatically filled in based on the code, weld joint, base metals and filler metals.

VARIABLES		ACTUAL VALUES			RANGE QUALIFIED		
Type of weld joint		Plate - Groove			Groove and Fillet welds		
Base metal		U to U			P-no./S-no.		
BASE METAL THICKNESS		Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness	(in.)	1	-	-	no limit	no limit	-
Pipe/tube thickness	(in.)	-	-	-	no limit	no limit	-
Pipe diameter	(in.)	-	-	-	2.875 min	no limit	-
PROCESS VARIABLES							
Welding process		GTAW	SMAW		GTAW	SMAW	
Type		Manual	Manual		Manual	Manual	
Backing		None	Yes		With, without	With	
Filler metal specification		5.9	5.1		5.xx	5.xx	
Filler metal classification		ER308	E7018		Any	Any	
Filler metal F-number		6	4		6	1..4	
Filler metal variety (QW-404.23)		Bare (solid)			Solid, metal core		
Consumable insert		None			Without		
Number of layers deposited		3	3				
Weld deposit thickness	(in.)	.5	.5		no limit	no limit	
Weld position (Actual position tested)		2G,3G and 4G	2G,3G and 4G				
				Groove - Plate & Pipe > 24"	All	All	
				Groove - Pipe 2.875" to 24"	F,H	F,H	
				Groove - Pipe < 2.875"	-	-	
				Fillet - Plate & Pipe > 24"	All	All	
				Fillet - Pipe 2.875" to 24"	All	All	
				Fillet - Pipe < 2.875"	All	All	
Progression		Up	Up		Up	Up	
Backing gas		Without			With, without		
GTAW welding current/polarity		DCSP			DCSP		

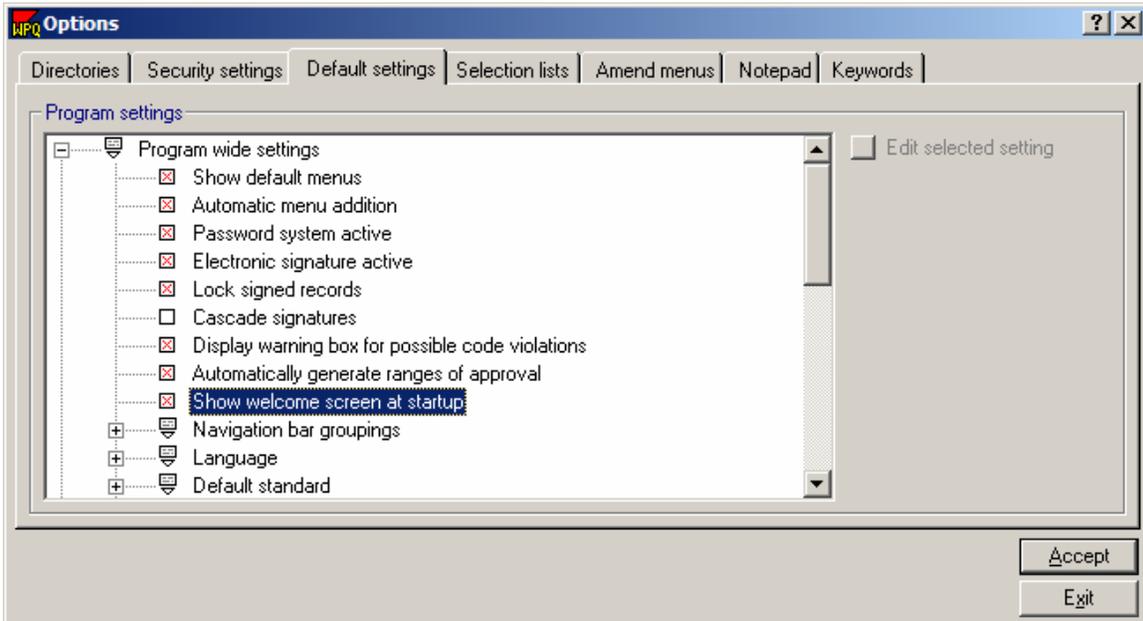
3.1.1.9 Show Welcome Screen at Startup

When WeldOffice® WPQ starts up, an initial start up screen appears asking "What would you like to do today". From this screen the user can select to: Create a WPQ, create a welder profile, open an existing document, print, change default settings, set up user and passwords, or see a tutorial. The user may also decide that they do not want this screen to appear at the startup. They could simply click on the box in front of "Show this screen at startup", which will delete the check in the box, and not show this screen again during startup.



Startup screen

Another way to turn this startup screen on or off is in the **Default Settings** under **Program Wide Settings**.



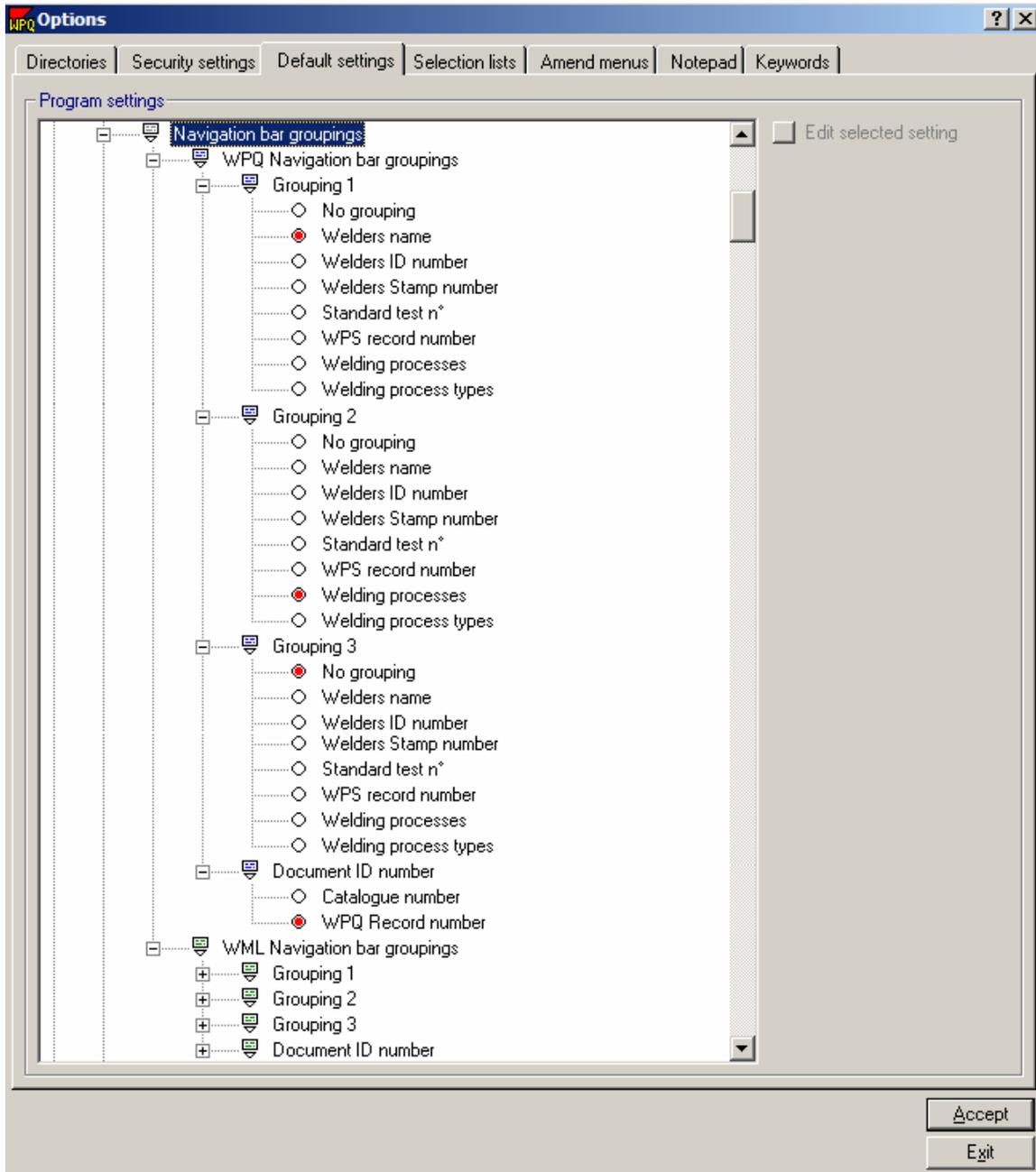
Click on **Show welcome screen at startup** or the box in front of the text to toggle this option on or off. A red 'X' signifies that this setting is on.

3.1.1.10 Navigation Bar Groupings

Explore WeldOffice® documents

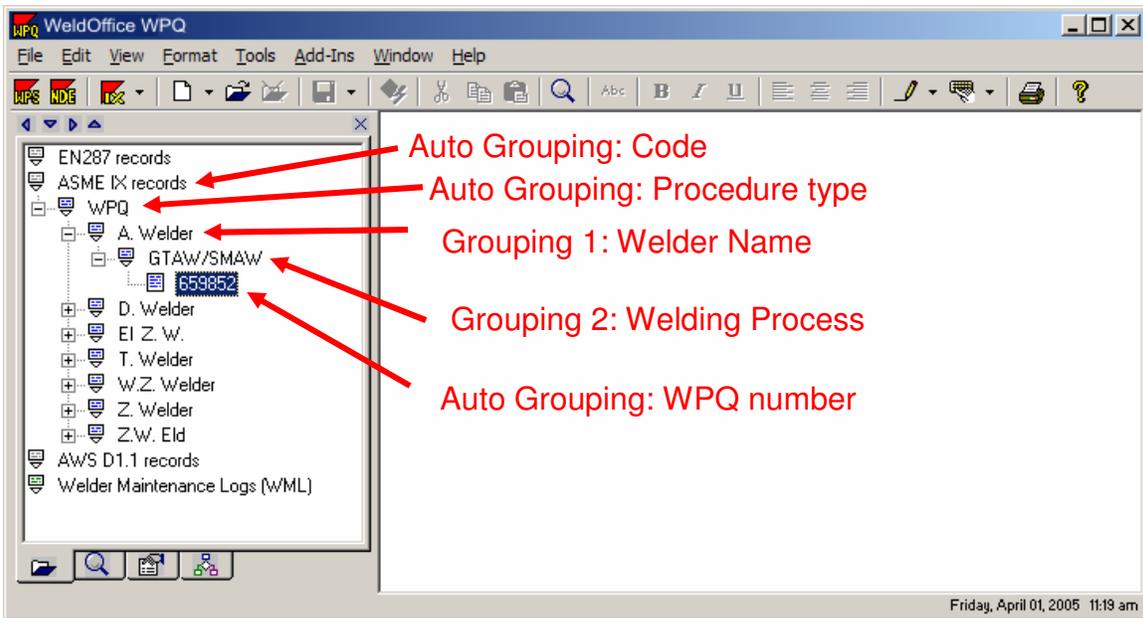
The Navigation bar for the WPQ (Welder Performance Qualification) and WML (Welder Maintenance Log) has been designed to work in a similar manner to Windows Explorer and has been designed to be a fast way of identifying documents.

Essentially, the software groups the documents in the database on up to three variables, in addition to the code/standard and document type, which are the first two 'groupings'. WeldOffice® WPQ has been supplied with a set of default groupings, but the user can change these using this option.



Click on Navigation bar groupings. Then click on either **WPQ Navigation bar groupings** or **WML Navigation bar groupings**. Then for each of the groupings, select one variable.

Note that the user can select 'No grouping' if the number of levels in the structure is not needed.



An example of the above settings shown on the actual navigation bar:

3.1.1.11 Language

WeldOffice®WPQ is designed to operate in English only. Other languages are under development.

3.1.1.12 Default Code/Standard

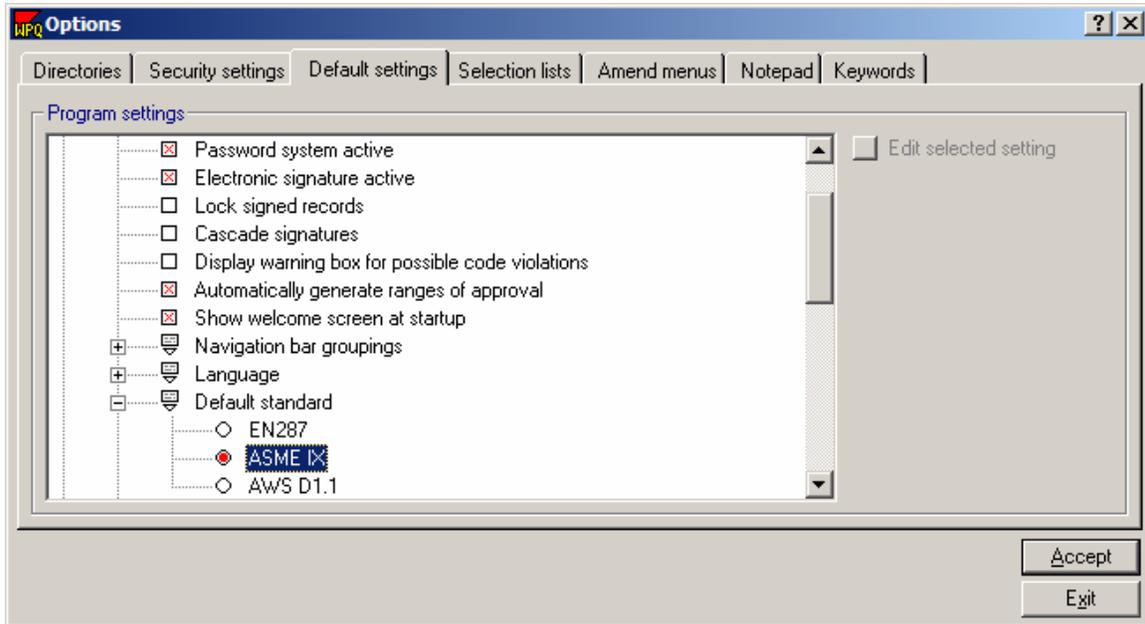
Choose the code/standard to be default

WeldOffice®WPQ works with multiple codes/standards. If the user works primarily with one code/standard, this option allows that code/standard to be set as the default. In the managers, i.e. record creation manager, etc., the default setting will be what is selected here. For instance, the figure below shows a record creation manager defaulting to the ASME records.



To change the default standard:

Double-click on **Default Standard** to expand this topic and view the options. Then select the code/standard required.



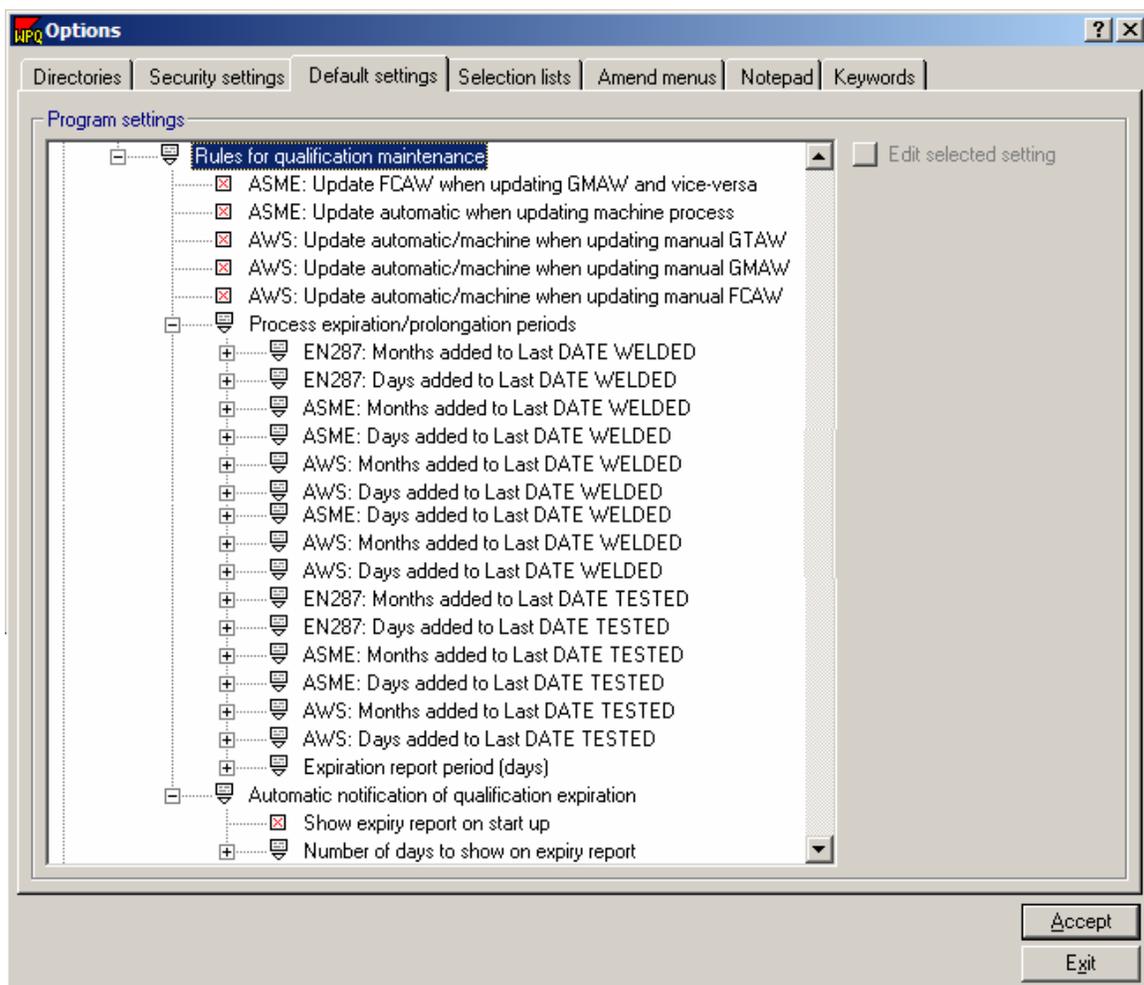
A red circle preceding the code/standard signifies that it is selected as the default. To switch codes/standard, click on the code or in the circle.

3.1.1.13 Rules for Qualification Maintenance

WeldOffice® WPQ allows the user to override some of the code rules built into the software, as follows:

- Update machine/automatic qualifications when updating manual qualifications. These options allow the user to prompt the software to update machine and automatic qualifications if a manual job is added to the weld to the WML.
- Specify the periods of qualification. These options allow the user to specify the default time between qualification tests or job welds and the expiration of qualifications. The default setting is six months, but this can be modified (usually downward without infringing codes/standards). This can be done for each standard and note that the software treats the test – expiration period as optionally different to the job weld – expiration period.

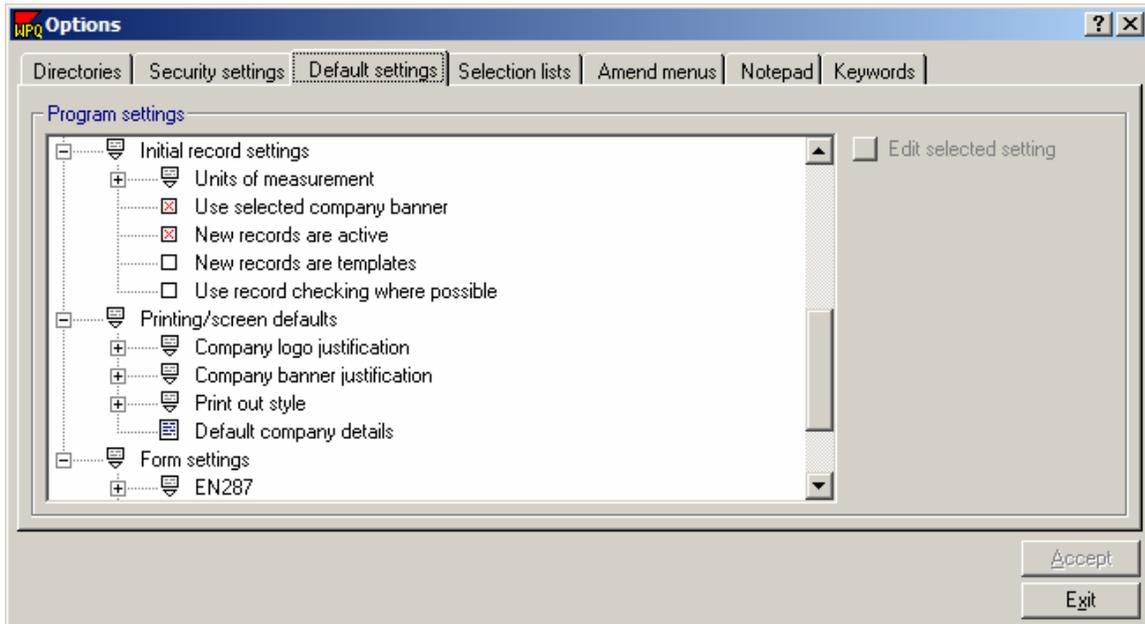
- Specify the expiration report period. When generating an expiration report, the user can specify the start and finish of a time period over which they want the software to search for qualifications that will expire. As a default, WeldOffice® WPQ will search from the current date to a period 14 days from today. This time period for expiration reports can be modified using this routine.
- Automatic notification of expiration of qualifications. The user can optionally ask the software to automatically make a list of qualifications due to expire, on start-up. In addition, the user can again specify the time period from the current date for this report.



3.1.2 Initial Record Settings

Default settings for new documents

This group of options is used to define the settings of newly created documents. Many of these settings can be overridden for individual documents (see Current Record Properties in the Navigation bar (section 3.4.3.5) for more information).



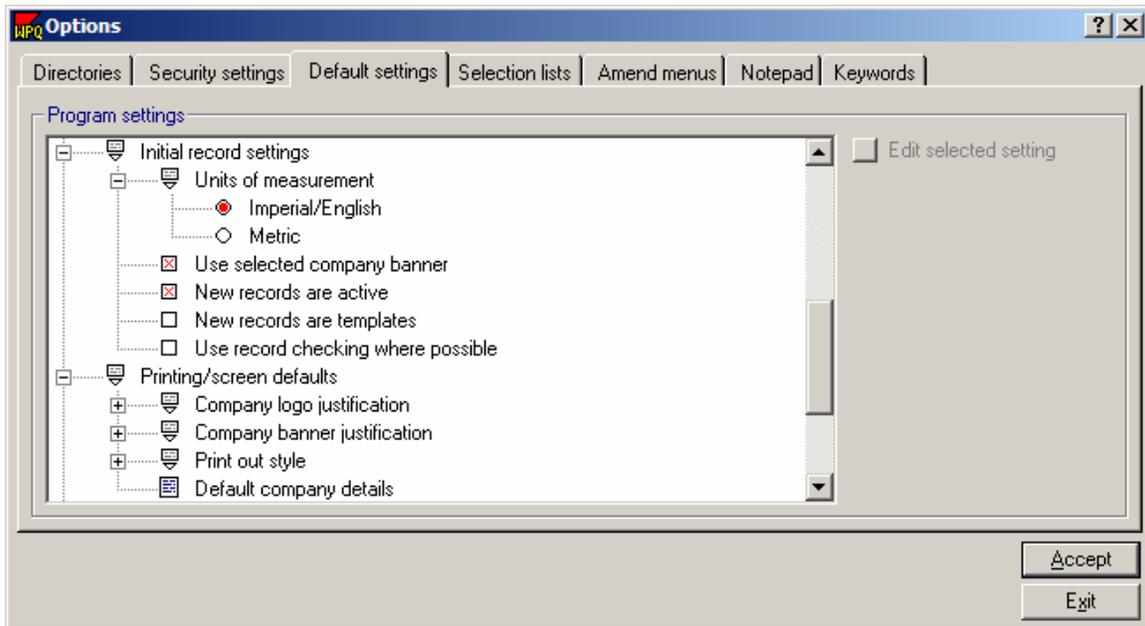
- Units of Measure
- Use selected company banner
- New records are active
- New records are templates
- Use record checking where possible

3.1.2.1 Units of Measurement

WeldOffice® WPQ can work with both metric and English/imperial units. It is possible to create some documents with metric units and some with English/imperial units if needed. This option allows the user to define the default unit for new documents, which can (if necessary) be overridden for individual documents using the Current Record Properties in the Navigation Bar (section 3.4.3.5).

How do I select the units?

Make sure that the Imperial and Metric selections can be seen. If not, then click on the  plus sign in front of "Units of measurement". This will expand the selection to allow the user to view the choices.

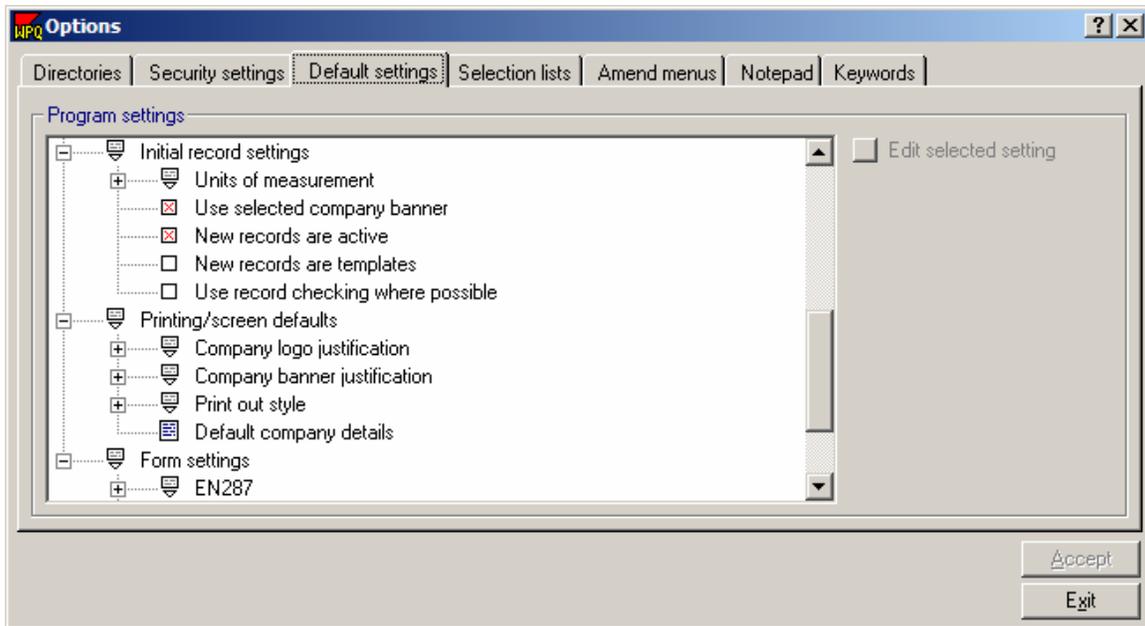


- Imperial/English
- Metric

The red circle in front of the unit means that it is selected as the unit for WeldOffice® WPQ. Clicking on Metric would move the red circle in front of Metric, making Metric the unit.

3.1.2.2 Use Selected Company Banner

WeldOffice® WPQ allows the user to define the header or banner for documents (including company name, address and logo). The user can set up a number of banners, with one banner being set as default. This option allows the user to define whether new documents automatically have the default company banner or the banner of the company specified in the Company name field on the records.



Click on the text **Use selected company banner** to toggle this option on or off.

Use selected company banner

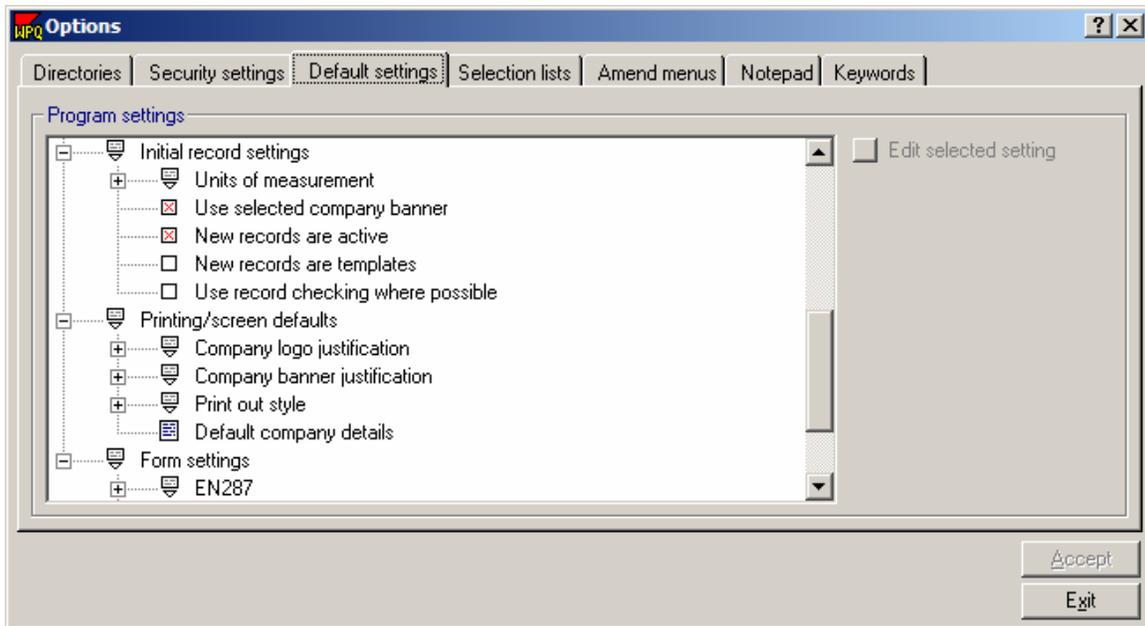
(A red 'X' signifies that the option is on and the default banner will be overwritten by the banner of the company specified on the certificate.)

Use selected company banner

(No 'X' indicates that this option is off and the default company banner will be used. See Default Company Details (section 3.1.3.4) for more information).

3.1.2.3 New Records are Active

This option allows the user to define whether new documents are active or inactive. Inactive documents will not appear in any list of documents unless the user specifically requests them. It would be very unusual to define new documents as inactive.

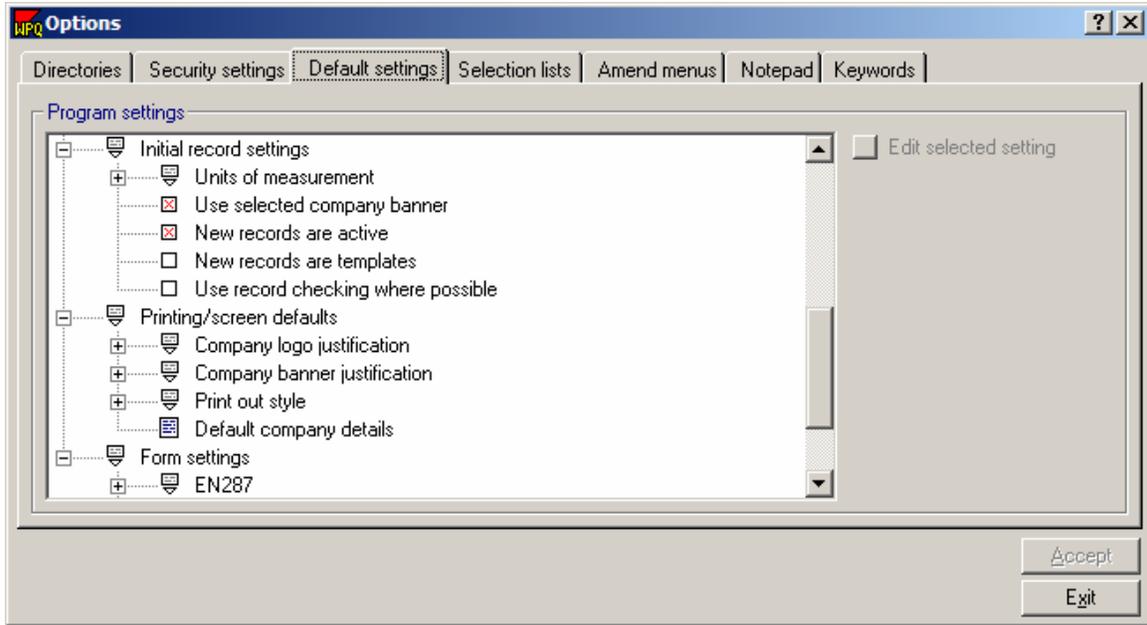


Click on **New records are active** to toggle this option on or off.

- New records are active (A red 'X' signifies that new records **are** active)
- New records are active (No red 'X' signifies that new records **are not** active)

3.1.2.4 New Records are Templates

WeldOffice® WPQ allows the user to create documents which act only as templates. These do not normally appear in lists of documents, unless the user specifically requests them. Typically, the user would not have this option checked. If the user wanted to set up a template, they would change it from the current WPQ Properties window in the navigation bar (3.4.3.5).

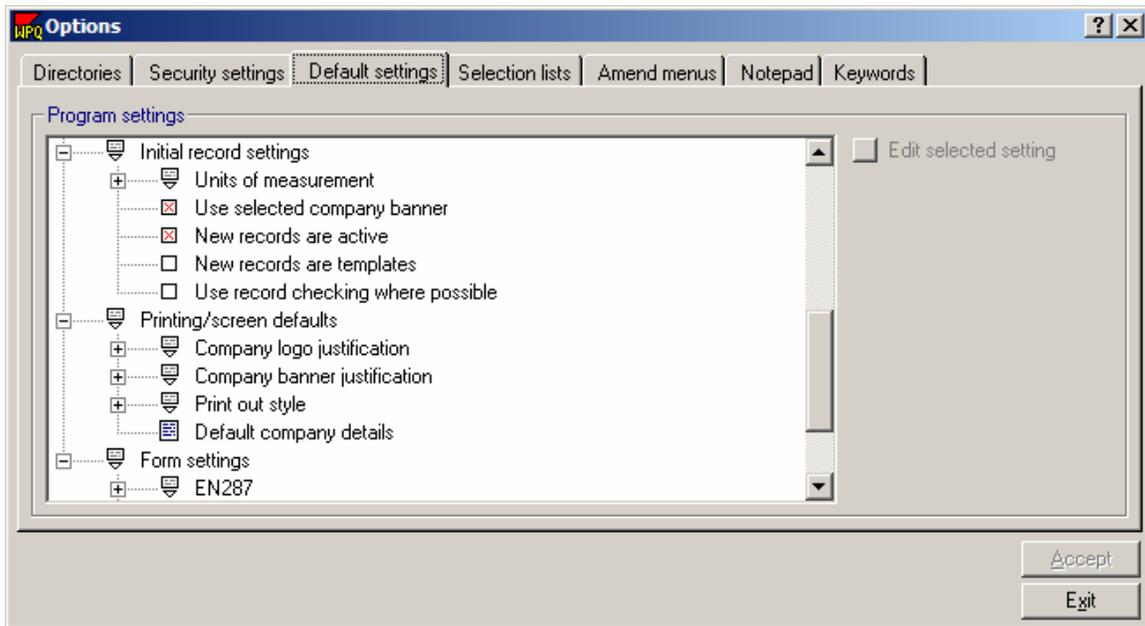


Click on **New records are templates** of this option to toggle this option on or off. A red cross signifies that new documents are templates.

- New records are templates (A red 'X' signifies that new records **are** templates)
- New records are templates (No red 'X' signifies that new records **are not** templates)

3.1.2.5 Use Record Checking Where Possible

This option is used to specify whether new documents will be automatically checked against the relevant code/standard. It is possible to overwrite this default option for individual documents using the Current Record Properties in the Navigation Bar (section 3.4.3.5).



Click on the text **Use record checking where possible**, to toggle on or off.

Use record checking where possible (A red 'X' in the box indicates that code checking is **on** - the document **will** automatically be checked)

Use record checking where possible (An empty box indicates that code checking is **off** - the document **will not** be automatically checked)

3.1.3 Printing and Screen Defaults

The settings under this topic in the Default Settings are:

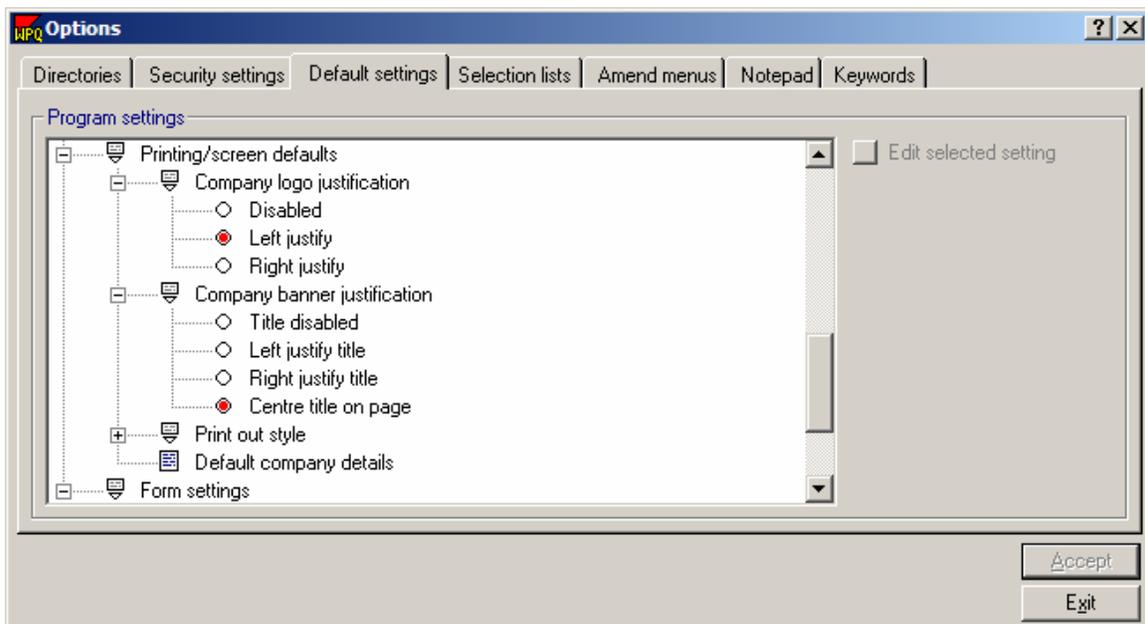
- Justification of the company logo
- Justification of the company banner
- The style of printout
- The default company details
- The settings of the documents

3.1.3.1 Company Logo Justification

Specify position of the company logo

This option allows the user to specify whether the company logo is positioned on the left or right of the header.

Double-click on **Company Logo Justification** to view the options available. Select the position by clicking on the text (Disabled, Left justify, or right justify). This will move the red circle in front of the option selected. Note that the user can also select to **Disable** the company logo from any printout. For example if using pre-printed paper with the company logo already present.



Example: In the figure above, the company logo justification selected is Left justify. Shown below is what that logo position will look like in the header.

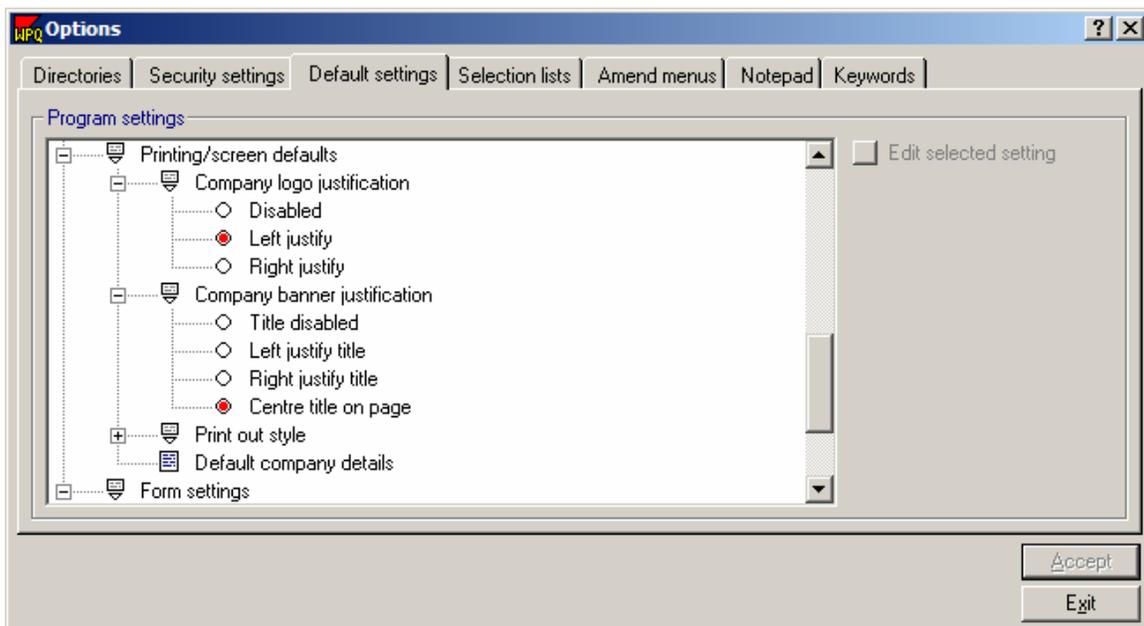


3.1.3.2 Company Banner Justification

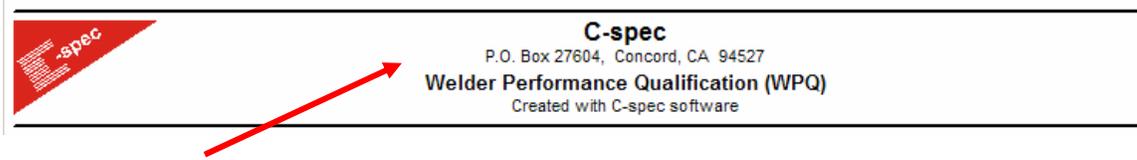
Specify position of the company name and address

This option allows the user to specify the position of the Company name and address. The user can center this information (the default position is centered) or justify it left or right. Note that if it is positioned on the same side as the logo, the logo will appear closer to the edge, with the rest of the header towards the center.

Double click on Company Banner Justification to see the options. Select the logo position by clicking on one of the options. The red circle will appear in front of the option selected.



For instance: The option chosen in the example above for the company banner justification is **Center title on page**. An example of this heading is shown below.



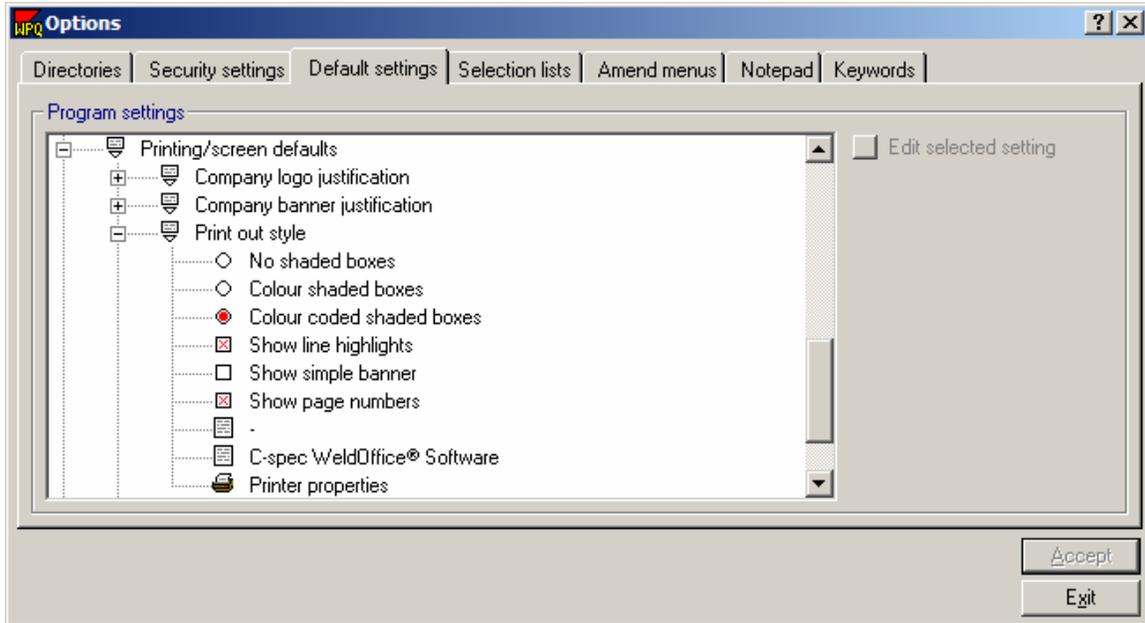
Company Banner justified to the center

To see more on changing company information, see the section Default Company information under section 3.1.3.4.

3.1.3.3 Printout Style

WeldOffice® WPQ allows the user to specify how the documents will print. Under the Print Out Style of the Printing/screen defaults, the user can set the options for new records. Each of these options are described below.

- No shaded boxes
- Color shaded boxes
- Color coded shaded boxes
- Show line highlights
- Show simple banner
- Show page numbers
- Not applicable designation
- Subtitle in header
- Printer properties



No shaded boxes/Color shaded boxes/Color-coded shaded boxes -

WeldOffice®WPQ optionally uses shaded boxes to improve readability of printed documents. If no shading is selected, the shading does not appear at all. If Color shading is selected, every document will have shaded boxes of the same color (or shade of grey on a black/white printer). If Color coded shading is selected, different document types will use a different color shading.



The red circle is in front of the selected option. To change the option, click on another option. The red circle will move. Color coded shaded boxes is selected in this example.

Show line highlights - If the procedure documents are complex, for example, with multi-processes, WeldOffice®WPQ automatically adjusts the font size to ensure the printout fits on one page. This can lead occasionally to a small font being used. To ensure the document retains readability, the software will optionally highlight alternative lines in the printout. Ensure this option is active to print the line highlights.



A red 'X' indicates that the option is selected and in use. To remove the 'X' click on the option.

Show simple banner - Although WeldOffice®WPQ allows the user to print the logo and company details at the top of the form, they can also use pre-printed paper with a pre-printed header and logo. To give the user maximum space at

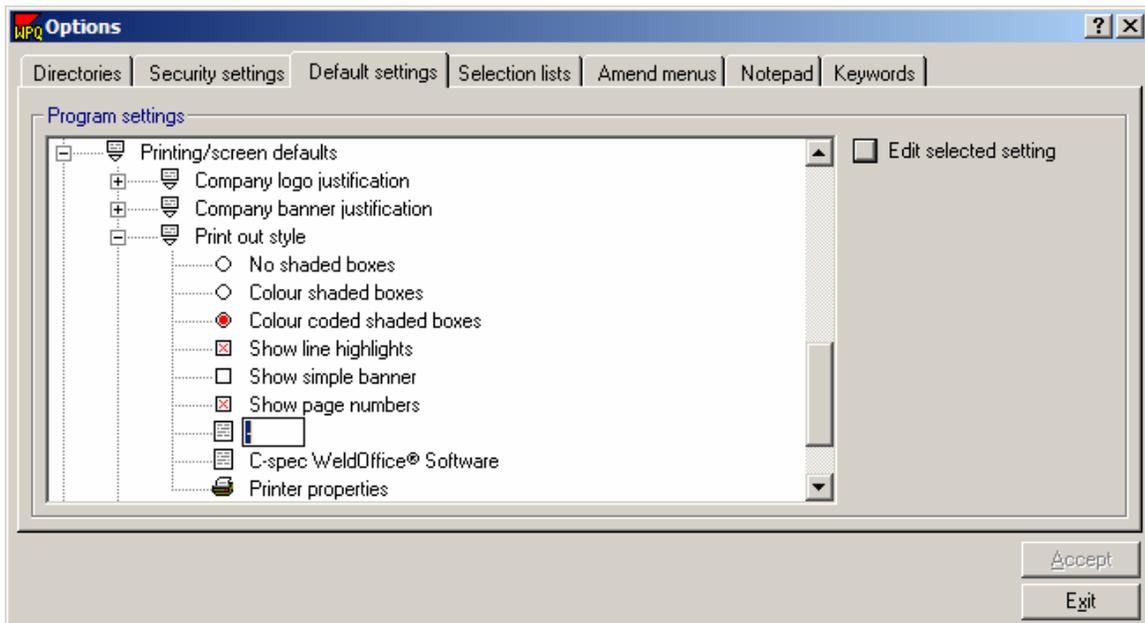
the top of the form for a pre-printed header, use the 'simple banner'. This removes the two horizontal black lines above and below the banner.

- Show simple banner A red 'X' will indicate that this option is selected and in use. To add or remove the 'X', click on the option. This example does not show this option as selected, so the company banner **will have** the two horizontal lines above it and below it.

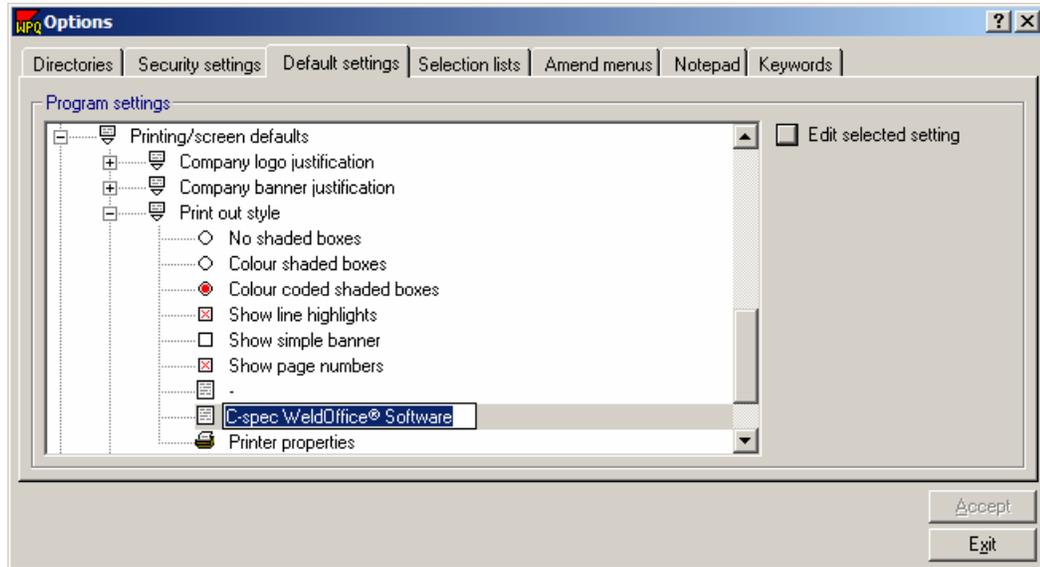
Show page numbers - This option allows the user to turn page numbering on or off.

- Show page numbers A red 'X' will indicate that this option is selected and in use. To add or remove the 'X' click on the option. This example shows the option as selected and the page numbers **will** print.

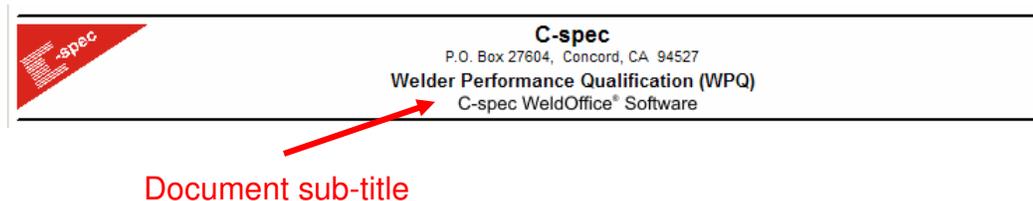
Not applicable symbol - WeldOffice® WPQ automatically generates certain types of data in certain documents. Although most documents are dynamic in that the layout of the document changes to match the procedure details, the system sometimes needs to generate the term 'not applicable'. This option allows the user to define the symbol or term they want to use for 'not applicable'. A dash (-), or 'na' or N/A' or the full 'Not applicable' could be used. Click on the text of the option, then on **Edit selected setting** button. When the entry has been completed, press Enter and then **Accept**.



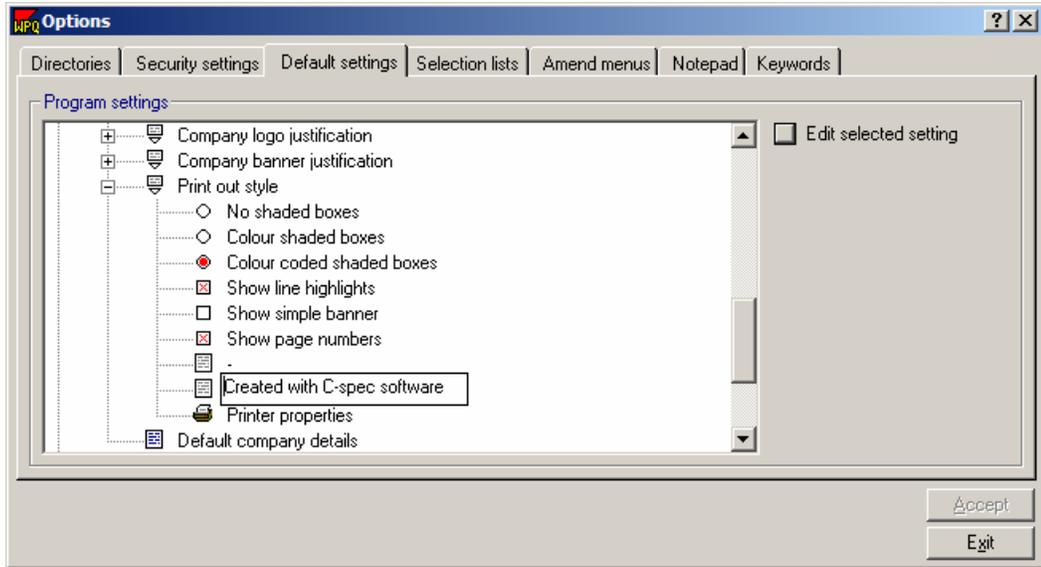
Document sub-title - As supplied, the printout sub-title default is 'C-spec WeldOffice® Software', which is displayed and printed under the company banner in the document header. To change the sub-title, click on the text, then on the **Edit selected setting** button. Type the subtitle wanted, then press Enter and click **Accept**.



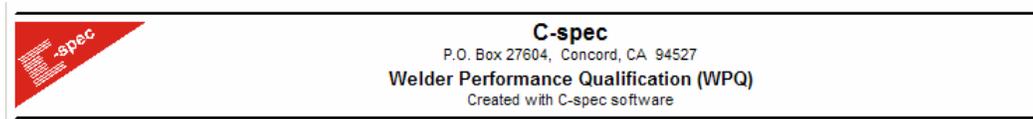
Example of the header:



If the subtitle was changed as shown below:



The header would look like this:



Printer properties - This option is used to access a standard Windows printer setup dialog box, which allows the user to choose which printer to use and how the printer should be set-up.

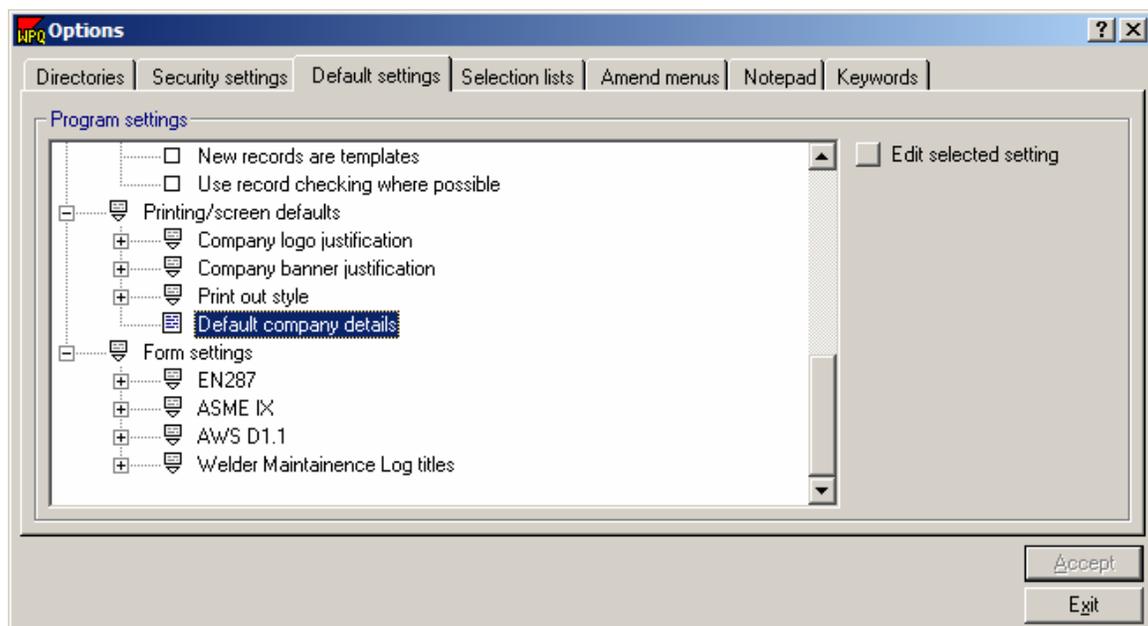
3.1.3.4 Default Company Details

Specify the company name and address

This option allows the user to specify a company and its details as 'default'. This will usually be the users own organization, although it doesn't need to be. It could, for example, be the users main customer.

To set up the company details, click on **Default company details** and then on the **Edit selected setting** button.

To set up other companies that will appear in the drop down menus, see section 3.3.1 Change the drop down menus.

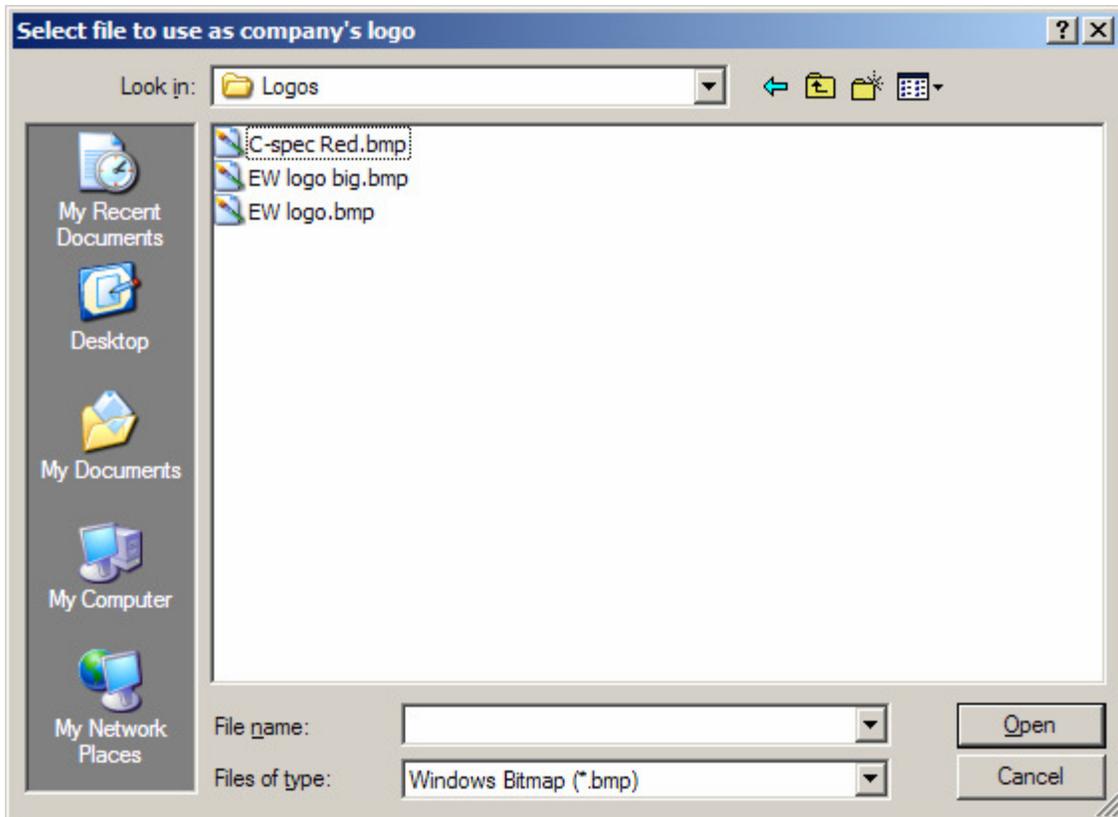


This will take the user to a Company Details screen, where the user can enter a company name, division, address, contact number, logo and notes. To specify any of these details, click in the appropriate box, and then type in the details.

The screenshot shows a 'Company details' dialog box with the following elements:

- Title Bar:** 'Company details' in a blue header.
- Company Name:** 'C-spec' in a text box.
- Division:** An empty text box.
- Address:** 'P.O. Box 27604' and 'Concord, CA 94527' in two stacked text boxes.
- Contact number:** An empty text box.
- Company logo:** A square box containing a red triangle with white diagonal lines and the text '-spec'.
- Notes:** A large empty text area.
- Buttons:** 'Accept' and 'Cancel' buttons at the bottom right.

To specify a company logo, click inside the logo box. This will take the user to a logo selection screen, as shown below, where the user can choose from any bmp, jpg or gif graphic files. Click on **Open** when finished. This will automatically bring up the logo in the company details screen.



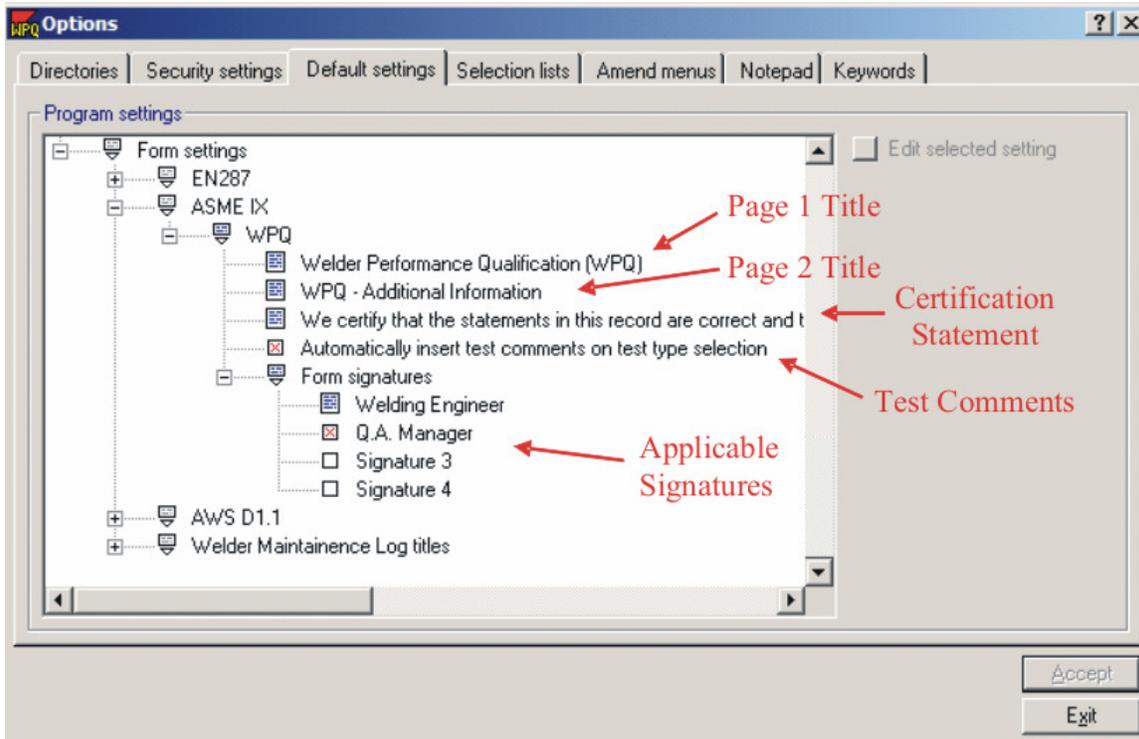
Click on **Accept** when finished.

3.1.4 Form Settings

Rename the titles of each page

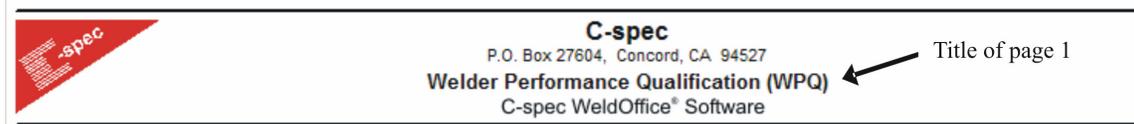
This option allows the user to define the following:

- Titles of each page in the record (which appears in the header of the documents)
- Certification statement
- Test comments
- Titles of each signature box on each document



1. The **document titles**, as supplied, simply reflect the document type and code/standard, but these can be changed if desired. Note that changing this option affects not only documents created after the change, but also all documents created prior to the change. To change the titles, click on the title and then on Edit selected setting. When typing has been completed, press Enter and then **Accept**.
2. The **Certification statement** can be changed to reflect the user's situation. To change the certification statement, click on the current certification statement and then on Edit selected setting. When typing has been completed, press Enter and then **Accept**.
3. The **Test Comments** field allows the user to turn on or off the automatic insertion of the test comments into the certification block on the WPQ. Click on the test comments to either turn it off (empty box) or on (red X in box)
4. **Applicable Signatures:** It is mandatory to have at least one signature block on each document, even if the user doesn't use it. Form settings also allows the user to turn on or off up to three other signatures on each document type and to specify the text associated with each signature block. To edit the signature titles, click on one of the four fields under From Signatures, then click on edit selected setting. Type in the new signature title and then press enter and then **Accept**. The signature field must be turned on (have an "X" in the box in front of it) to be able to edit the title.

Below is an example showing the page 1 title and where it is located.



Note: Before the user clicks on another Tab in the Options screen or before clicking Exit, they must click on Accept to activate any changes made.

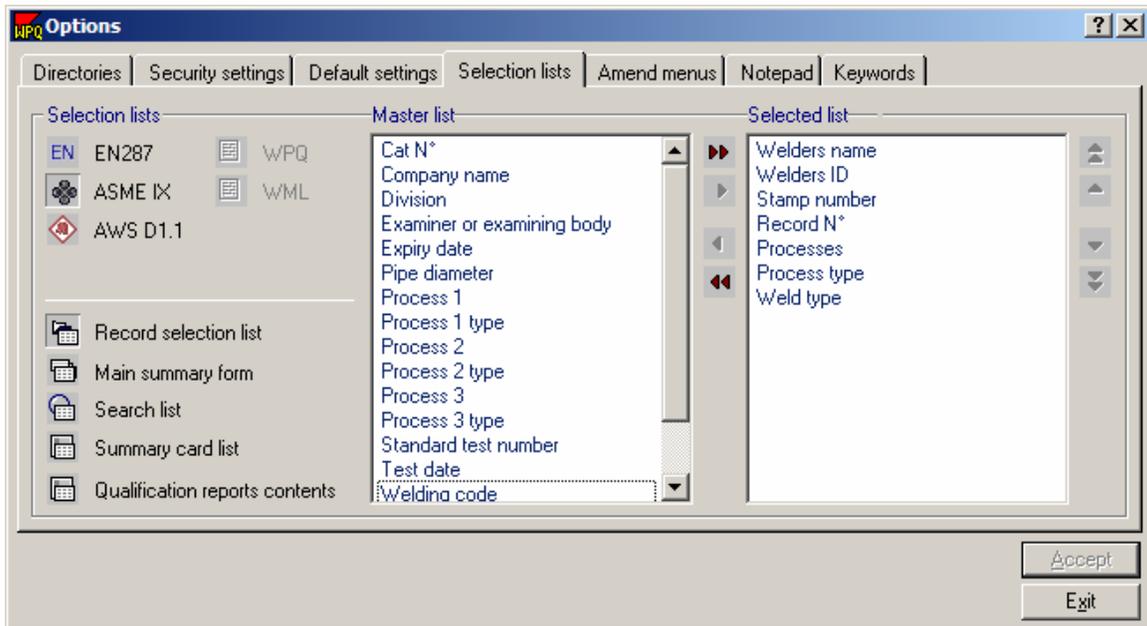
3.2 Selection Lists

Specifying the fields listed in the reports and lists

The selection lists tab in the Options is used to specify which fields will appear on various reports and lists in the WeldOffice® software. These include:

- **Record Selection List:** The "manager" window that appears when selecting a record to open, delete, print, export, etc.
- **Main Summary Form:** The form that prints out when creating a summary of one or more records.
- **Search list:** The fields available to search upon when using the Record Search Manager.
- **Summary Card List:** The wallet-sized summary form that prints when creating a Summary Card.
- **Qualification reports contents:** The printout of basic WPQ details that can be provided to the welder

Each report will be discussed in following sections. The current section will give the user a brief overview of how to change the reports.



1. To make changes to one of the Reports/Lists, first select the applicable code (EN288, ASME IX, AWS D1.1).



2. Then select the applicable record (WPQ or WML). Note: Some lists will not allow the user to select a record type, because it is not applicable, for instance the Record selection list searches both WPQs and WMLs.



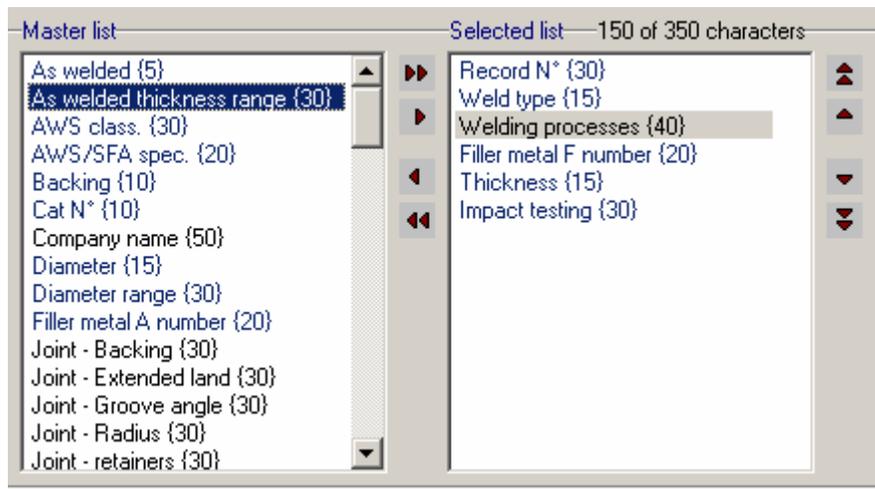
3. Then select the desired Report or List to be edited.



With these selections made, two lists of fields will appear:

Master List: This is the list (on the left) of all available fields which could be placed on the reports.

Selected List: This is the list (on the right) of fields that are already included on the reports.



4. To add a field to the selected list, click on the desired field under the Master list.

5. Press the red arrow pointing to the right  to move it to the selected list.

To remove a field from the Selected list, click on the field to select it and then click the single arrow going to the left  to return it to the Master list.

Use the double arrows to return all selected items to the master list  or to move all the Master list to the Selected list .

To change the order of the fields seen on the various reports (order of columns) change the order of the fields in the selected list. For instance, to move thickness to the first field shown, click on Thickness, then use the double arrow  to move that field to the top. To move it only one field up, use the single arrow . Use the down arrows to move the field to the back of the selected list .

For all the reports that are to be printed, the number of available characters on one page width needs to be considered. The amount of used space is listed just above the Selected List. In the example shown above, 150 of the 350 available

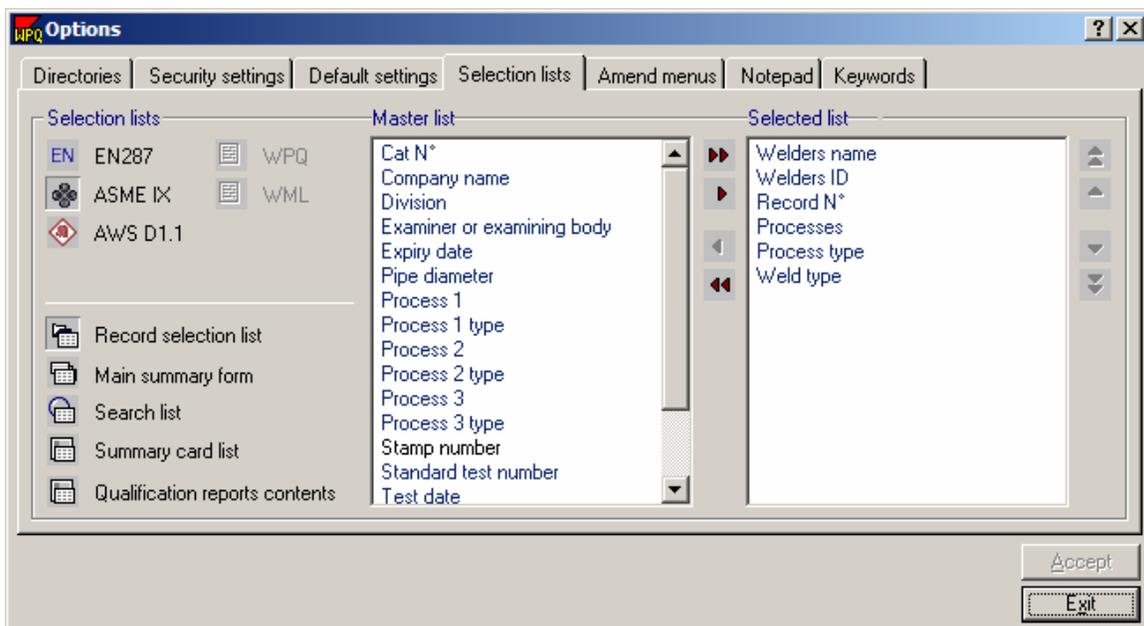
characters have been used. The numbers in the parenthesis {} indicates the number of characters in the item.

3.2.1 Record selection lists

Set the criteria for the Record Managers

When the *Record Manager* is used to open, print, delete, export, etc., documents, the system displays a summary of documents comprising one line for each document. This option allows the user to select which variables should be listed and in what order they should be arranged. Clicking on the column headers on the *Record Manager* resorts the list of documents in alphanumeric order for that column, so the user can identify and select one or more items very quickly.

Each code/standard has a different record selection list. See the above section (3.2) to set up the list of details to be viewed by the record selection list.



To view the *Record Selection Manager*, click on **File** and then **Open**. The Manager will appear. Notice that the columns of data are the same as what was selected above under the selected list. To change the order, of the columns, change the order in the selected list above, see the above section 3.2.

The screenshot shows a software window titled "Record selection manager". At the top, there are tabs for "EN 287", "ASME", "A/W/S", "WPQ", and "WML". Below the tabs is a search bar with a magnifying glass icon and the text "Filter Search". The main area contains a table with the following columns: "Welders name", "Welders ID", "Record N", "Processes", "Process type", and "Weld type". The table lists eight records. At the bottom of the window, there is a status bar that says "Records shown: 8" and a set of control buttons: "Template", "Active", "Inactive", "Active & Inactive", "Metric", "English", and "Metric & English". There are also "Accept" and "Cancel" buttons at the bottom right.

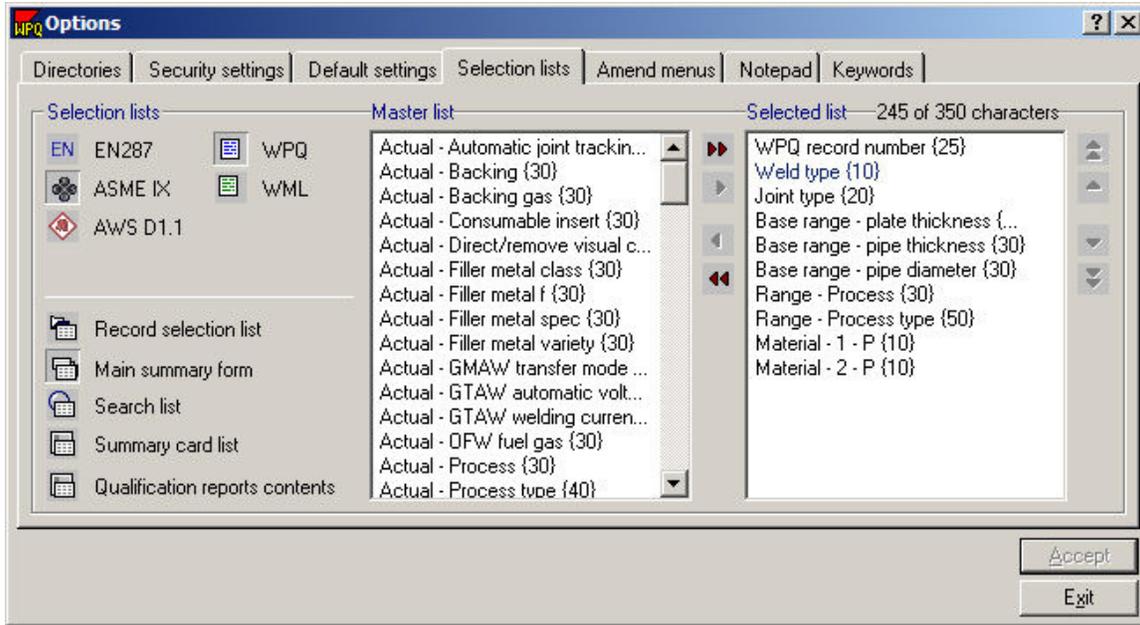
Welders name	Welders ID	Record N	Processes	Process type	Weld type
EI Z.W.	333-33-333	P1-BT-V-EZV	GTAW/SMAW/FCAW	Manual/Manual/Semi-automatic	Groove
V.Z. Welder	555-55-5555		GTAW/SMAW	Manual/Manual	Groove
Z.W. Eld	444-44-4444		GTAW/SMAW	Manual/Manual	Groove
D. Welder	111-11-1111		GTAW/SMAW	Machine/Manual	Groove
A. Welder	999-99-9999	659852	GTAW/SMAW		Groove
T. Welder	777-77-7777	73420	SMAW	Manual	HFO
Z. Welder	888-88-8888	9383	SMAW	Manual	CRD
EI Z.W.	333-33-333		GTAW/SMAW/FCAW	Manual/Manual/Semi-automatic	Groove

The fields are the same for the *Record Deletion Manager*, *Record Printout Manager*, and the *Record Export Manager*.

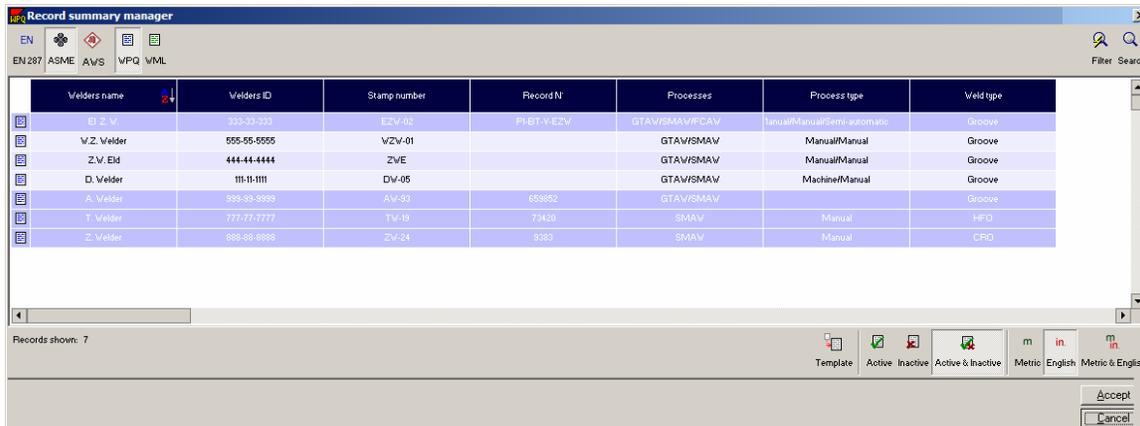
3.2.2 Main Summary Form

The Main summary form is displayed when the user clicks on **View** then **Summary**, or when printing a summary through the *Print Manager*. The Summary is a one-line summary of multiple documents, filtered and sorted on variables of the user's choice. This selection list allows the user to select the variables which appear on the summary.

To avoid problems with document layout, avoid including more than 350 characters across the printed page (the Summary uses landscape paper orientation). Each variable in the list includes an indication of its maximum width and the total width is displayed at the top of the form. The more characters used, the smaller the font that will be displayed.



To view the summary form, click on **View** and then **Summary**. A *Record Summary Manager* will appear. Select the welders that are to be included in the Summary Report and then click on **Accept**.



With the above items selected, the following is the Main Summary Form which is generated.

Summary Display Form						
Weld type	Joint type	Base range - plate thickness	Base range - pipe thickness	Base range - pipe diameter	Range - Process	Range - Process type
Groove	Groove	no limit/no limit/-	no limit/no limit/-	2.875 min/no limit/-	GTAW/SMAW/FCAW	Manual/Manual/Semi-automatic
Groove	Groove	no limit/no limit	no limit/no limit	no limit/no limit	-	-
HFO	Overlay	-	-	-	SMAW	Manual
CRO	Overlay	-	-	-	SMAW	Manual

Records listed: 4

Record type: WPQ WML Print summary report

Cancel

Summary form sample

The user can also access this by clicking on **File** and **Print**. A *Record Printout Manager* will appear.

Report printout manager						
Velders name	Velders ID	Record N	Processes	Process type	Weld type	
Ei Z. V.	333-33-333	PIBT-VEZV	GTAW/SMAW/FCAW	Manual/Manual/Semi-automatic	Groove	
V.Z. Velder	555-55-5555		GTAW/SMAW	Manual/Manual	Groove	
Z.W. Eld	444-44-4444		GTAW/SMAW	Manual/Manual	Groove	
D. Velder	111-11-1111		GTAW/SMAW	Machine/Manual	Groove	
A. Velder	999-99-9999	659852	GTAW/SMAW		Groove	
T. Velder	777-77-7777	73420	SMAW	Manual	HFO	
Z. Velder	888-88-8888	9383	SMAW	Manual	CRO	
Ei Z. V.	333-33-333		GTAW/SMAW/FCAW	Manual/Manual/Semi-automatic	Groove	

Records shown: 16

Template Active Inactive Active & Inactive Metric English Metric & English

Accept Cancel

Select the code, the record type, records and Summary. Then, select the welders to view in the summary form. Then click **Accept**.

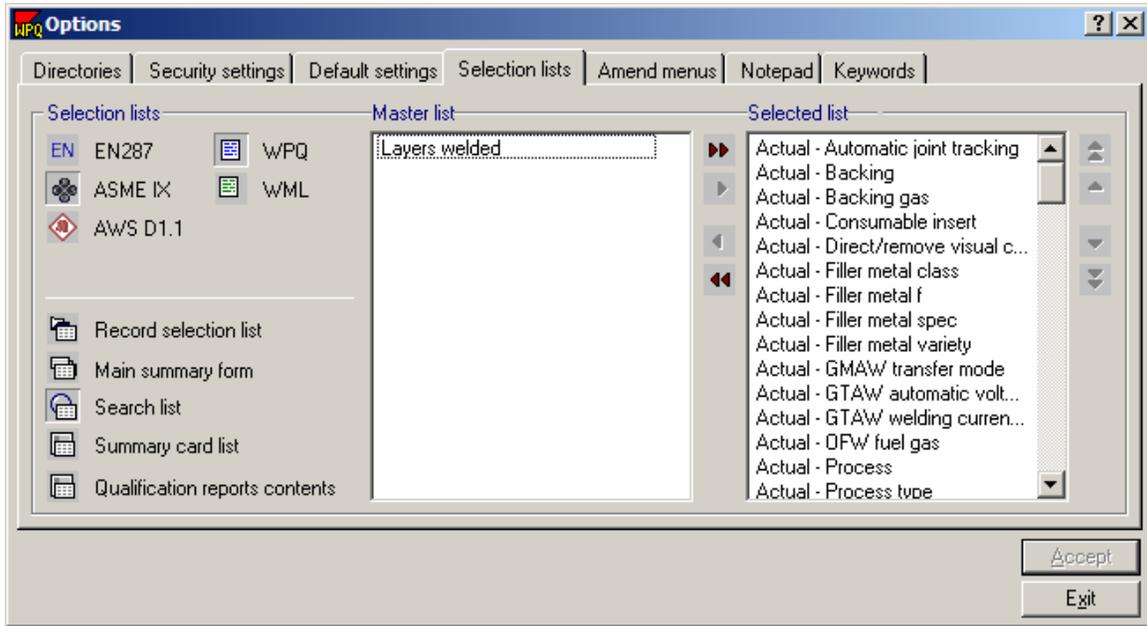
The Summary form, as shown above, will be printed to the default printer.

3.2.3 Search list

Select fields to from which to search

On the *Record Selection Manager* there are three ways to search and sort data. The first is the list of records itself, which can be sorted alphanumerically by clicking on column headers. The second is the fast filter which allows the user to search rapidly on a few pre-set parameters and the third is the comprehensive search, which allows the user to search on one or more parameters from a larger list.

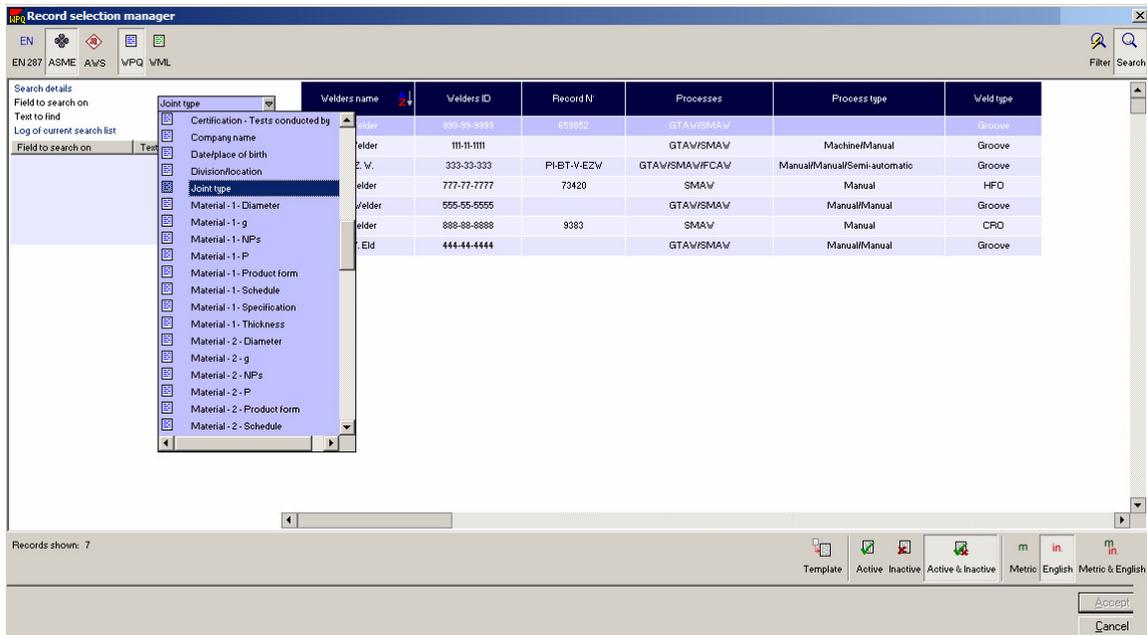
This selection list allows the user to define the contents of the drop-down list of variables, which the user can search using the comprehensive search routine.



As shown above, there are a large number of fields that are used in the Search fields. The fields selected above can be seen in the Record Selection Manager



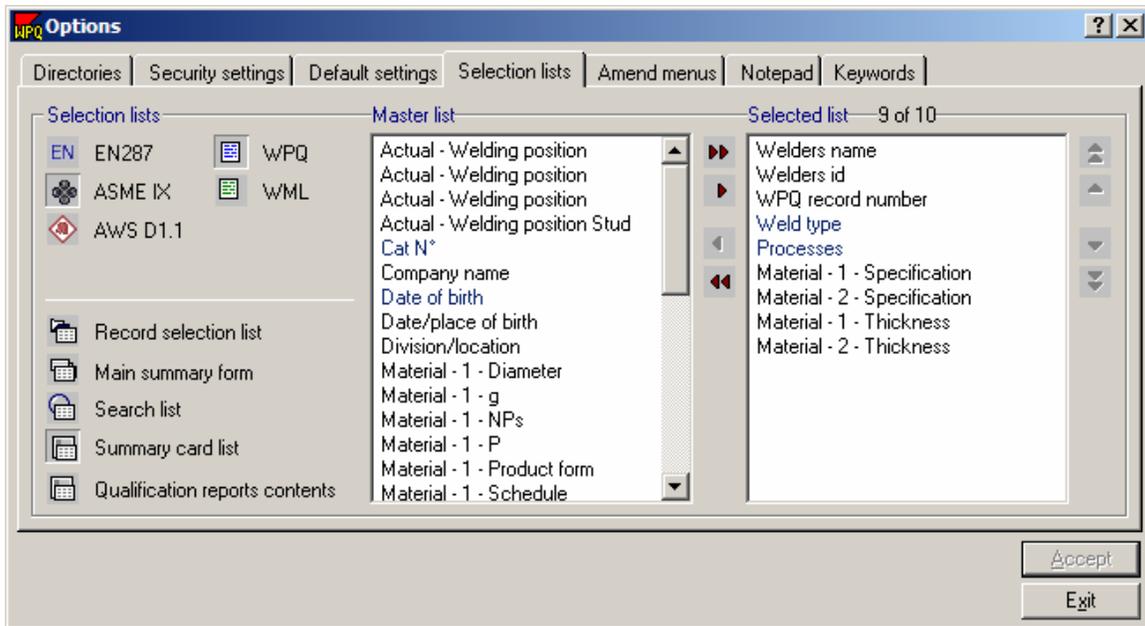
after clicking on the search button and then **field to search on**. A drop down menu appears which contain all of the fields from above.



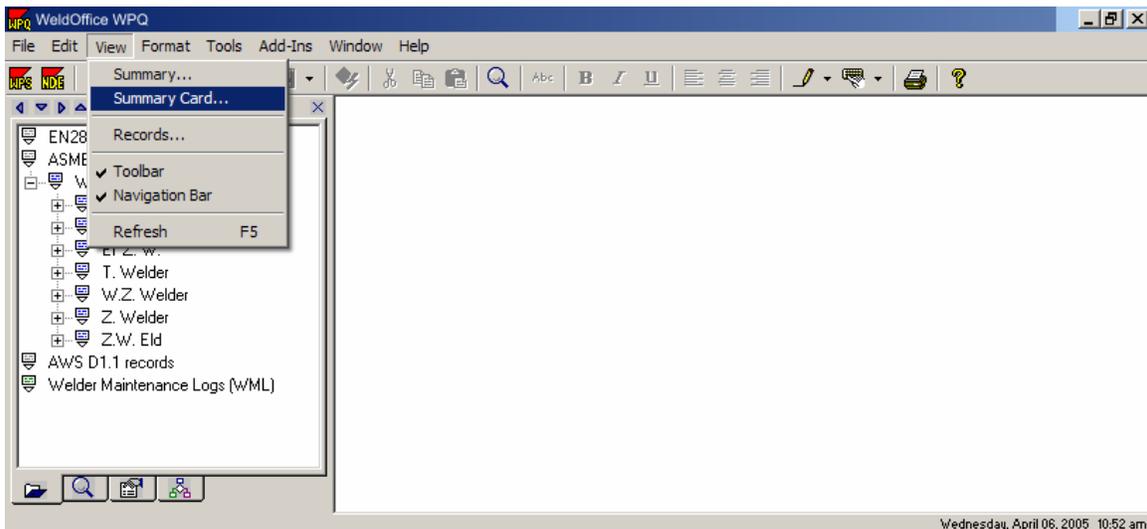
Each document type within each code/standard can have a different list of search variables.

3.2.4 Summary card list

The Summary card is an alternative method of printing a Document summary. Each 'card' comprises up to ten variables which are printed in one column. For example, this option allows the user to print a summary of qualification tests for one welder, which could be folded and kept in a pocket.

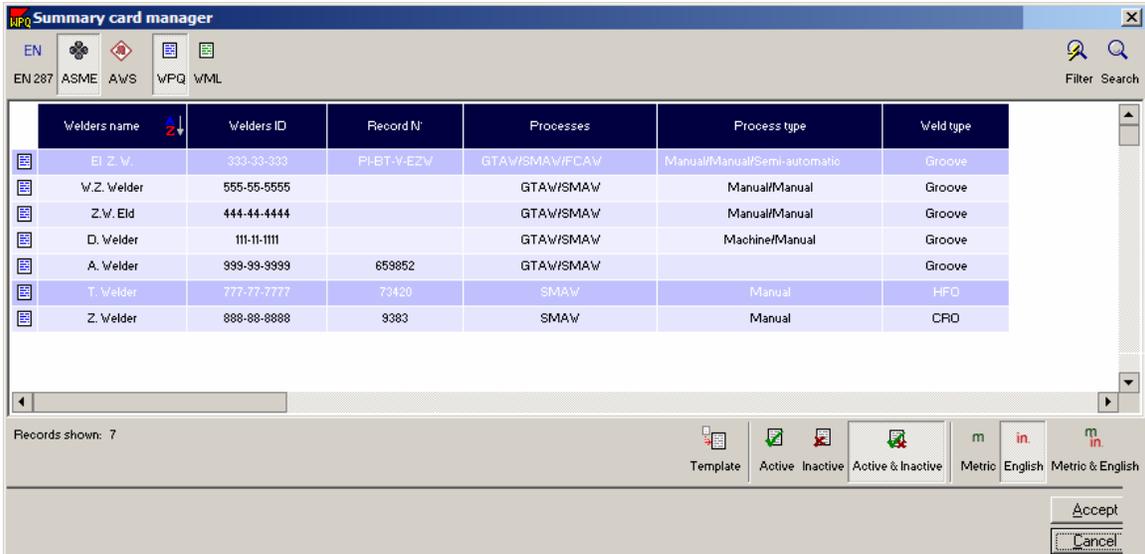


After selecting the appropriate fields to view on the Summary Card, open the Summary Card by clicking on **View** and then **Summary Card**.



The summary card manager will open. (**Note:** the fields present in this manager can be changed by changing the selection list for the *Record Manager*).

Select the welders for whom the user would like a summary card and then click **Accept**.



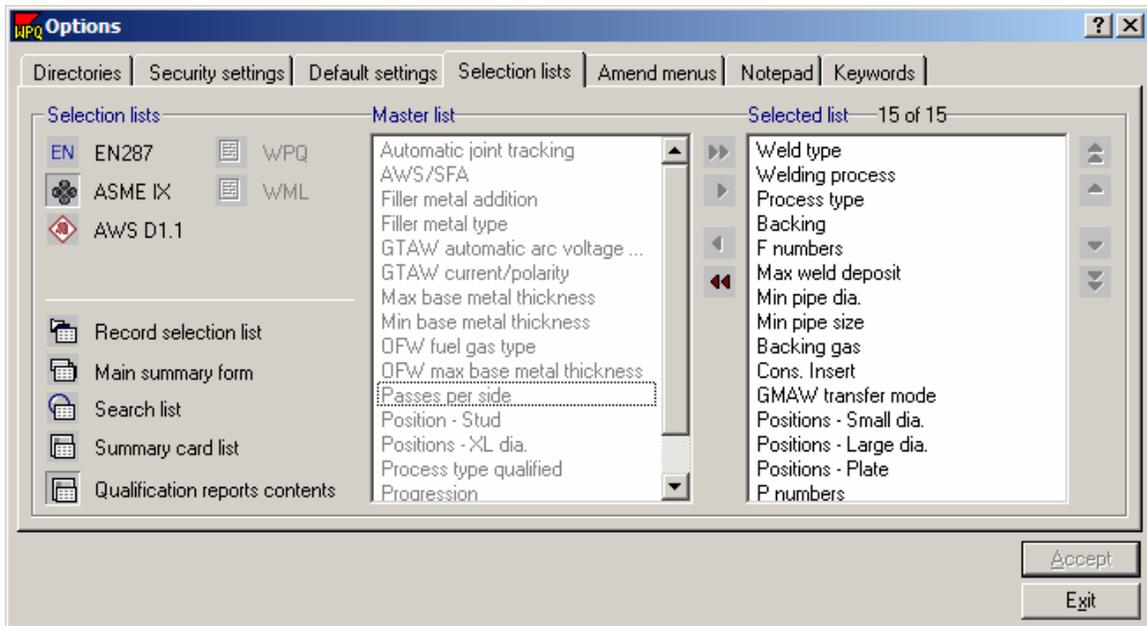
The summary card is displayed below. Notice that the fields shown here are the fields that were selected in the Summary Card List.



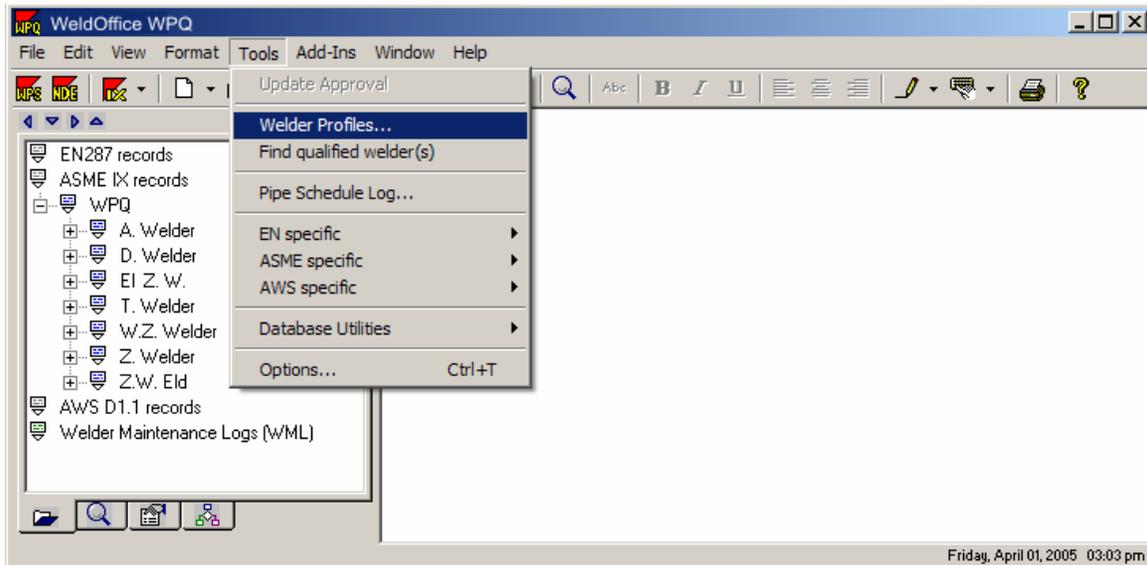
3.2.5 Qualification Report Contents

One of the unique features of WeldOffice® WPQ is that it allows the user to display and print a summary of all the qualifications of a welder.

WeldOffice® WPQ also allows the user to define the contents of these reports using the Selection list facilities. Each item in the selected list forms a column of data in the Qualified ranges report. The user can define different report formats for each code/standard.



To view the Qualification Report, click on **Tools** and then **Welder Profile**. A *Welder Selection* screen will appear. Select the welders for whom the user would like to see the qualification report.



Welder selection

Records listed: 8

Picture	Name	ID	Stamp	Date of birth	Company	Division	Status
	A. Welder	999-99-9999	AW-93	12/19/1965	C-spec		Active
	D. Welder	111-11-1111	DW-05	4/30/1971	C-spec		Active
	Ei Z. W.	333-33-333	EZW-02	1/25/1975	C-spec		Active
	T. Welder	777-77-7777	TW-19	4/14/1966	C-spec		Active
	W.Z. Welder	555-55-5555	WZW-01	9/19/1958	C-spec		Active
	Welder Z	222-22-2222	WZ-04	4/6/1979	C-spec		Active
	Z. Welder	888-88-8888	ZW-24	9/26/1970	C-spec		Active
	Z.W. Eld	444-44-4444	ZWE	1/19/1995	C-spec		Active

Accept Cancel

After selecting the welders, click on the " **Show the Welders Qualification Report**" icon . The qualifications report will appear with the variables that were selected for the Qualifications Report Contents List.

Welder selection (Qualified ranges)

EN

Welder details					Welder's qualified ranges				
Picture	Name	ID n°	Stamp n°	Division	Weld type	Welding process	Process type	Backing	F numbers
	Ei Z. W.	333-33-333	EZW-02	-	fillet	GMAW	Semi-automatic	With	6
	Ei Z. W.	333-33-333	EZW-02	-	fillet	GTAW	Manual	With, without	6
	Ei Z. W.	333-33-333	EZW-02	-	groove	SMAW	Manual	With	1.4
	Ei Z. W.	333-33-333	EZW-02	-	fillet	SMAW	Manual	With	1.4
	Ei Z. W.	333-33-333	EZW-02	-	groove	FCAW	Semi-automatic	With	6
	Ei Z. W.	333-33-333	EZW-02	-	fillet	FCAW	Semi-automatic	With	6
	Ei Z. W.	333-33-333	EZW-02	-	groove	GTAW	Manual	With, without	6
	Ei Z. W.	333-33-333	EZW-02	-	groove	GMAW	Semi-automatic	With	6
	D. Welder	111-11-1111	DW-05	-	fillet	GTAW	Machine	With, without	-
	D. Welder	111-11-1111	DW-05	-	groove	SMAW	Manual	With	1
	D. Welder	111-11-1111	DW-05	-	fillet	SMAW	Manual	With	1

Records listed: 16

Close

3.3 Setting Up Menus, Keywords and the Notepad

The drop-down menus built into the software, the list of keywords that can be built and the Notepad are all designed to reduce the time taken to create and edit documents. Each of these will be described in sections below.

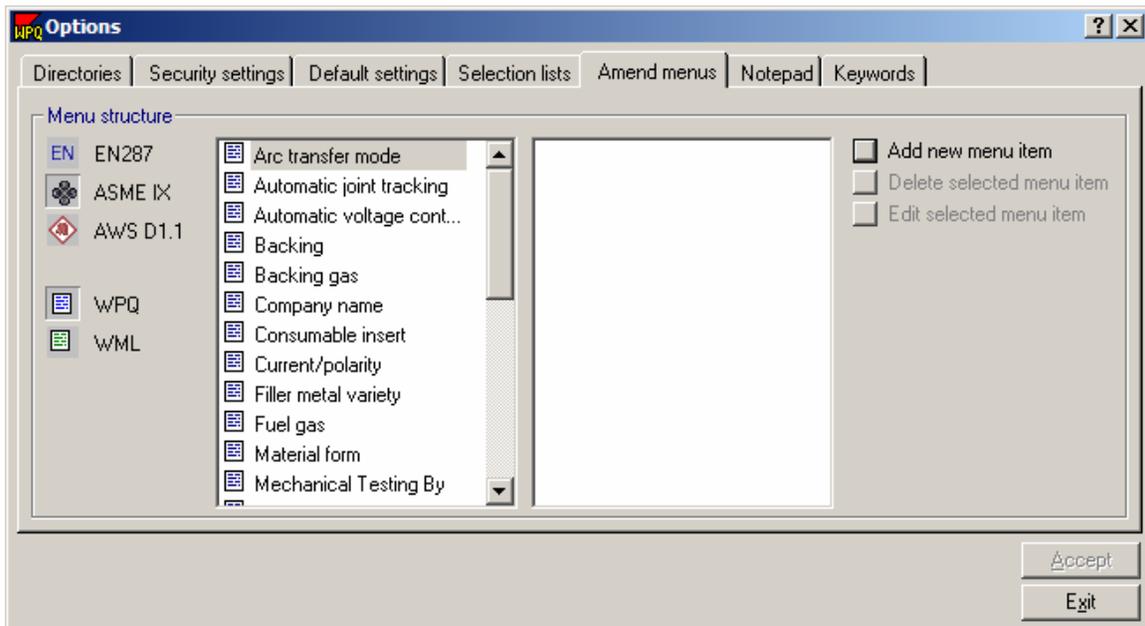
- Changing Drop Down Menus
- Notepad
- Keywords

3.3.1 Change the Drop Down Menus

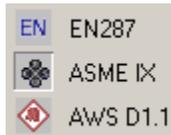
Changing the content of the drop-down menus

The Amend Menu tab allows modification of the content that users add to any drop down menu. Any changes made here will not reflect the default drop down menu which came with the software.

1. Click on **Tools** and then **Options** to open the Options window. Click on the fifth tab called **Amend Menu**.



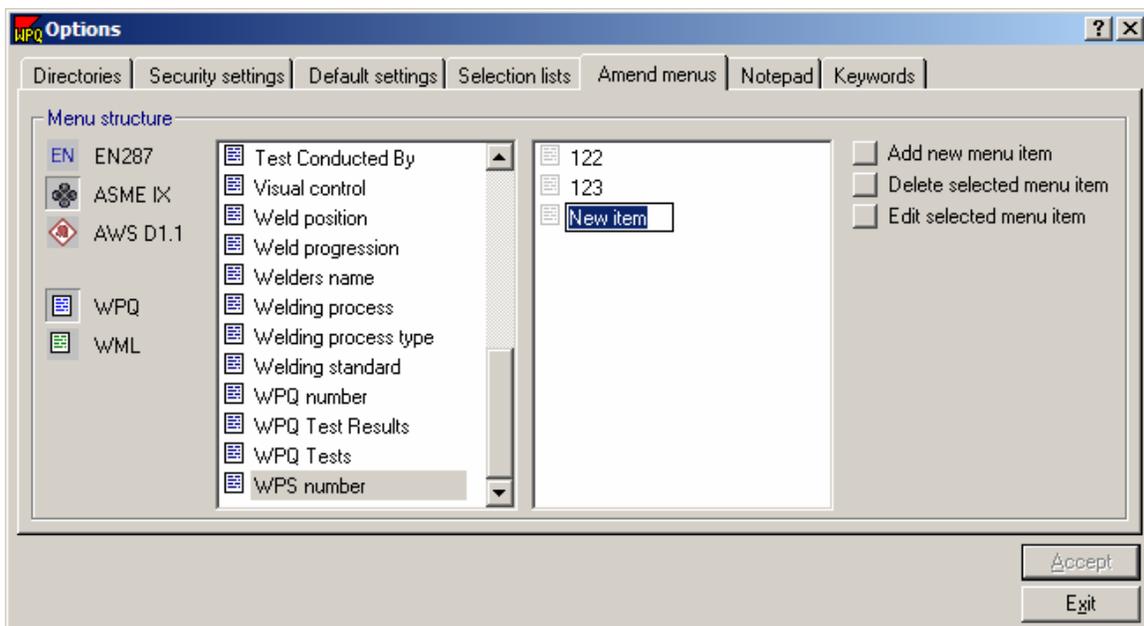
2. For each available document, a specific list of menu fields will appear. First select the applicable code.



3. Then select the applicable record type.



4. With a specific record type selected, all fields will appear that have user definable drop down menus. Select one of the fields to make changes to its menu content by clicking on the title. For instance **WPS Number**, as shown in the figure below.

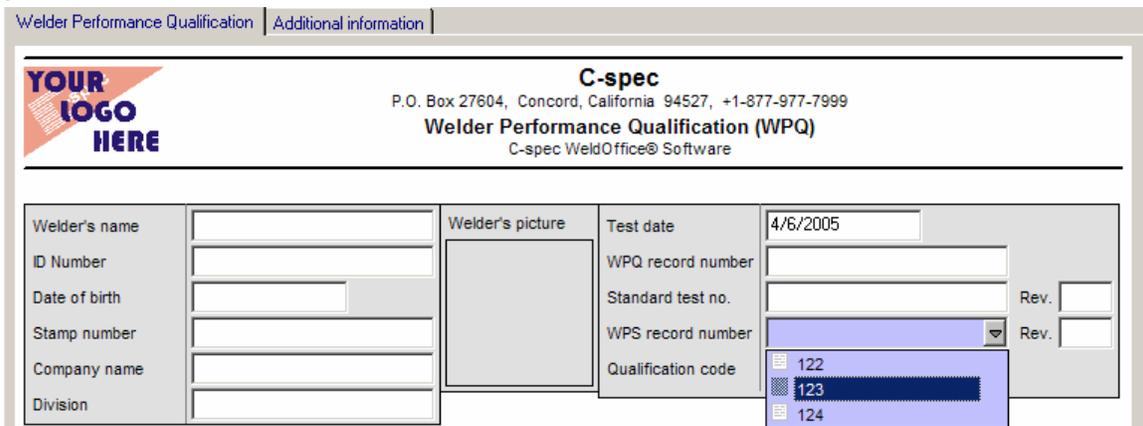


5. If there are any contents of that field that have been defined by the user, they will appear in the right hand window. To edit or delete an item click on that item and then select **Edit selected item** or **Delete selected item**.

6. To add an item click on **Add new item**.

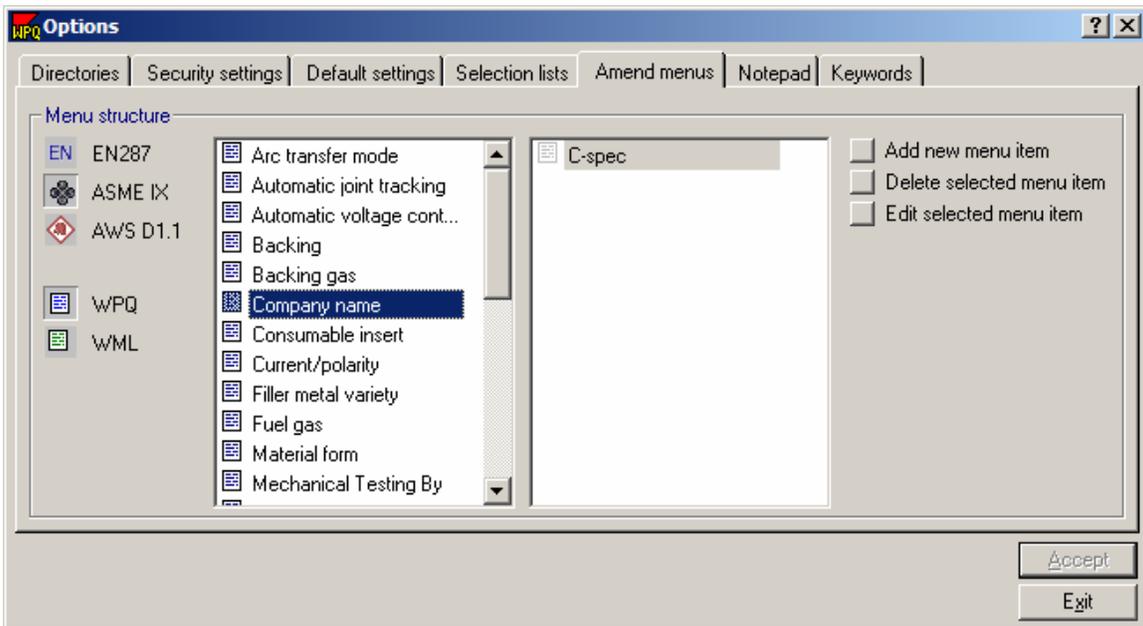
7. This opens a New Item text in the right hand window. Type the item that the user wants to add to the drop down menu. For instance: 124

- Click **Exit** when finished.
- When the user opens a new WPQ, in the drop down menu for WPS number, they will see the numbers shown above



To add companies to the drop down list:

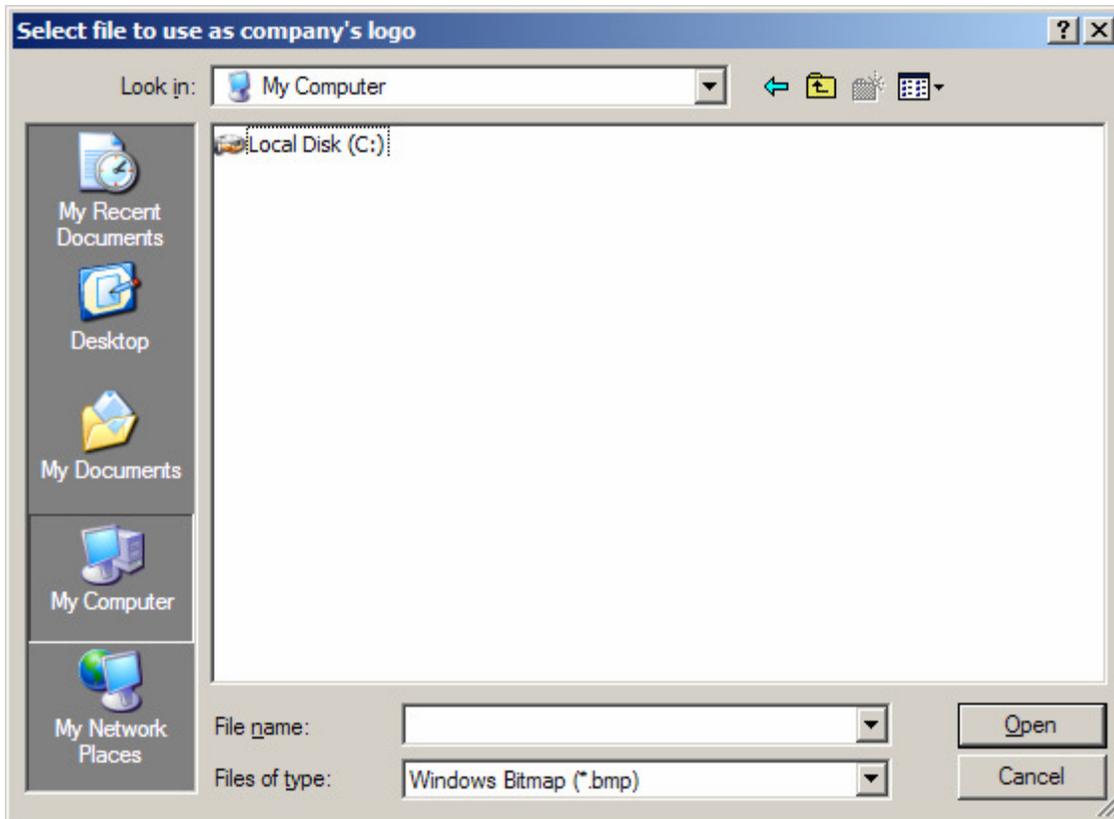
- Follow the above steps 1-3.
- Click on **Companies**



3. Click on **Add new menu item**
4. The screen shown below will open. Fill out the information as necessary.

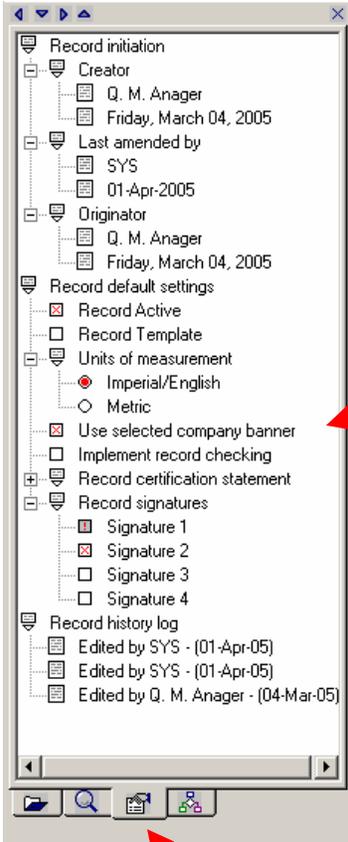
The screenshot shows a dialog box titled "Company details". It features several input fields for company information. The "Company" field is filled with "ABC Piping". The "Division" field is empty. The "Address" field is filled with "1234 ABC way" and "ABC, 12345". The "Contact number" field is empty. To the right of these fields is a "Company logo" box containing a small green and yellow icon. Below the input fields is a large "Notes" text area. At the bottom right are "Accept" and "Cancel" buttons.

5. When the mouse is moved over the Company Logo box, left click and a standard 'Select file' window will open. Choose the location of the bitmap to use for the company logo.



6. After the company logo is selected, the user will be taken back to the Company Details windows. Click **Accept**. The user will then be taken back to the Amend menus window.

In order to display this company rather than the default company, in the header, the user will have to make sure that the **Use the Selected Company** is checked on the properties tab in the navigation bar (section 3.4.3.5) as detailed below.



Make sure this box is checked if the selected company is what needs to be displayed in the header.

Properties Tab

Welder Performance Qualification | Additional information

ABC Piping
1234 ABC Road, ABC, 12345
Welder Performance Qualification (WPQ)
WeldOffice WPQ

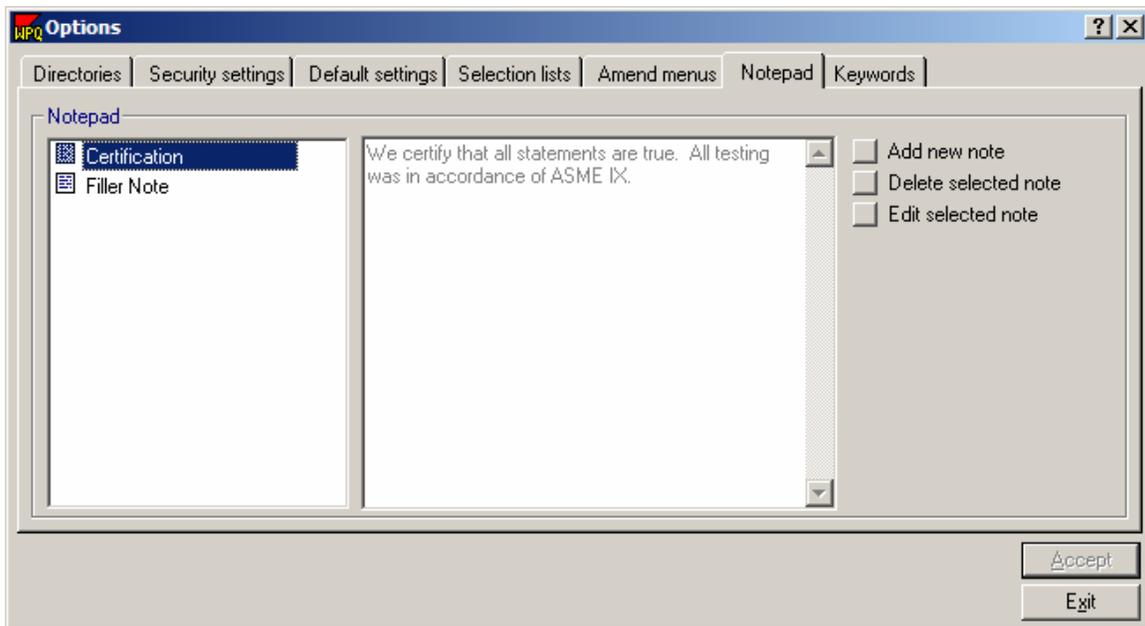
Welder's name	A. Welder	Welder's picture	Test date	3/4/2005
ID Number	999-99-9999		WPQ record number	659852
Date of birth	12/19/1965		Standard test no.	Rev. <input type="checkbox"/>
Stamp number	AW-93	WPS record number	Rev. <input type="checkbox"/>	
Company name	ABC Piping	Qualification code		
Division				

3.3.2 Notepad

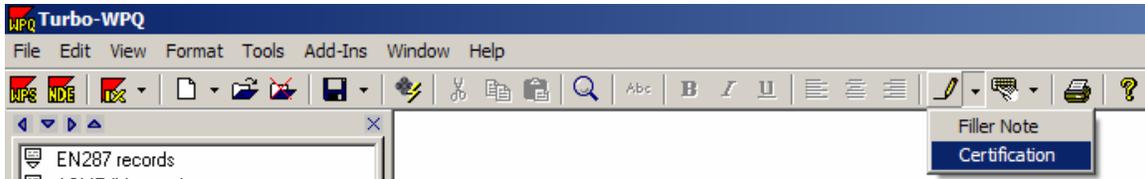
Specifying the content of the Notepad database

The WeldOffice® software allows the user to store typical notes eliminating the need to produce these items more than once. A typical note may be instructions for cleaning strategies for different metals or standard statements on welder approval requirements.

1. To access the Notepad database, click on **Tools** and then **Options** to open the options window. Click on the sixth tab called **Notepad**. (Another way to access the notepad is to click on the pencil icon  on the toolbar)



2. To add a new note, click on **Add new note**.
3. Type in the name of the note.
4. Then click over to the right hand side window and type the contents of the note.
5. To edit or delete a note, select the note and then click **Delete selected note** or **Edit selected note**.
6. When all of the desired changes have been made, press the **Accept** button.
7. To access the notepad, click on the drop down arrow next to the pencil icon  and then click on the note to be inserted.

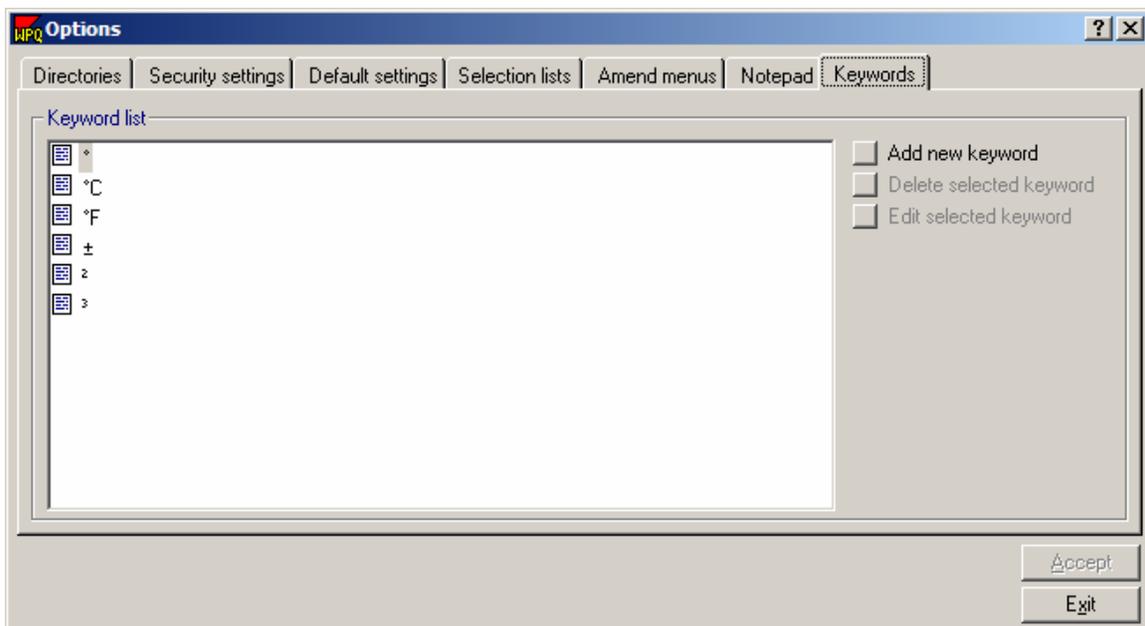


3.3.3 Keywords

Specifying the content of the Keywords database

The WeldOffice® software allows the user to store hard to find characters eliminating the need to produce these items more than once.

1. To access the Keywords database, click on **Tools** and then **Options** to open the options window. Click on the seventh tab called **Keywords**. (Another way to access the notepad is to click on the keyboard icon  on the toolbar)



2. To add a new keyword, click on the **Add new keyword** icon.
3. Enter the new keyword or character by using the Windows paste feature or by pressing the appropriate ASCII character code.

For more information on ASCII Characters, look up **Character Map** in the Windows help system.

4. To edit or delete a keyword, select the keyword by clicking on it and then click **Delete selected keyword** or **Edit selected keyword**.
5. When all of the desired changes have been made, press the **Accept** button.
6. To access the keyword list, click on the drop down arrow next to the keyword icon  and then select a keyword listed.

3.4 Icons & Toolbars

Shown below are the icons that can be viewed along the top row of WeldOffice® WPQ. A description of the bottom row of icons is listed below. The top row is described in sections below titled: Subjects under File, Edit, View, Format, Tools, Add-ins, and Window.



Icon	Description
	WeldOffice® WPS: Click on this icon to open the WeldOffice® WPS Program to create weld performance qualifications, weld procedures, etc.
	WeldOffice® NDE: Click on this icon to open the WeldOffice® NDE Program to create radiographic, ultrasonic, radiography, penetration and magnetic particle reports, etc.
	Turbo-IX: Click on this icon to open the Turbo-IX Program which lets the user quickly and easily find any information required to qualify and to review welding procedures for ASME Section IX code compliance.

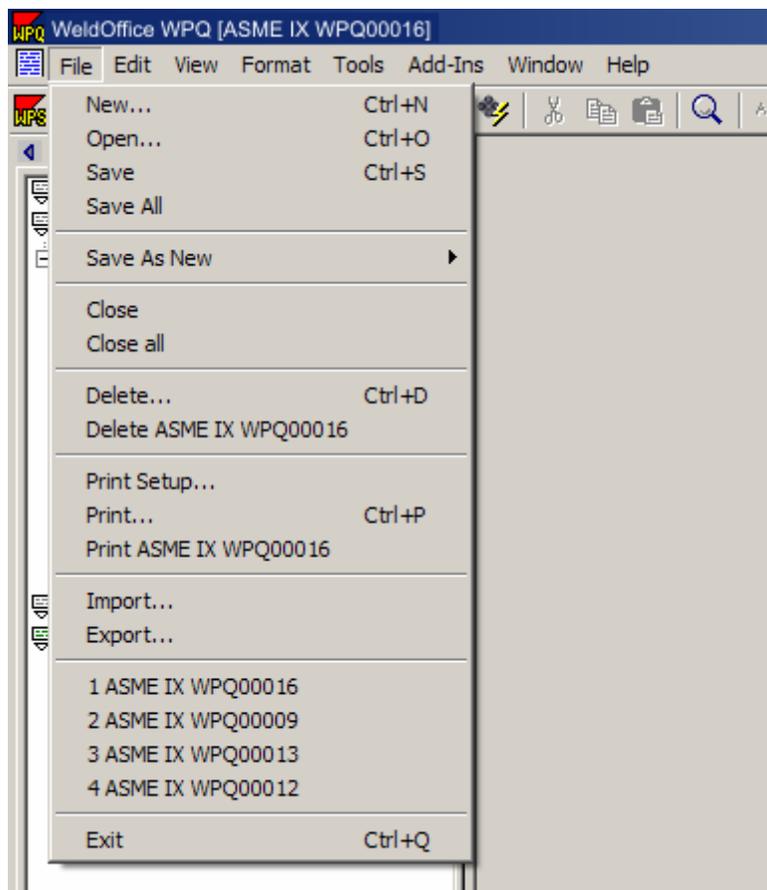
	New Document: Click on this icon to open a new document through the records creation manager. Or click on the down arrow to the right of the icon, and the list of different reports will appear. Then simply click on the report to be created.
	Open Existing Documents: Click on this icon to be taken to the records selection manager. Double click on an existing document in the list to open it.
	Close Document: Click on this icon to close the open document.
	Save: Click on this icon to save the current document. Or, click on the drop down arrow to save the document as another type of report.
	Generate Range of Approval: Generates a range of qualification based on welding conditions
	Cut: Click on this icon to cut the current selection of text, putting it on the clipboard for later use.
	Copy: Click on this icon to copy the current selection of text to the clipboard.
	Paste: Click on this icon to paste the item on the clipboard into the document where the cursor is located.
	Find: Click on this icon to open the search page.
	Font: Click on this icon to change the font type, style, size, color, etc. The font can only be change on text added to the additional information page.
	Bold: Click on this icon to make the current selection of text bold in appearance.

	Italic: Click on this icon to make the current selection of text italicized in appearance.
	Underline: Click on this icon to make the current selection of text underlined.
	Left Justification: Click on this icon to make the current selection of text justified to the left hand side of the page.
	Center Justification: Click on this icon to make the current selection of text justified to the center of the page.
	Right Justification: Click on this icon to make the current selection of text justified to the right hand side of the page.
	Note: Click on this icon to add/edit/delete a note. A note is something that the user will have to add to many reports and this feature allows the statements to be stored and easily inserted each time they are needed. Click on the down arrow to the right of the note icon to see a list of previously defined notes, and click on the one to be inserted.
	Keywords: Click on this icon to add/edit/delete a keyword, which can be a symbol or statement. A keyword is something that will be added to many reports and this features allows the user to store the keywords and easily insert them each time they are needed. Click on the down arrow to the right of the note icon to see a list of previously defined keywords, and click on the one to be inserted.

	<p>Print: Click on this icon to print the open document. This will use the default printer. If changes need to be made to the printer, go through <i>file-print setup</i> from the main header.</p>
	<p>Help: Click on this icon to open the help files.</p>

3.4.1 Subjects under File

Each subject under File will be described briefly below and the further descriptions will be listed in sections below.



New: Clicking on this will open a *Record Creation Manager* where the type of document that is to be created can be selected. Press the accept key when finished and the blank document will open.

Open: Click on this to open the record selection manager and then double click a record to open it.

Save: Click on this to save the current records changes.

Save All: Click on this to save all open records.

Save As New: Click on this to save an existing record as another WPQ. This creates a new record with the same applicable information with a new WPQ record number. This is useful if the user has several WPQ's to enter that were either the same process information or welder.

Close: Click on this to close the current record.

Close All: Click on this to close all the records that are open.

Delete: Click on this to be taken to the records deletion manager where the user can select the records to be deleted.

Delete XXXXXXXX: Deletes the current record.

Print Setup: Clicking on this brings up the Print Setup screen which the user can choose what printer, paper size and orientation.

Print: Brings up a report print manager, which the user can select the records to be printed.

Print XXXXXXXX: Prints the current record.

Import: This will bring up an import from window which will allow the user to select the files that will be imported.

Export: Brings up the records export manager, where the user can select the records to be exported.

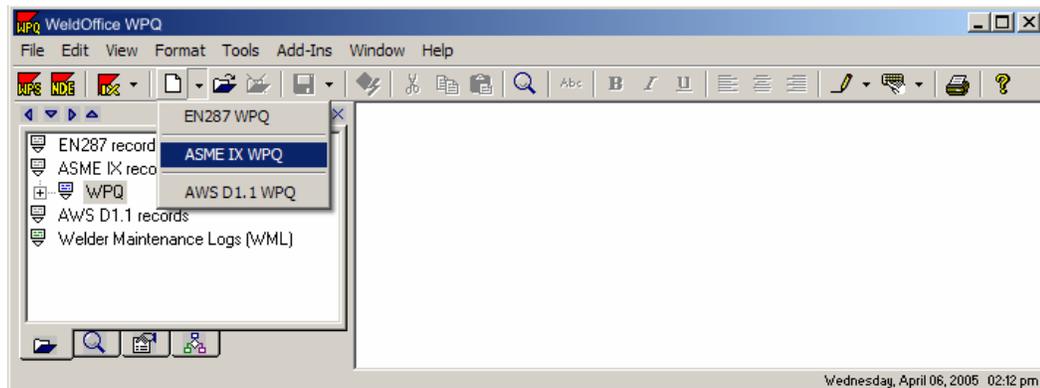
3.4.1.1 Create a New File

Create a new record from the toolbars or File option

There are three ways to create a new record:

1. Toolbar - New Drop Down

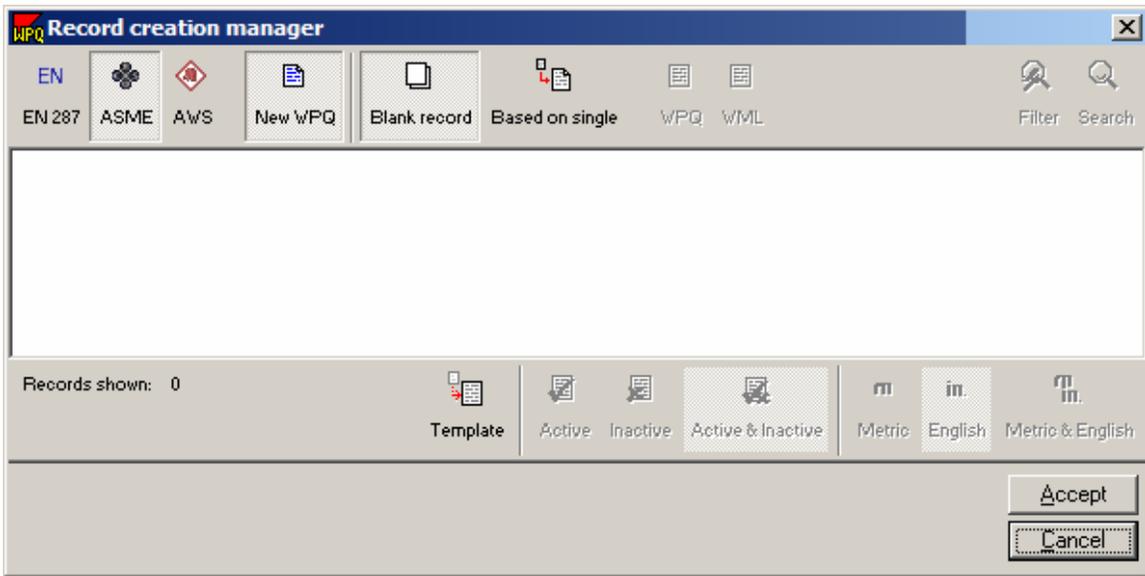
- Click on the drop down arrow next to the **New** icon .



- From the drop down menu, select the code/record to create.
- The new record will open.

2. Toolbar - New Icon

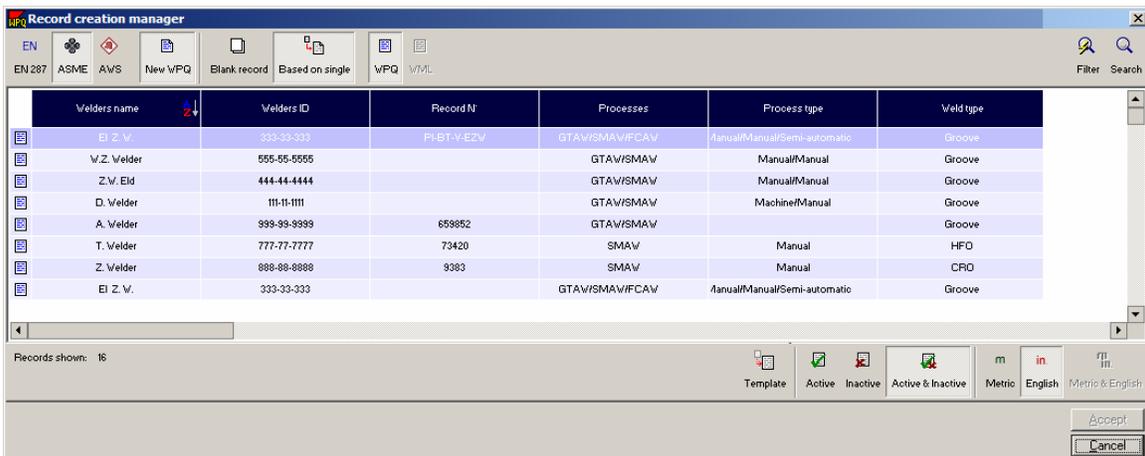
- Another way to open a new document is by clicking on the New icon . This will open the **Records Creation Manager**.



Record creation manager with **Blank record** selected.

- From the **Records Creation Manager**, select the code to create the record to.
- Select a blank record or a record based on other existing records.

(If **Blank record** is chosen, there will be no records listed in the manager. If the record is **Based on single** (based on existing results), the manager will list all the applicable records to choose from, click on one of these records.)



Record creation manager with **Based on Single** selected.

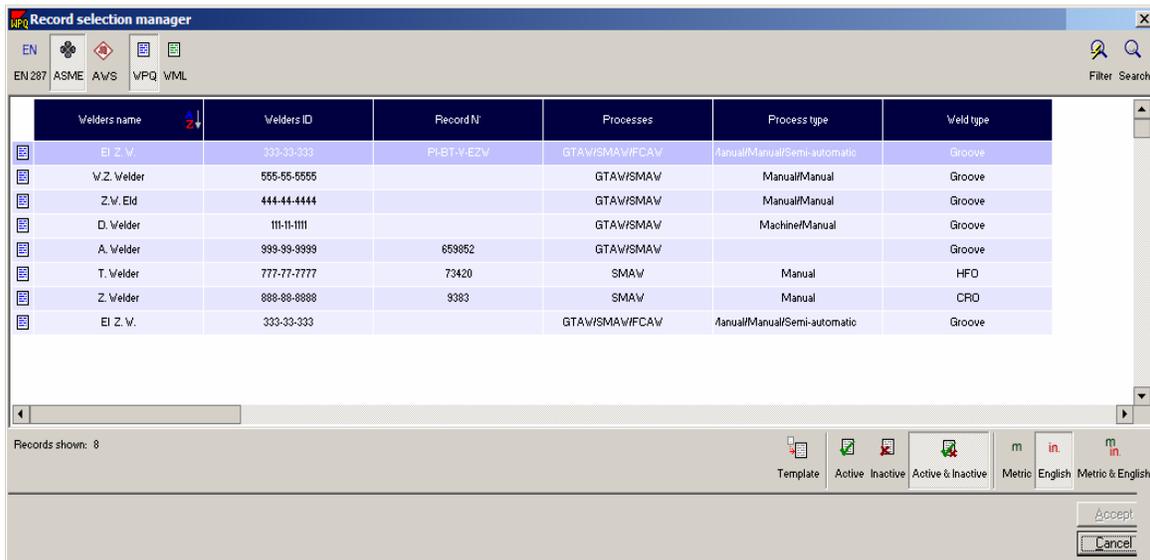
- Press the **Accept** button when finished.

3. File - New Option

- Another way to open a new document is by clicking **File** and then **New**. This will open the **Records Creation Manager** (as detailed above). Follow the instructions listed above for Toolbar-New Icon.

3.4.1.2 Open a File

1. Click on **File** and then **Open**, which will open the **Records Selection Manager**.



2. Select the code and record type to be opened.
3. Click on the record to be opened. If there are multiple records to open, hold down the **ctrl** or **shift** key and select the other records.
4. Click the **Accept** button when finished.

3.4.1.3 Save

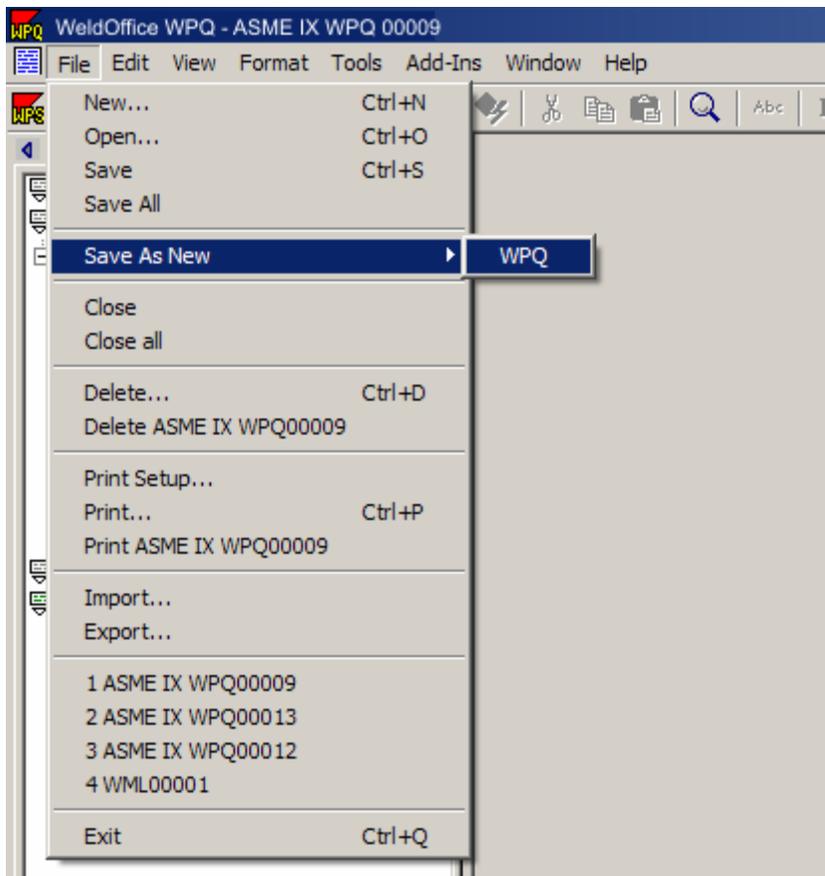
1. Click on **File** and then **Save**.
2. WeldOffice®WPQ will automatically save the current record. (There will not be any windows that open during the saving process)

3.4.1.4 Save All

1. Click on **File** and then **Save All**.
2. WeldOffice®WPQ will automatically save all the records that are open. (There will not be any windows that open during the saving process)

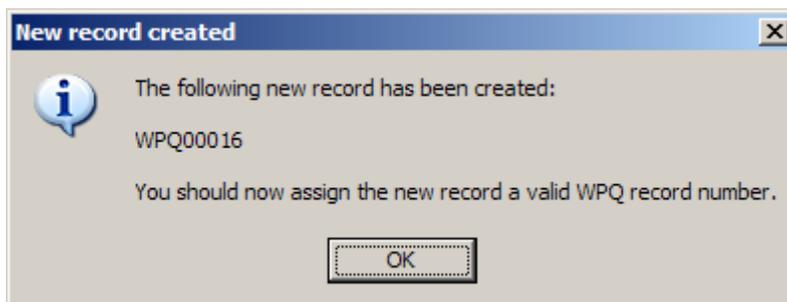
3.4.1.5 Save as New

1. Click on **File** and then **Save as New**.



2. Click on **WPQ**. This will automatically copy all of the information from the current record to the new record.

3. The **New Record Created** screen will pop up showing the user what the file name is and that it should be changed.



4. Click on the **Ok** button. The new record will be shown on the screen.

3.4.1.6 Close All

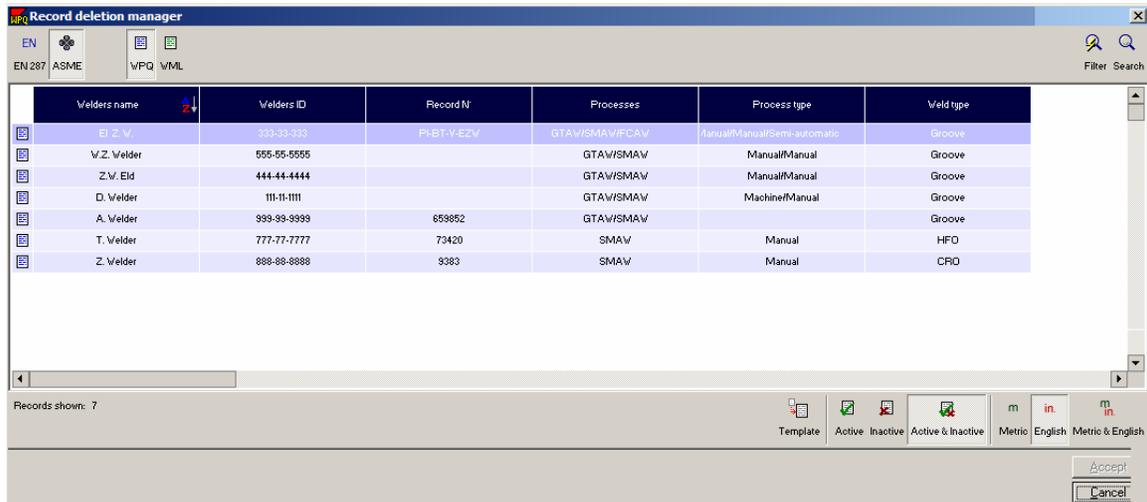
1. Click on **File** and then **Close All**.
2. The program will close all reports that are open.

3.4.1.7 Close Report

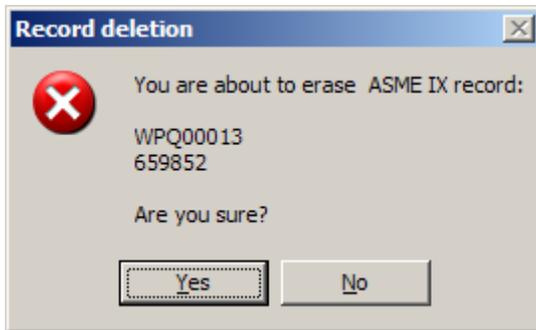
1. Click on **File** and then **Close**.
2. The program will close the current report only.

3.4.1.8 Delete

1. Click on **File** and then **Delete**.
2. The **Report Deletion Manager** will open.



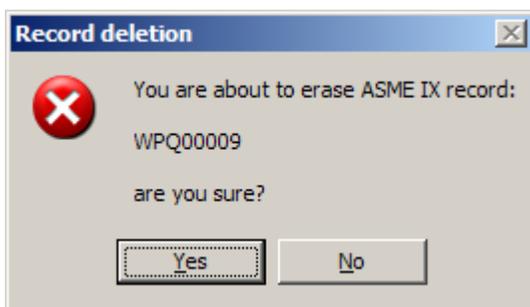
3. Click on the record to be deleted. If there are several to be deleted, hold down the **ctrl** or **shift** key and select the other records. Click **Accept**.
4. The user will be prompted by a **Record Deletion** Screen.



5. Click **Yes** to proceed with the deletion.
6. Close the **Record Deletion Manager** screen when finished deleting reports.

3.4.1.9 Delete Current Report

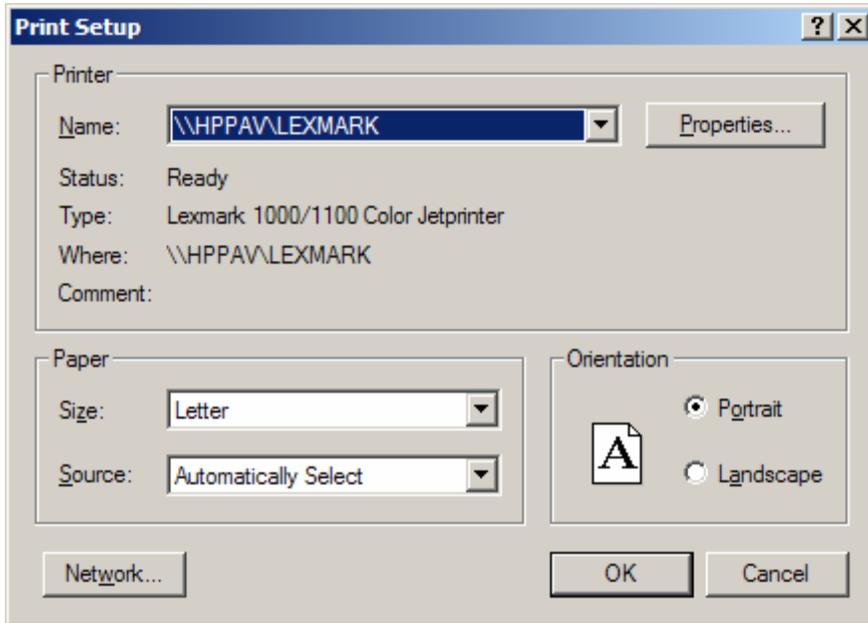
1. Click on **File** and then **DeleteXXXXX**. The current file name will be next to the delete, for instance Delete ASME IX WPQ00009.
2. The user will be prompted by the **Record Deletion** screen.



3. Click **Yes** to proceed with the deletion.

3.4.1.10 Print Setup

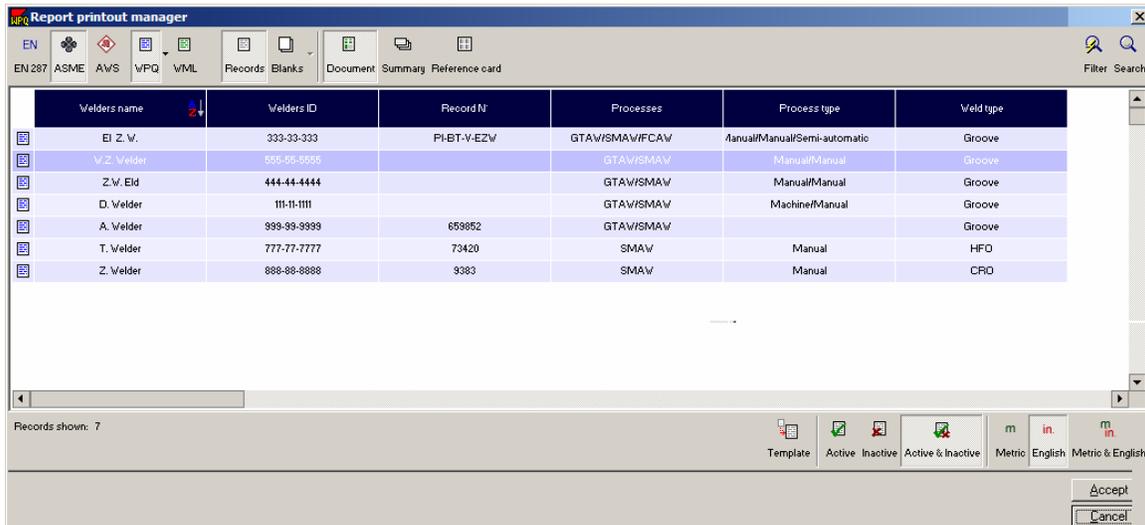
1. Click on **File** and then **Print Setup**.



2. The **Print Setup** Screen will appear.
3. Click on the drop down arrow next the **Name** of the printer to select a different printer. (The printers need to be installed before attempting to go through this setup.)
4. Click on the **Properties** button to see the properties of the printer selected.
5. Choose the size of the paper. Click on the drop down arrow next to the paper size box to see the other options available.
6. Choose the source of the paper. If the printer selected has more than one tray, select which tray or let it be automatically selected. Click on the drop down arrow next to the paper source box to see the other options available.
7. Determine if the orientation of the paper should be portrait or landscape. Click on the word **Portrait** or **Landscape** to select either one.
8. If the user is on a network, click on **Network** which will open a **Connect to Printer** screen which will allow the user to connect to a network printer.
9. Click the **OK** button when finished.

3.4.1.11 Print

1. Click on **File** and then **Print**.
2. This will open the **Report Printout Manager** screen.



3. Click on the record to be printed. (If there are multiple records to be printed, hold down the **ctrl** or **shift** key and select the other records).
4. Click on **Accept** when finished and the record(s) will be sent to print at the default printer (3.4.1.10).

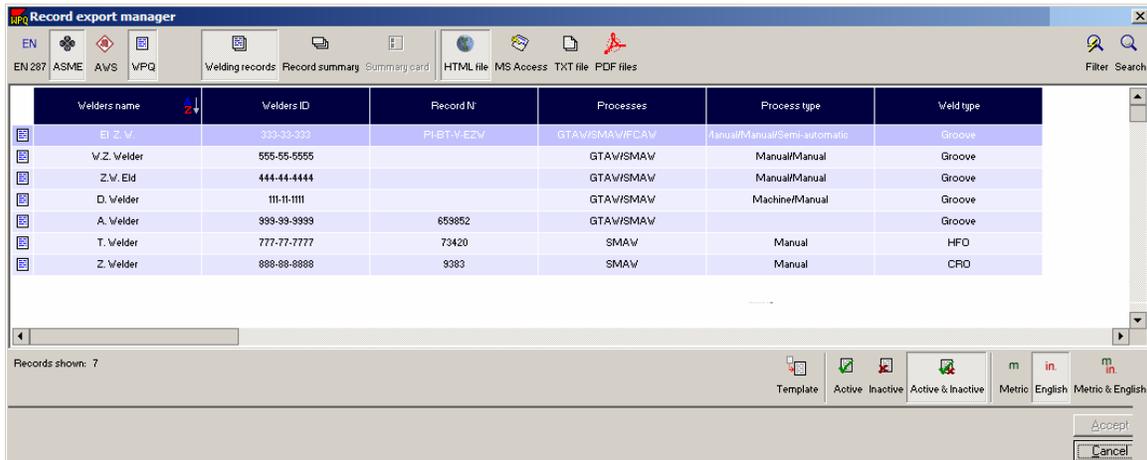
3.4.1.12 Print Current Record

1. Click on **File** and then **Print xxxx**.
2. This will print the current record to the default printer (3.4.1.10).

3.4.1.13 Export a Report

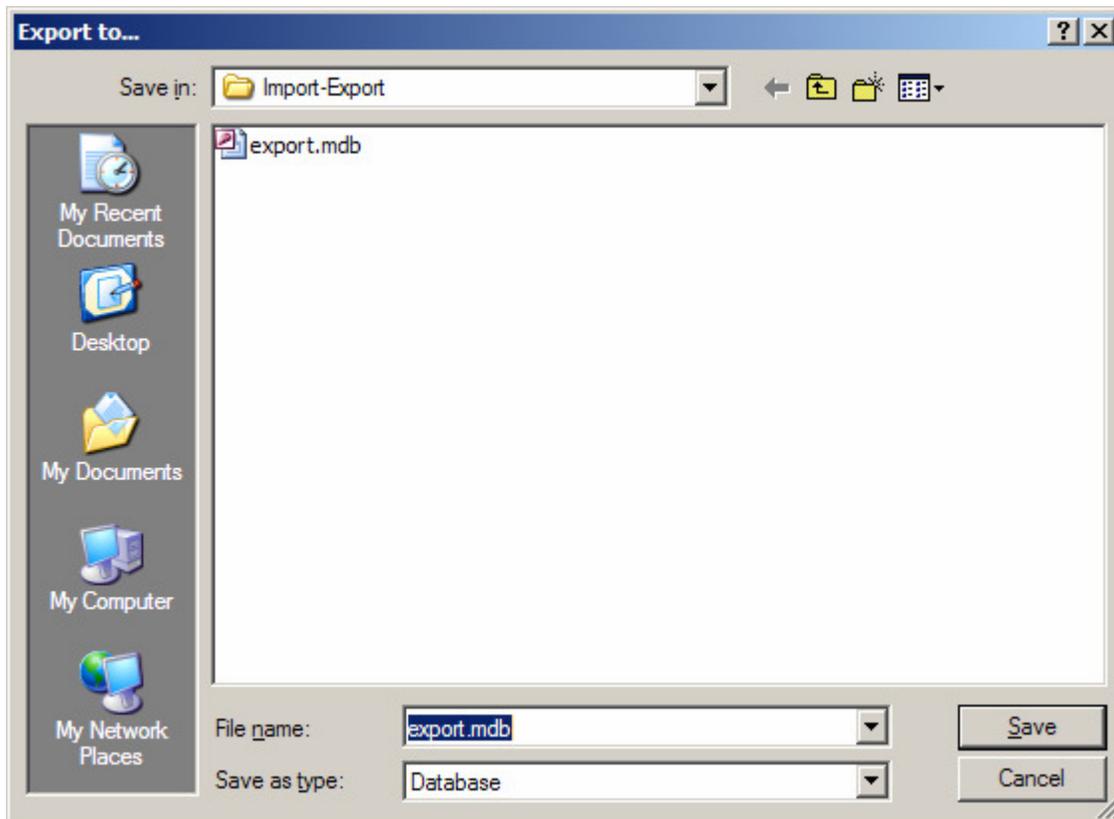
Importing and exporting in the WeldOffice® software is used to share records between computers that are not utilizing the networking capabilities. Additionally, the export feature is also used to publish the records to an HTML format for web display, ASCII Text format for a simple data display, or PDF.

1. Click on **File** and then **Export**.
2. The **Report Export Manager** will open.



3. Select the type of file to export the report as: HTML file, MS Access, TXT file, or PDF file.
4. Select the report to export by double clicking on it or click on it and then click on **Accept**. (To select several reports, hold down the **ctrl** key and select the other reports. Click on **Accept** when finished.)
5. The user will be prompted to give the file a name and a location.

It is suggested that the user make a Import-Export folder under the WeldOffice directory and then use "export" as the filename of the database to export. This way there is no confusion on what database to import later. Problems can occur when the master database is accidentally imported on to itself.

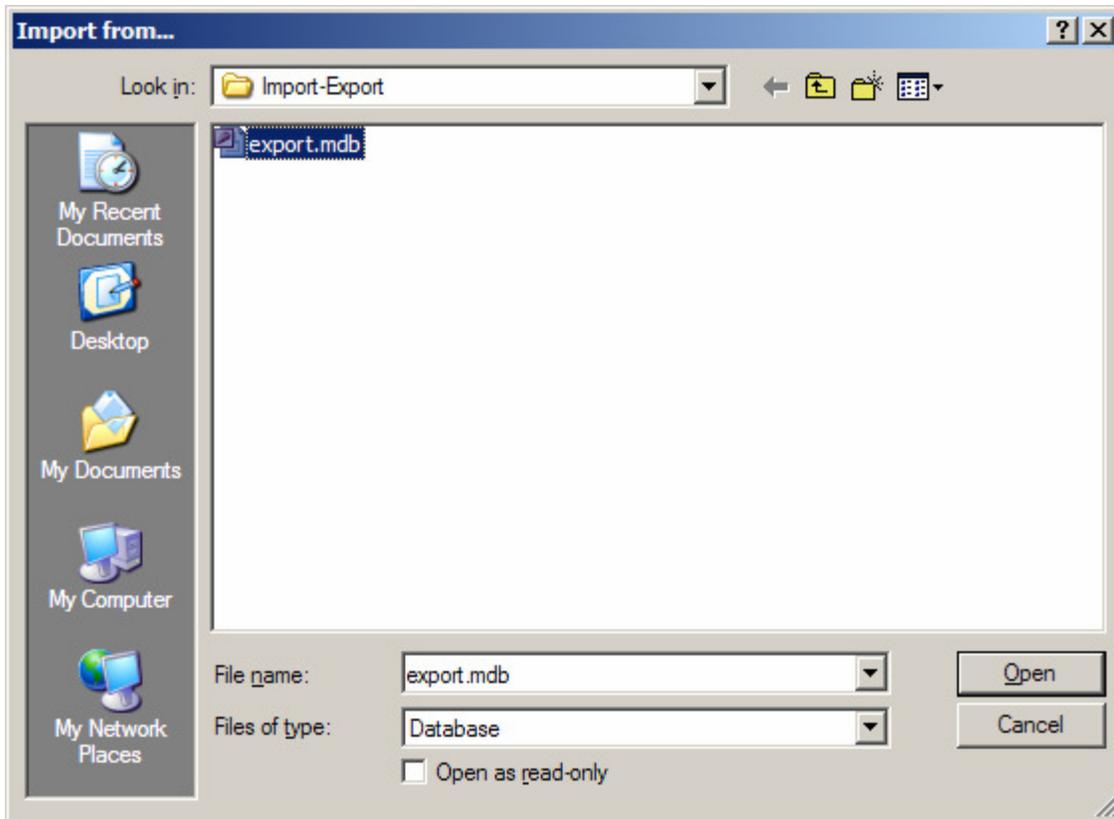


6. Click **Save** after choosing a name and location.
7. Bars will appear showing the progress of the export. When these bars disappear, the export was completed.

3.4.1.14 Import a Report

Importing and exporting in the WeldOffice® software is used to share records between computers that are not utilizing the networking capabilities.

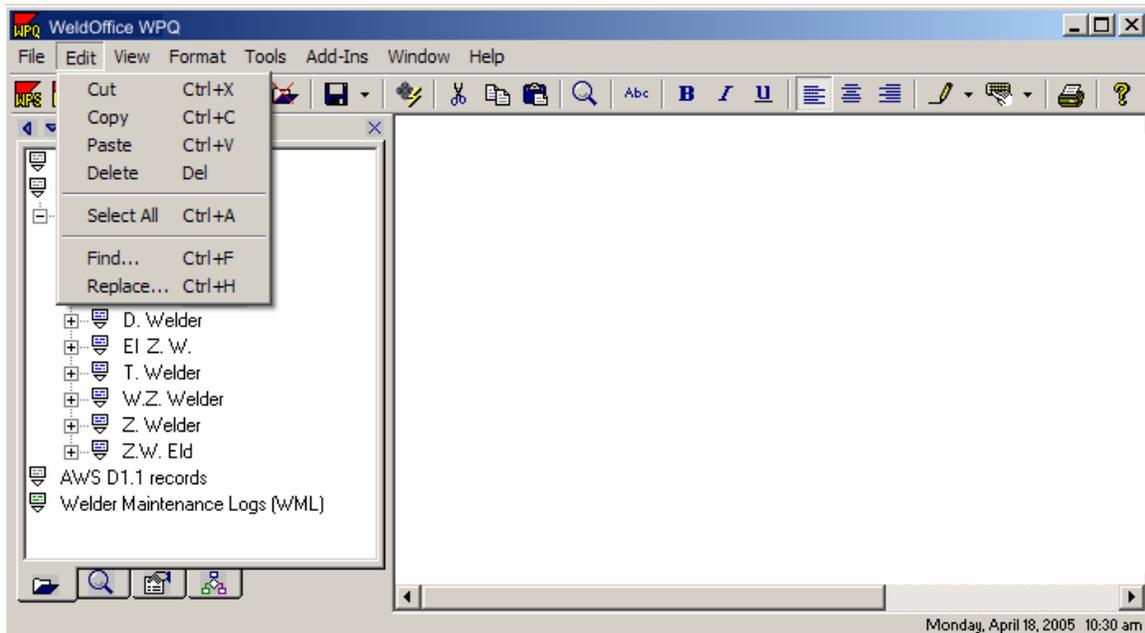
1. Click on **File** and then **Import**.
2. The **Import** screen will appear. Select the location of another database to import. Importing may only be done with Access database files exported from other WeldOffice® software installations.



3. Click **Open** in the **Import from** box after the file has been selected.
4. Importing bars will appear showing the user the progress of the import.
5. When the import progress bars disappear, the import will be complete. To open the imported files, click on **File** and then **Open** and double-click on the new record(s).

3.4.2 Subjects under Edit

The edit menu allows the user to easily work with the text entered into the documents. Most of these selections, as indicated, will only be available while the user is on the Additional Page tab of the current record.



Cut: Removes the selected text and puts it on the clipboard for use at a later time.

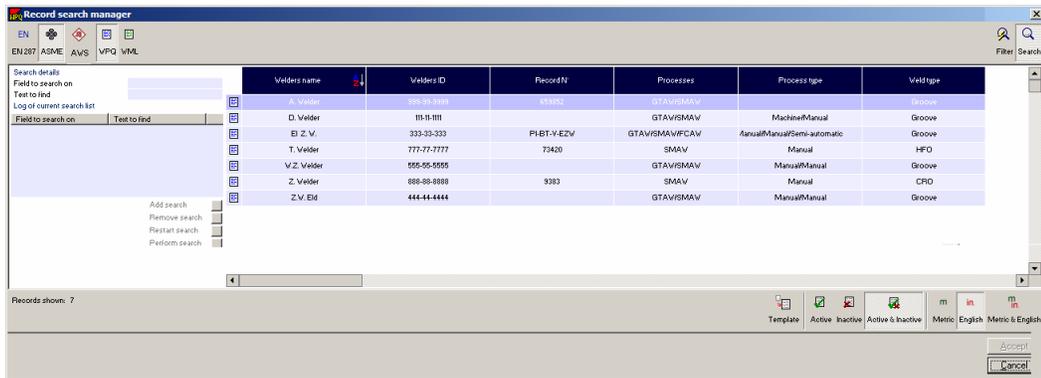
Copy: Copies the selected text and puts the copy on the clipboard for use at a later time.

Paste: Click on this to paste the last item that was cut or copied to the clipboard.

Delete: Erases the selected text

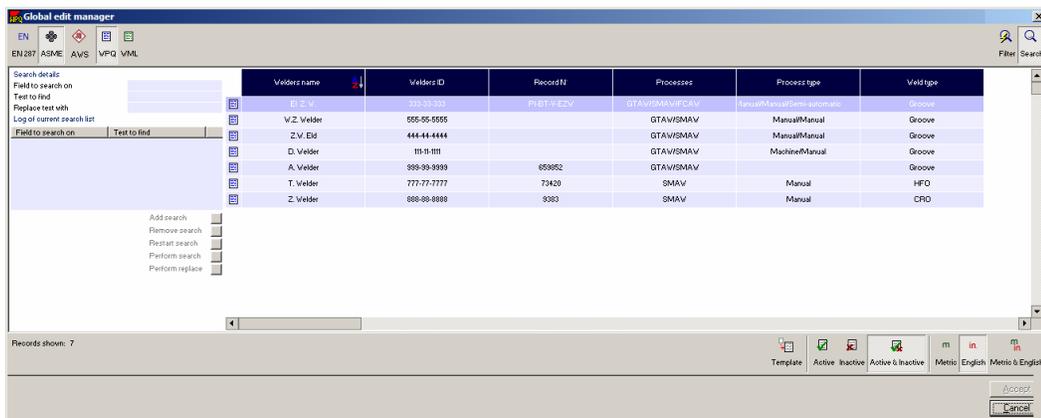
Select All: This feature is only applicable on the additional information page. Select a small quantity of text and then click the **Select All** to select all the text on that page.

Find: This opens the *Record Search Manager* which allows the user to type in the words, letters, or numbers that they would like to find.



- Click in the **Field to search on** and select the field from the drop down menu.
- Then, click on **Text to find** and type in the text to search for.
- Click on **Add search** to add the search parameters to the description field. This will add a line in the description field.
- Click on **Perform search** to run the search.
- The applicable documents will be brought up.

Replace: This opens the **Global Edit Manager** screen which allows the user to type in the word to search for and then replaces it with the specifications provided. **This will replace ALL of the text found with the replacement text. It is not recommended that this feature be used.**

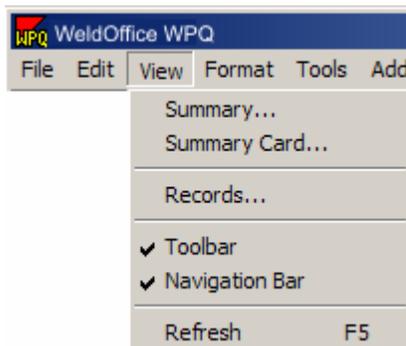


- Click in the **Field to search on** and select the field from the drop down menu.
- Then, click on **Text to find** and type in the text to search for.
- Click on **Replace text with** and type in the replacement text.
- Click on **Add search** to add the search parameters to the description field. This will add a line in the description field.

- Click on **Perform replace** to replace all the text matches with the new text.

3.4.3 Subjects under View

Each subject under View will be described briefly below and the further descriptions will be listed in sections below.



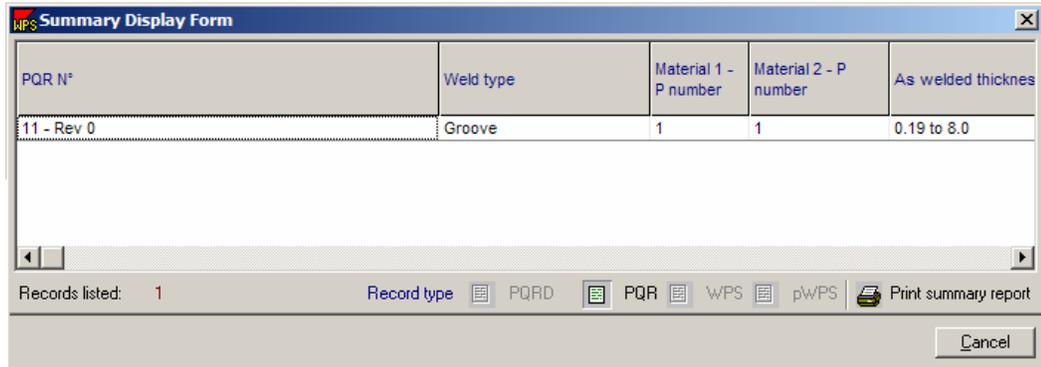
3.4.3.1 Summary

Clicking on **View** and then **Records** will open the **Record Summary Manager** and the user can click on any of the reports to open them. (To select several, hold the **ctrl** button down and select the others.) Click **Accept** when finished.

Record N	Weld type	Parent material	As welded thickness range	P/V/HT thickness range	Welding processes	Impact testing
11 - Rev 0	Groove	1G3 to 1G3	0.19 to 8.0	0.19 to 8.0	3TAW/FGMAW/SAV	Yes
11 - Rev 0	Groove	1G3 to 1G3	0.19 to 8.0	0.19 to 8.0	3TAW/FGMAW/SAV	Yes
15 - Rev 1	Groove	S1SG1 to S1SG1	0.0 to 0.0	0.0 to 0.0	STUD	Yes
13 - Rev 0	Stud	S1SG1 to S1SG1	n/a	n/a	GTAW	Yes
15 - Rev 1	Stud	S1SG1 to S1SG1	n/a	n/a	STUD	Yes
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SMW	Yes
6 - Rev 0	Groove	21 to 21	0.06 to 0.14	n/a	GTAW	No

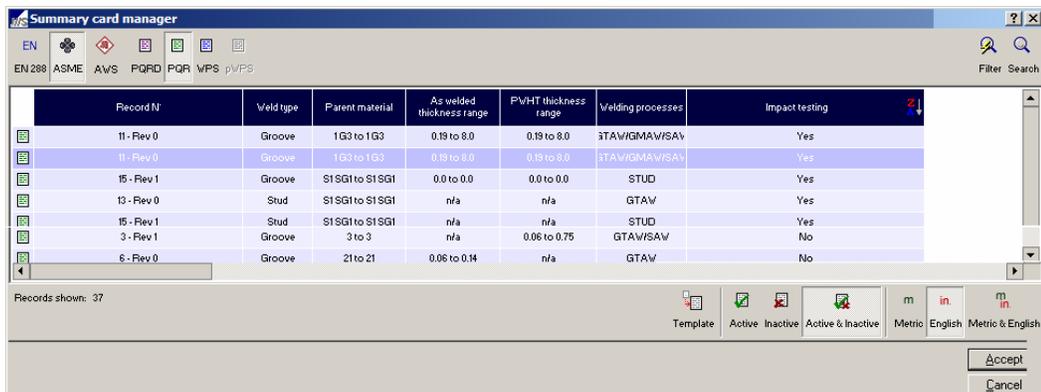
A **Summary Display Form** will open showing all of the chosen records and a brief summary of the variable that were set up using the selection

list. To change the variables seen in the Summary Form, see Selection lists (3.2.2).

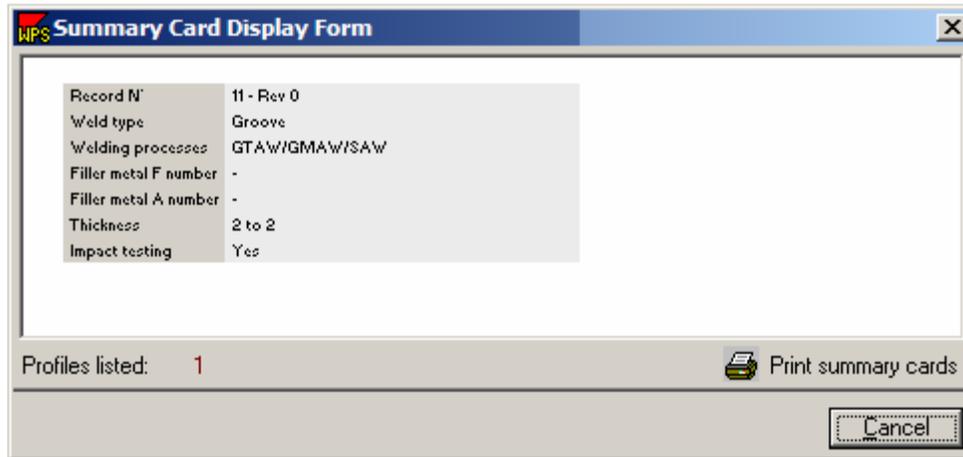


3.4.3.2 Summary Card

Clicking on **View** and then **Summary card** opens the **Summary Card Manager** and the user can click on any of the reports to view as a summary. (To select several, hold the **ctrl** button down and select the others.) Click **Accept** when finished.



The **Summary Card Display Form** will open.



To change the variables listed on the Summary Card, see section 3.2.4.

3.4.3.3 Records

Clicking on **View** and then **Records** will open the *Records Selection Manager* and the user can double click on any of the reports to open them.

3.4.3.4 Toolbar

Toggle this switch on to off to show/hide the tool bar along the top.

3.4.3.5 Navigation Bar

Toggle this switch on and off to show/hide the navigation bar.

3.4.3.5.1 Navigation Bar Function

Navigation Bar Tabs:

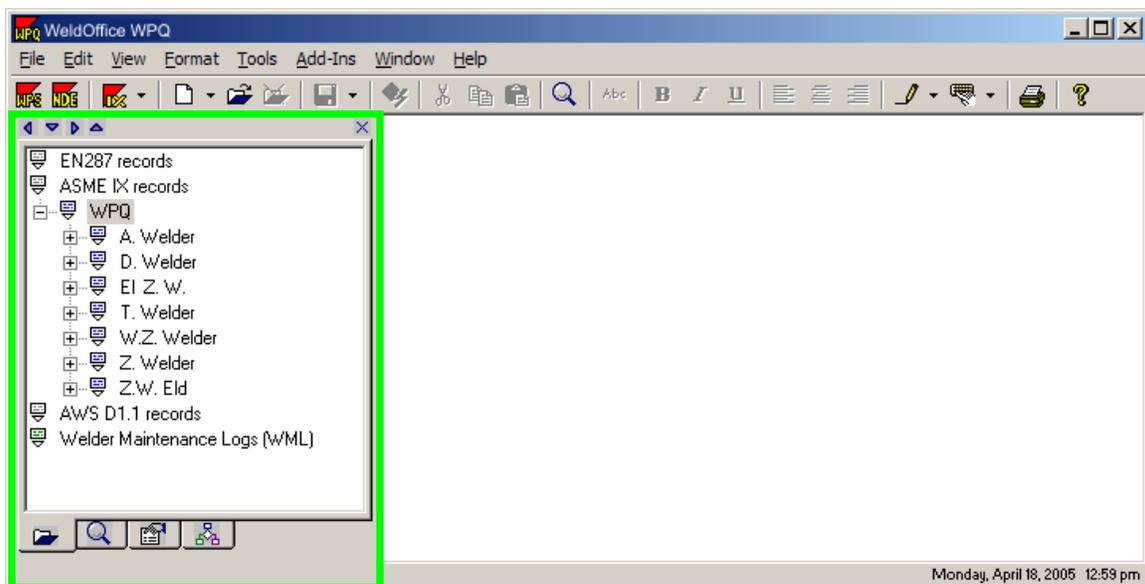
Selection 

Search 

Properties 

Network 

1. To view the Navigation Bar, click on **View** then **Navigation Bar**. (WeldOffice® WPQ should default to starting with the Navigation Bar open and on the left hand side of the screen, depending on the users operating system).



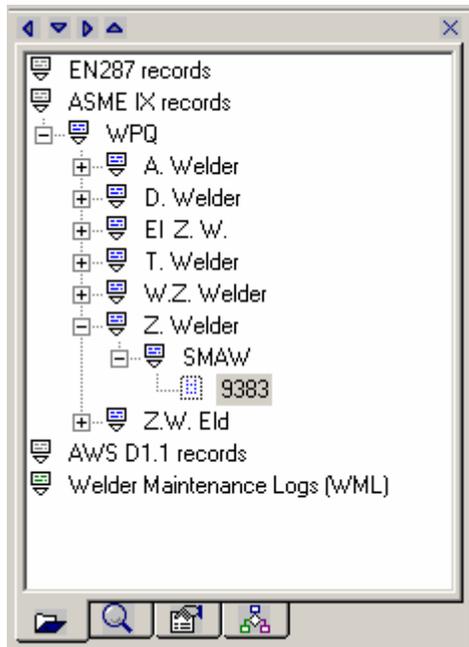
Navigation bar is highlighted in green.

2. To move this bar to another location, use the *arrow* buttons on top of the bar to move it to the bottom , top , or right  hand side.

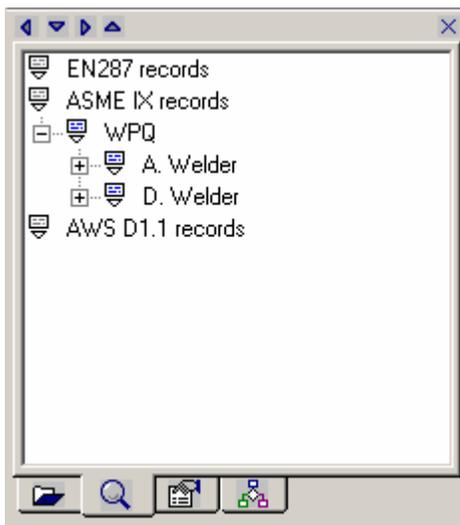
3. At the bottom of the bar, click on the first tab  to show the **Record Selection List**. This provides a quick list of the records in the system.

The documents are grouped according to what the user has setup in the Navigation Bar grouping section 3.1.1.10. In the example shown below, this grouping allows the user to view: 1. Welder, then 2. Process and then 3. WPQ number.

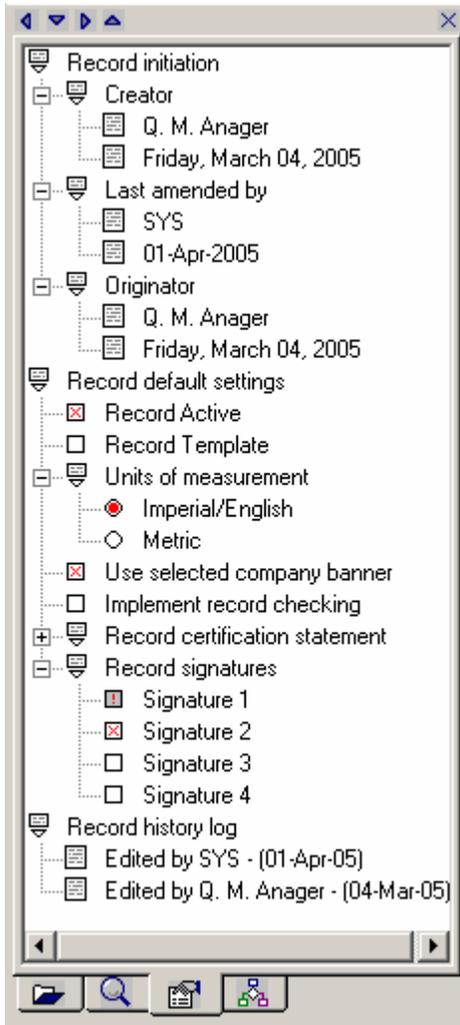
If a grouping sequence other than the one provided is desired, the Navigation Bar groupings may be changed in the Options - Default Settings (Navigation Bar Groupings 3.1.1.10).



4. Click on the second tab  to show the **Record Search Results Selection List**. The list of records that will be displayed are the records meeting the criteria of the last search performed. See section 3.10 for more information about using the search features.



5. Click on the third tab  to show the **Current Record Properties**. This tab displays several settings and properties of the record that is currently in view. Changes to these settings may be necessary in certain circumstances. For example: Record Template may need to be checked in order to turn a new record into a template. Implement record checking allows control over the code checking feature. Turn this setting off if it is desired to keep the software from automatically entering code information into the records.



6. Click on the fourth tab  to display the **Network Settings**. This will show all the users that are currently logged on and all of those that are currently logged off of the network.

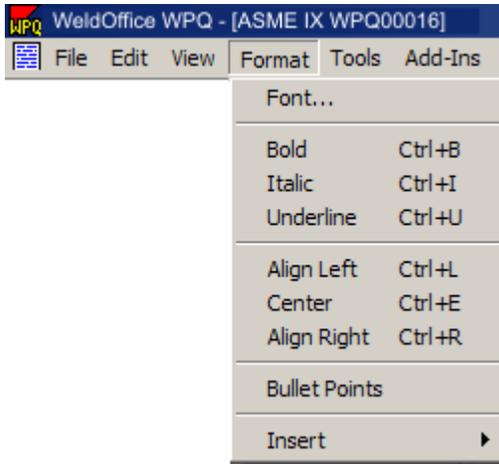


3.4.3.6 Refresh

This rebuilds the current screen display.

3.4.4 Subjects under Format

Each subject under Format will be described briefly below.



The subjects under Format only apply to text added to the Additional Field page on any record.

Font: Opens the Font screen where the user can change the selected text font, size, style, effects and script.

Bold: Changes the selected text or the location of the cursor bold formatting.

Italic: Changes the selected text or the location of the cursor to Italic formatting.

Underline: Changes the selected text or the location of the cursor to underline formatting.

Align Left: Aligns the paragraph (or line of text) to the left of the page.

Center: Aligns the paragraph (or line of text) to the center of the page.

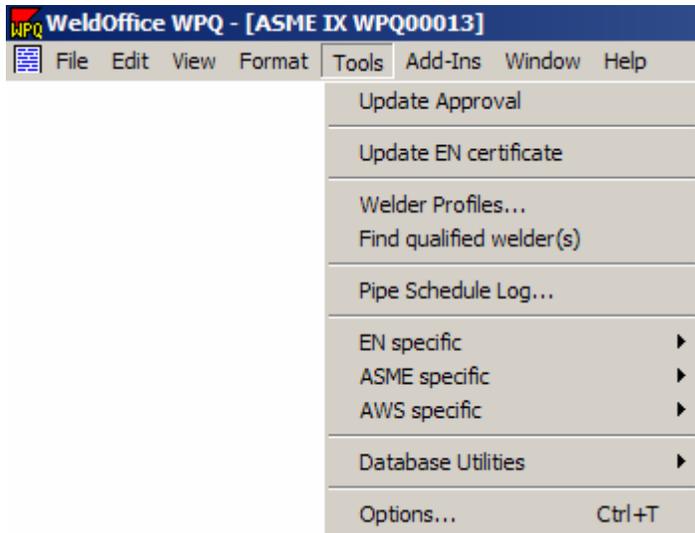
Align Right: Aligns the paragraph (or line of text) to the right of the page.

Bullet Points: Inserts a bullet point at the beginning of the line.

Insert: Allows the user to insert RTF or text files.

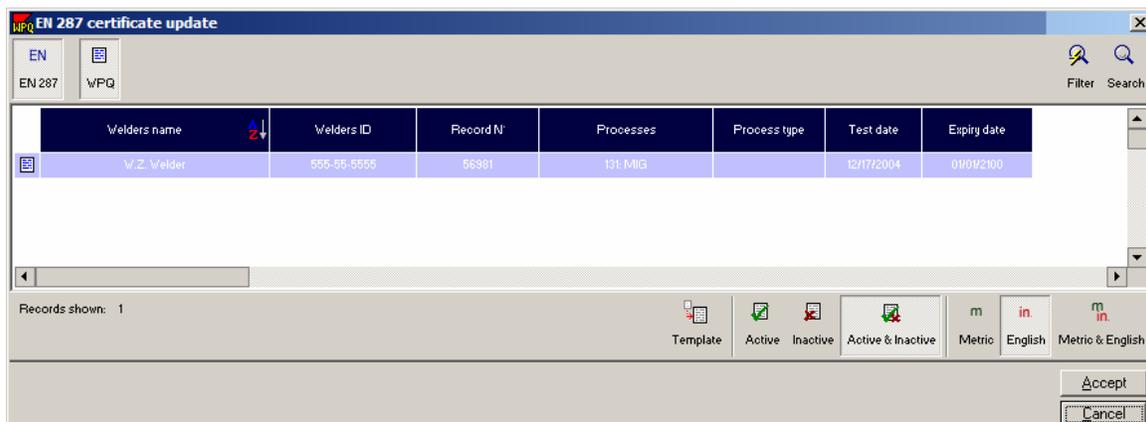
3.4.5 Subjects under Tools

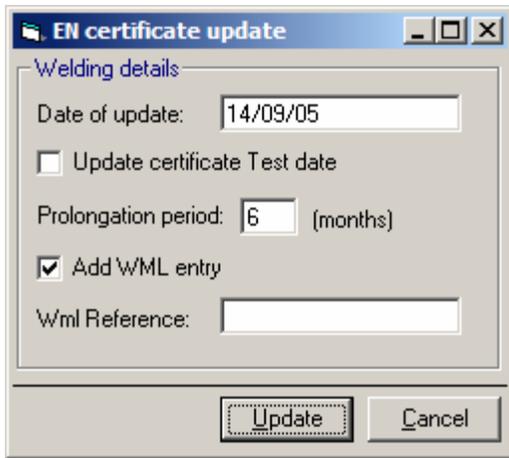
Each subject under Tools will be described briefly below.



Update Approval: Clicking on the Update approval will update the Qualification Ranges. This feature checks the code to make sure that all of the qualified ranges are correct and makes necessary changes if needed. When "record checking" is active for a currently opened record (Options/Default Settings Section 3.1.2.5), this feature is executed automatically.

Update EN certificate: This features opens a EN certificate update manager where the user can select from the list of EN records. Once they click on Accept, a new window will pop up asking for the update details.



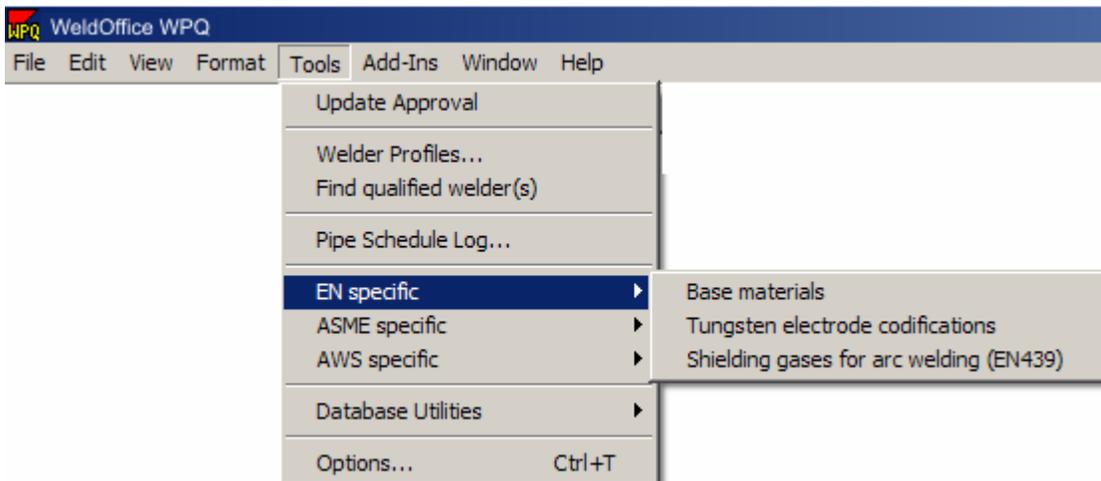


Welder Profiles: Allows the user to view the welders in the database. From here the user can add welder profiles or pull expiration and qualification reports.

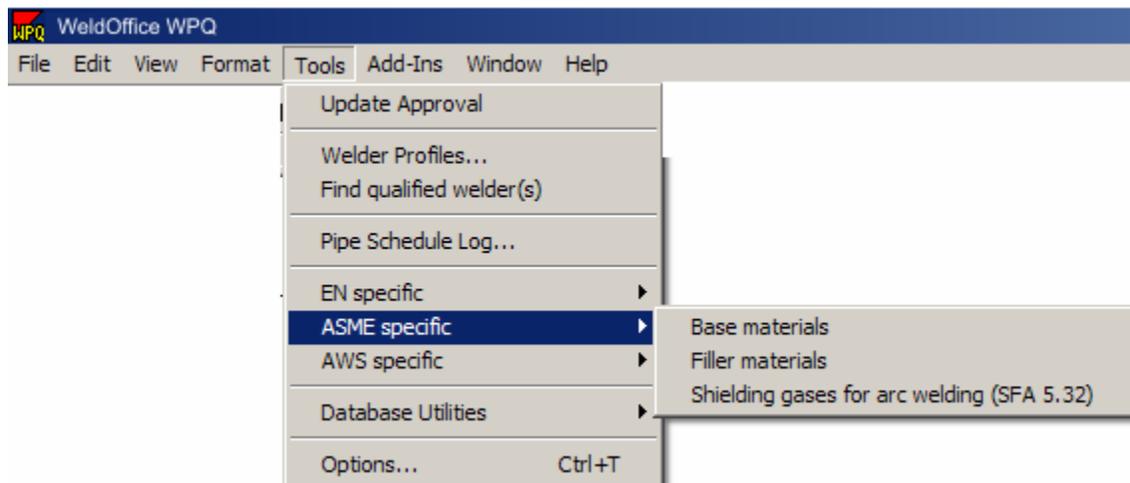
Find Qualified Welders: Allow the user to search the database of welders for those that match certain criteria as defined by the user.

Pipe Schedule Log: Opens the Pipe Schedule Log database.

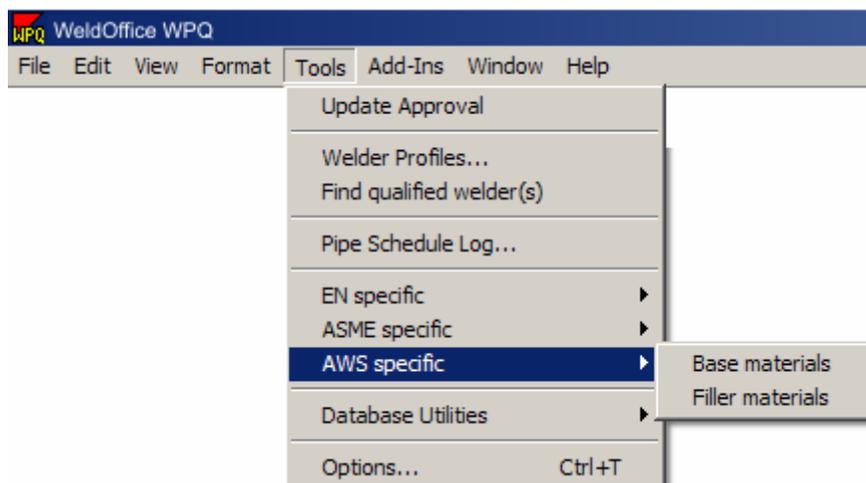
EN Specific: Allows the user to look at the base materials, tungsten electrodes and shielding gases for arc welding specific to EN codes.



ASME Specific: Allows the user to look at the base materials, filler materials and shielding gases for arc welding specific to ASME codes.



AWS Specific: Allows the user to look at the base materials and filler materials specific to AWS codes.

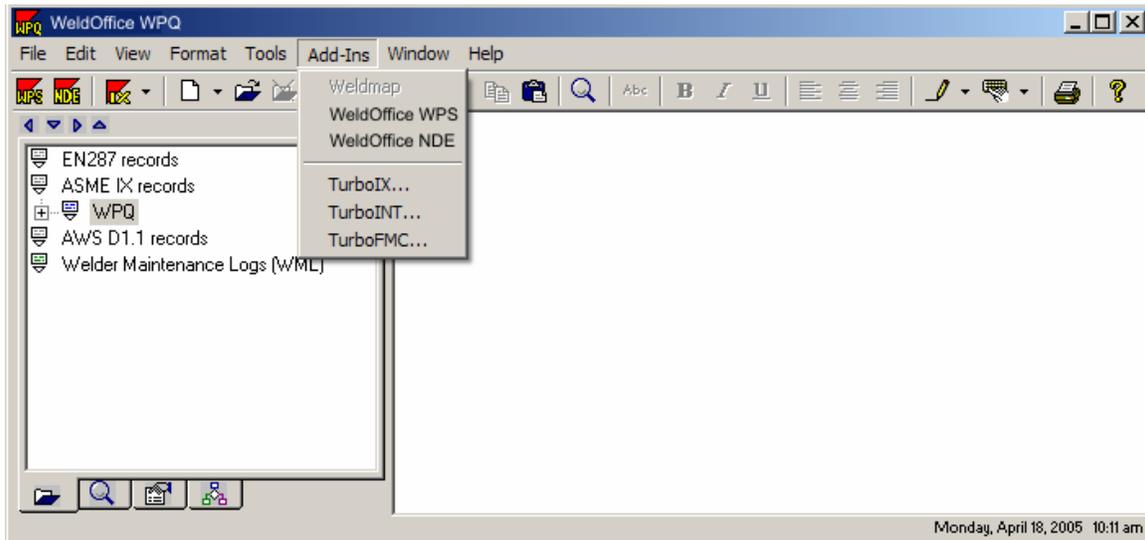


Database Utilities: Click on this heading to be able to compact or backup the database and also be able to remove record locks. This is only an option for the system administrator.

Options: Click on this heading to be taken to the option screen. Within the option screen the user will be able to setup program directories (2.4.1), setup security settings (2.4.2), change any default settings (3.1), setup selection lists (3.2), amend drop down menus (3.3.1), add/delete/edit notes (3.3.2), and add/delete/edit keywords (3.3.3).

3.4.6 Subjects under Add-Ins

The Add-Ins menu allows the user to easily open another WeldOffice® component simply by selecting a module from the drop down list of installed WeldOffice® components. A brief description of the modules is listed below.



WeldMap™: WeldMap™ is a production weld management software for full company-wide monitoring and traceability of fabrication information. This option should be available soon. To find out more information go to <http://cspec.com/csp-coo.htm>

WeldOffice® WPS: Click on this heading to open WeldOffice® WPS (if purchased). If it has not yet been purchased and installed, the area will be grayed out. WeldOffice® WPS automatically creates and manages multi-code welding procedure specifications (WPS) and procedure qualification records (PQR). To find out more information, go to <http://cspec.com/csp-wsp.htm>

WeldOffice® NDE: Click on this heading to open WeldOffice® NDE (if purchased). If it has not yet been purchase and installed, the area will be grayed out. WeldOffice® NDE automatically creates and manages non destructive evaluation reports (NDE). The format of the screens which are used for data entry and viewing, and the hardcopy printouts are based on extensive research throughout the industry to develop a standard layout that fulfills any application of NDE. Included in WeldOffice® NDE are reports for radiographic, ultrasonic, liquid penetrant and magnetic particle examination, as well as a general report which can be used for other types, such as visual inspection or eddy current examination. To find out more information, go to <http://cspec.com/csp-ndt.htm>

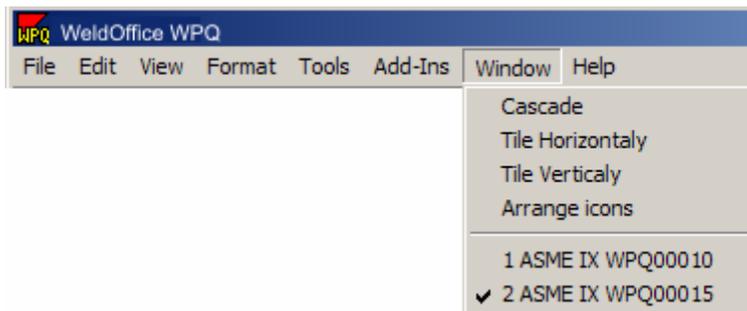
Turbo-IX™ : Click on this heading to open Turbo-IX™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-IX™ ensures qualified welding procedure specifications meet ASME IX code requirements. To find out more information, go to <http://cspec.com/csp-tix.htm>.

Turbo-INT™: Click on this heading to open Turbo-INT™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-INT™ instantly resolves code disputes involving welding procedures, welder qualifications and other code issues. To find out more information, go to <http://cspec.com/csp-int.htm>.

Turbo-FMC™: Click on this heading to open Turbo-FMC™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-FMC™ answers welding and brazing filler metal questions for over 10,000 filler metal trade-names. To find out more information, go to <http://cspec.com/csp-fmc.htm>.

3.4.7 Subjects under Window

Each subject under Window will be described briefly below.



Cascade: This option stacks the open records in a waterfall shape.



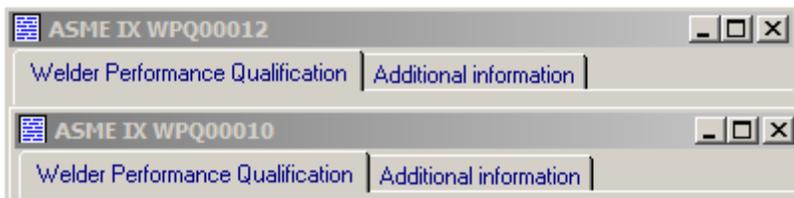
Showing the Cascading window effect.

Tile Horizontally: This option stacks the reports horizontally in the order they were opened.



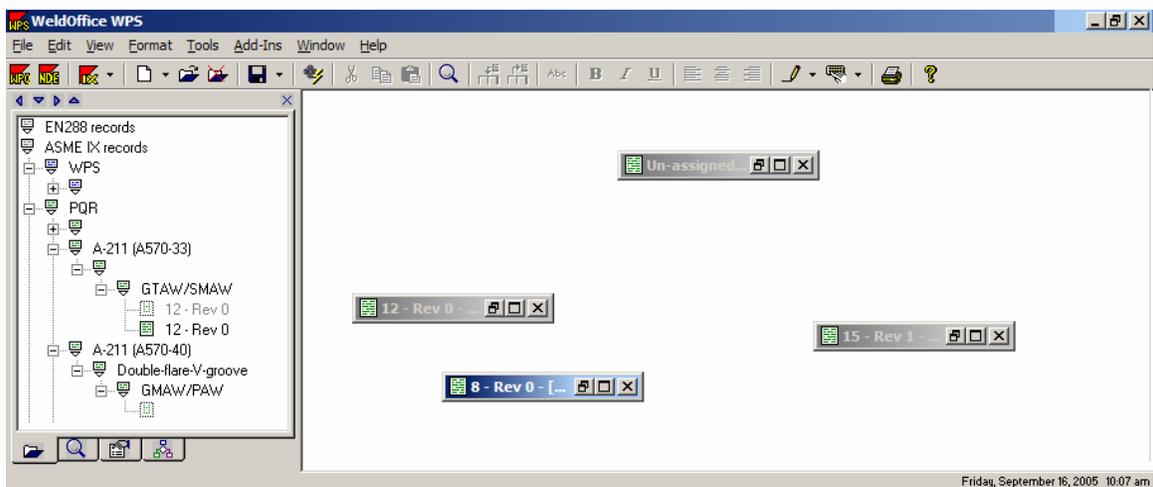
Showing the Horizontal window effect.

Tile Vertically: This option stacks the reports vertically in the order they were opened.

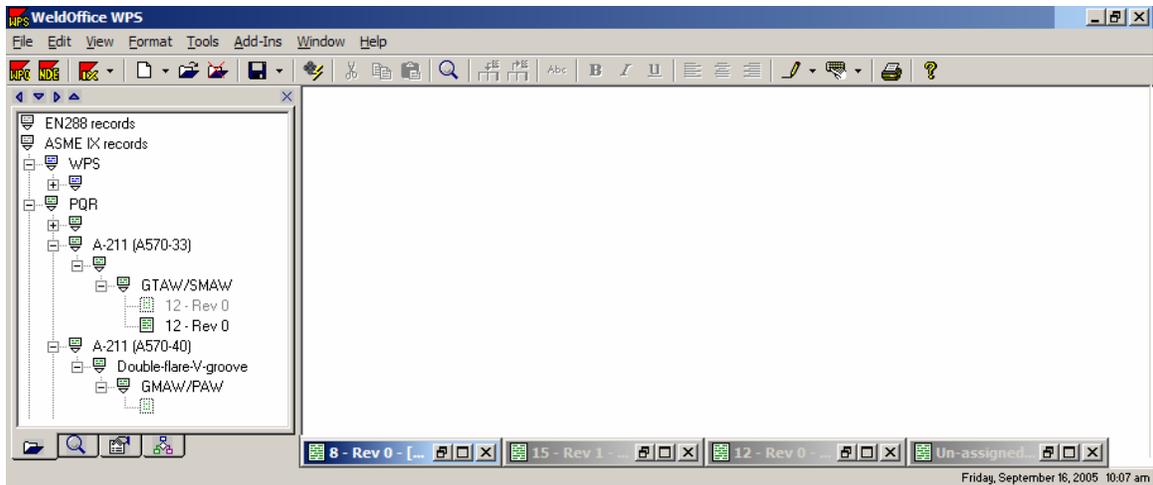


Showing the Vertical window effect.

Arrange Icons: Arranges the records as icons in the order they were opened.



Showing the minimized icons of the records before clicking on Arrange Icons.



Showing the Arrange Icon effect.

3.5 Creating a WPQ

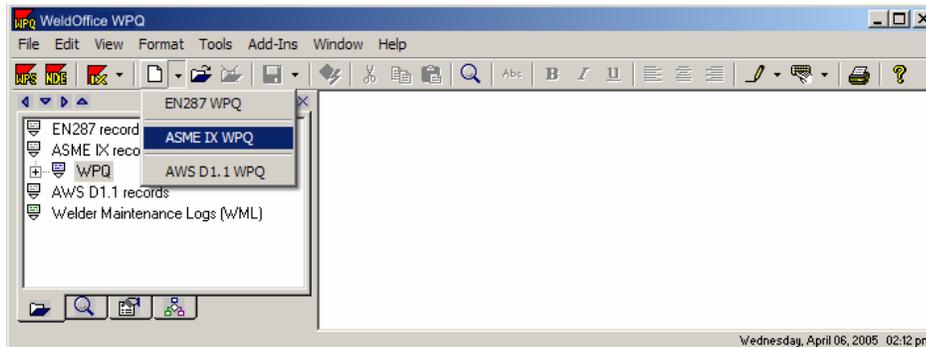
Welder Performance Qualification

Steps and descriptions to creating a WPQ are listed below.

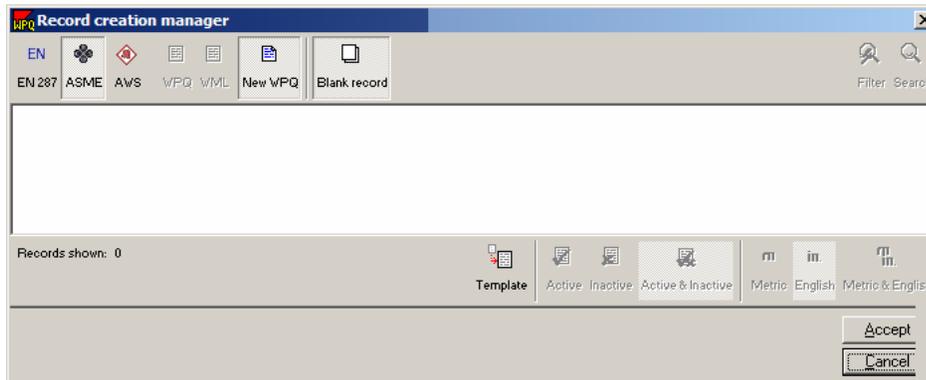
3.5.1 Open a blank WPQ

There are three ways open a blank WPQ:

1. Click on the down arrow next to the New icon  and select the type of WPQ to create (EN, ASME, or AWS).



2. Click on the **New**  icon which will open the **Record Creation Manager**. From here select the Code, New WPQ, and Blank record. Click **Accept**.



3. From the main menu click on **File**, then **New**. This will open the **Record creation manager** screen. Follow the same steps as listed above.

3.5.2 Fill out the header information

Welder Performance Qualification | Additional information

C-spec
P.O. Box 27604, Concord, California 94527, +1-877-977-7999
Welder Performance Qualification (WPQ)
C-spec WeldOffice® Software

Welder's name	<input type="text"/>	Welder's picture	Test date	<input type="text" value="4/6/2005"/>
ID Number	<input type="text"/>		WPQ record number	<input type="text"/>
Date of birth	<input type="text"/>		Standard test no.	<input type="text"/> Rev. <input type="text"/>
Stamp number	<input type="text"/>		WPS record number	<input type="text"/> Rev. <input type="text"/>
Company name	<input type="text"/>		Qualification code	<input type="text" value="ASME Section IX"/>
Division	<input type="text"/>			

- **Welder's name:** When the user clicks in the Welder's name field, two icons will appear, a database icon and a drop down arrow.



1. Clicking on the database icon will open the welder selection screen.

Welder selection

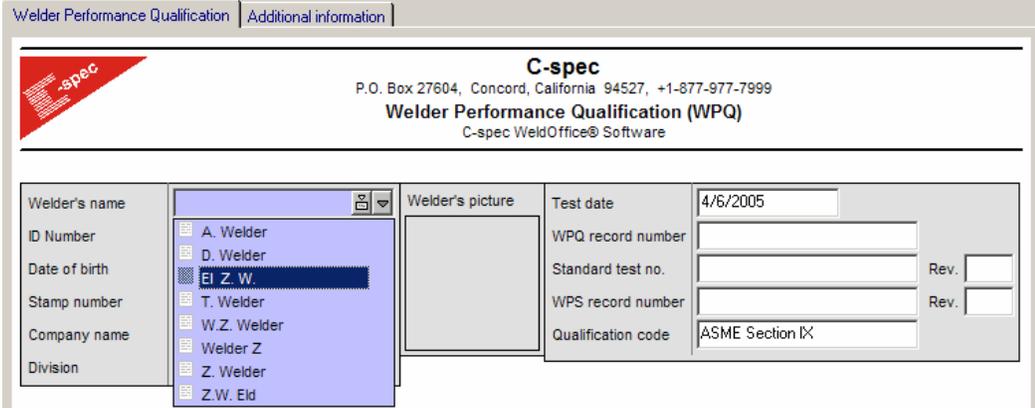
Records listed: 8

	ID	Stamp	Date of birth	Company	Division	Status
A. Welder	999-99-9999	AW-93	12/19/1965	C-spec		Active
D. Welder	111-11-1111	DW-05	4/30/1971	C-spec		Active
E. Z. W.	333-33-333	EZW-02	1/25/1975	C-spec		Active
T. Welder	777-77-7777	TW-19	4/14/1966	C-spec		Active
W.Z. Welder	555-55-5555	WZW-01	9/19/1958	C-spec		Active
Welder Z	222-22-2222	WZ-04	4/6/1979	C-spec		Active
Z. Welder	888-88-8888	ZW-24	9/26/1970	C-spec		Active
Z.W. Eld	444-44-4444	ZWE	1/19/1995	C-spec		Active

Accept
Cancel

Select a welder by clicking on their name and then click on **Accept**. The program automatically fills in the information needed in the header.

2. Clicking on the drop down arrow  option will give the user a list of welders that have been entered into the database. Select one of the welders by clicking on the name.



- **ID Number:** Enter the welder's ID. If information was pulled from the database, this should have been filled in automatically.
- **Date of Birth:** Enter the welder's birth date. If information was pulled from the database, this should have been filled in automatically.
- **Stamp number:** Enter the welder's stamp number. If information was pulled from the database, this should have been filled in automatically.
- **Company name:** Enter the welder's company name. If information was pulled from the database, this should have been filled in automatically.
- **Division:** Enter the company division in which the welder works, if any at all. If information was pulled from the database, this should have been filled in automatically.
- **Welder's picture:** A picture of the welder can only be automatically entered into the space, if a welder's profile is pulled from the database of welders (i.e. welder selection screen).
- **Test date:** The test date will automatically be the date that the user created the document. However, the user may change this to any date. To keep the same formatting throughout the documents, use the calendar icon  to select a date.
- **WPQ record number:** Enter a record number for this WPQ according to the user's company policy. If there were any numbers entered previously, or added to the drop down menu, these will be available through the drop down menu that appears by clicking in the field.

- **Standard test number:** If there is a standard number associated with the test, enter it here as well as the revision number. If there were any numbers entered previously, or added to the drop down menu, these will be available through the drop down menu that appears by clicking in the field.
- **WPS record number:** If this procedure is associated with a WPS record number, enter it here as well as the revision number for that WPS. Or, when the user clicks in the WPS record field, a drop down arrow will appear.

 A screenshot of a software interface showing a text input field labeled "WPS record number". The field is currently empty and has a small downward-pointing arrow on its right side, indicating it is a drop-down menu.

By clicking on the drop down arrow, the user will see any WPS record numbers that have been entered into the drop down system. (see section 3.3.1 on how to enter other numbers into the drop down menu)

 A screenshot of the "WPS record number" field with the drop-down menu open. The menu displays three options: "122", "123", and "124". The option "123" is currently selected and highlighted with a dark blue background.

Click on one of the record numbers if required, or type in the number needed.

- **Qualification code:** The qualification code will already be selected based on how the user opened up the WPQ. When they opened a new record they were prompted to select a code. The user can change this at any time by clicking on the drop down arrow, and selecting another code.

 A screenshot of a software interface showing a text input field labeled "Qualification code". The field contains the text "ASME Section IX" and has a small downward-pointing arrow on its right side. The drop-down menu is open, showing three options: "ASME Section IX", "AWS D1.1", and "EN 287". The option "ASME Section IX" is currently selected and highlighted with a dark blue background.

3.5.3 Fill in the Base Metal section

BASE METALS

Product form	Specification (type or grade)	P-no.	Grp-no.	Size	Sch.	Thick. (in.)	Dia. (in.)
Welded to:							

Joint type Groove Fillet Overlay Stud welding

- **Product Form:** Select a product form from the drop down menu.

Product form

Plate

- Corrosion-resistant overlay
- Hardfacing overlay
- Hardfacing spray fuse
- Pipe
- Pipe/Tube
- Plate**
- Stud
- Tube

- **Specification:** The user can type in the specification or use the material database (see section 3.13). To get to the material database: Click in the specification box, then click on the database icon . The database shown below will appear. Depending on what product form was selected, it will be listed in the product form box of the database, and the database will be sorted by that product form.

Base material selection

Product form: Plate

Spec.	Grade	UNS	Condition	P	G	K.SI	D1.1 Group	Nominal composition	Product form
SA-283	B	K01702		1	1	50	U	C	Plate
SA-283	C	K02401		1	1	55	U	C	Plate
SA-283	D	K02702		1	1	60	U	C	Plate
SA-283	A	K01400		1	1	45	U	C	Plate
SA-285	A	K01700		1	1	45	U	C	Plate
SA-285	B	K02200		1	1	50	U	C	Plate
SA-285	C	K02801		1	1	55	U	C	Plate
SA-299		K02803		1	2	75	U	C-Mn-Si	Plate
SA-36		K02600		1	1	58	I	C-Mn-Si	Plate, Bar & Shapes
SA-495		K03300		1	2	70	U	C-Mn-Si	Plate
SA-495		K03300		1	2	73	U	C-Mn-Si	Plate
SA-495		K03300		1	2	75	U	C-Mn-Si	Plate
SA-515	60	K02401		1	1	60	U	C	Plate
SA-515	65	K02800		1	1	65	U	C-Si	Plate
SA-515	70	K03101		1	2	70	U	C-Si	Plate
SA-516	55	K01800		1	1	55	I	C-Si	Plate
SA-516	60	K02100		1	1	60	I	C-Mn-Si	Plate
SA-516	65	K02403		1	1	65	II	C-Mn-Si	Plate
SA-516	70	K02700		1	2	70	II	C-Mn-Si	Plate
SA-537	Cl 3	K12437		1	3	75	U	C-Mn-Si	Plate

Buttons: Accept, Cancel

To sort the database by another means, type in the known information (i.e. type or P-no.). Then click on the specification

and click **Accept**. WeldOffice® WPQ will automatically input all of the information needed.

Note: The same data will be entered as default for the "welded to" section. This can be overridden, for dissimilar metal joints, simply by selecting a different material for the "Welded to" section.

- **P-number:** P-numbers are assigned by the base materials weldability. This allows groupings of different base materials and overall, lessens the number of procedures that need to be qualified. P-numbers have been assigned in the materials database (see section 3.13). If the user selected a material from the database, the P-number was filled in automatically.
- **Group Number:** Group numbers are assigned to ferrous base metals and become necessary when procedures are qualified by impact testing. It is a further categorization of the materials weldability, composition, and mechanical properties. If the user selected a P no from the selection list, then if there was an applicable group number it will be entered into the PQR automatically.
- **Size:** If Tube or Pipe is selected as the product form, type in the size of pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out.
- **Schedule:** Type in the schedule of the pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out. See section 3.13 for more details on the pipe schedule log database.
- **Thickness:** Type the thickness of the test coupon.
- **Diameter:** Type the diameter of the test coupon.
- **Joint Type:** Click on the joint type that was used.

3.5.4 Fill in the Variables section

VARIABLES	ACTUAL VALUES	RANGE QUALIFIED
Type of weld joint		
Base metal		

Do not enter "Variables" data manually. The code checking in WeldOffice® WPQ will take care of all these fields for the user. Code checking must be enabled for this form to function correctly (see section 3.1.2.5).

- Type of weld joint:** Based on the information entered in the Base Metal section (3.5.3), this section will automatically be filled in if the Code checking is on.

If Code checking is not on, use the drop down menu to select the type of weld joint. Notice that the drop down menu only has applicable selections based on the information entered in the previous base metal section.

VARIABLES	ACTUAL VALUES
Type of weld joint	<div style="border: 1px solid black; padding: 5px;"> <div style="background-color: #e0e0ff; padding: 2px;">▼</div> <ul style="list-style-type: none"> <input type="checkbox"/> Pipe - Groove <li style="background-color: #000080; color: white;"><input type="checkbox"/> Pipe - Corrosion-resistant overlay <input type="checkbox"/> Pipe - Fillet <input type="checkbox"/> Pipe - Hardfacing overlay <input type="checkbox"/> Pipe - Stud <input type="checkbox"/> Pipe to Plate - Fillet <input type="checkbox"/> Plate - Corrosion-resistant overlay <input type="checkbox"/> Plate - Fillet <input type="checkbox"/> Plate - Groove <input type="checkbox"/> Plate - Hardfacing overlay </div>
Base metal	

- Base Metal:** Once the specification in the Base Metal section (3.5.3) has been selected and the cursor is clicked into another field, this field will automatically be filled in by the Code checking system.

If code checking is off, then the user will have to manually type in the P numbers for the base metals.

Once the welding process and type have been selected, the range qualified field for base metals will be filled in automatically if code checking is on.

If code checking is off, then the user will also have to enter the range qualified fields manually.

3.5.5 Base Metal Thickness section

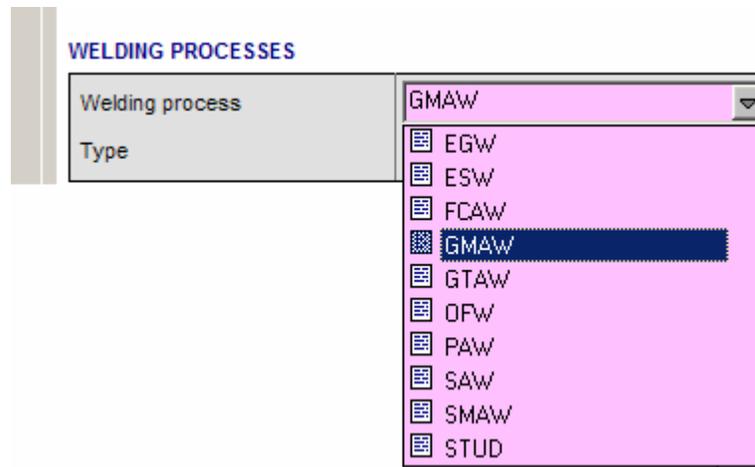
BASE METAL THICKNESS		ACTUAL VALUES			RANGE QUALIFIED		
		Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness	(in.)	-	-	-	no limit	no limit	-
Pipe/tube thickness	(in.)	0.237	-	-	no limit	no limit	-
Pipe diameter	(in.)	4.5	-	-	2.875 min	no limit	-

All of the fields listed in the base metal thickness section will be filled in automatically, based on the information entered into the Base Metals section (3.5.3) if the code checking is on. If code checking is off, then the user will have to enter the fields manually.

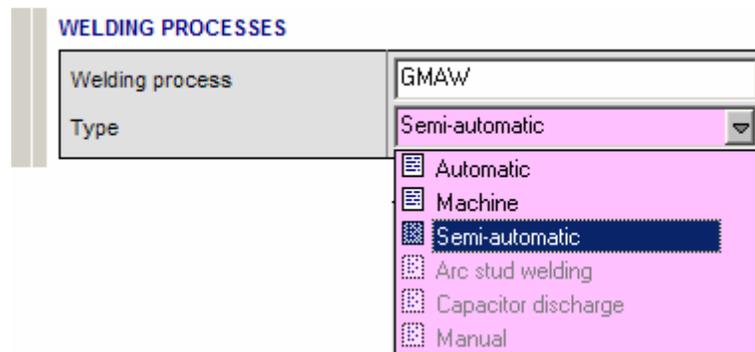
3.5.6 Fill in the Process Variables section

PROCESS VARIABLES		ACTUAL VALUES			RANGE QUALIFIED		
Welding process							
Type							

- Click on the left box of the welding process.
- From the drop down list, chose the process to be used.



- Choose the welding process type from the drop down menu.



- If there are more processes involved, enter them now (Up to three processes can be used for one WPQ).

Note: Depending on what process was selected, some of the type options are grayed out. The user can actually type any value into these boxes. However, if the user uses his/her own terminology, the software may not be able to carry out any checking against the relevant code/standard.

- Depending on the process(es) selected, the form will extend to include all the requirements for that process, as shown below.

PROCESS VARIABLES	ACTUAL VALUES		RANGE QUALIFIED	
Welding process	GTAW	SMAW	GTAW	SMAW
Type	Manual	Manual	Manual	Manual
Backing	With	Backing used	With	With
Filler metal specification	5.18	5.1	5.xx	5.xx
Filler metal classification	ER70S-6	E7018	Any	Any
Filler metal F-number	6	4	6	1..4
Filler metal variety (QW-404.23)	Bare (solid)		Solid, metal core	
Consumable insert	None		Without	
Number of layers deposited	1	2		
Weld deposit thickness (in.)	0.125	0.25	0.25 max	0.5 max
Weld position (Actual position tested)	5G	5G		
			Groove - Plate & Pipe > 24"	F.V.D F.V.D
			Groove - Pipe 2.875" to 24"	F.V.D F.V.D
			Groove - Pipe < 2.875"	- -
			Fillet - Plate & Pipe > 24"	All All
			Fillet - Pipe 2.875" to 24"	All All
			Fillet - Pipe < 2.875"	All All
Progression	Up	Up	Up	Up
Backing gas	Without		With, without	
GTAW welding current/polarity	DCSP		DCSP	

- **Backing:** Select the type of backing that was used or none from the drop down list.
- **Filler Metal Specification:** The SFA specification is the code that the filler is made to. Click in the box, and then click on the database icon  to open the filler metal database. See section 3.13 for more information on the filler metal database.



WPQ Filler material selection

AWS classification

AWS/SFA specification

F-no.

A-no.

UNS

Show: GTAW (8)
 GTAW (8)
 All materials

Type: Solid
 Metal cored
 Flux cored
 Powder
 Other types
 All types

Include discontinued

Classification	Spec.	F-no.	A-no.	UNS	Comment
ER16-8-2	5.9	6	8	S16880	Solid wire
ER19-10H	5.9	6	8	S30480	Solid wire
ER209	5.9	6	NA	S20980	Austenitic Cr-Ni-Mn-Mo SS fil
ER218	5.9	6	NA	S21880	Solid wire
ER219	5.9	6	NA	S21980	Solid wire
ER2209	5.9	6	8	S39209	Solid wire
ER240	5.9	6	NA	S24080	Solid wire
ER2553	5.9	6	NA	S39553	Solid wire
ER307	5.9	6	NA	S30780	Solid wire
ER308	5.9	6	8	S30880	Solid wire
ER308H	5.9	6	8	S30880	Solid wire
ER308L	5.9	6	8	S30883	Solid wire
ER308LMo	5.9	6	8	S30886	Solid wire
ER308LSi	5.9	6	8	S30888	Solid wire
ER308Mo	5.9	6	8	S30882	Solid wire
ER308Si	5.9	6	8	S30881	Solid wire
ER309	5.9	6	8	S30980	Solid wire
ER309L	5.9	6	8	S30983	Solid wire
ER309LMo	5.9	6	8	S30986	Solid wire
ER309LSi	5.9	6	8	S30988	Solid wire
ER309Mo	5.9	6	8	S30982	Solid wire
ER309Si	5.9	6	8	S30981	Solid wire
ER310	5.9	6	9	S31080	Solid wire
ER312	5.9	6		S31380	Solid wire
ER316	5.9	6	8	S31680	Solid wire

Accept
Cancel

Depending on what process was selected, the database will be sorted based on that process. If more information about the filler metal is known, the user can narrow the field by inputting the known data into the fields on the left hand side. Choose one of these filler metals by clicking on it. The information that is needed on the WPQ form will be filled in automatically.

- **AWS Classification:** This is a classification based on the chemical content of the filler metal. Click in the box, and then click on the database icon  to open the filler metal database. See section 3.13 for more information regarding the filler metal database. Choose one of these filler metals based on information that is known about the filler metal. The rest of the information will be filled in automatically. If the user has already selected a filler metal from the data base, this information will already be filled in.
- **Filler Metal F-Number:** This is a grouping of Filler metals based on their weldability. To find an F-number for a filler metal, look inside the filler metal database by clicking on the database icon  inside the f-number box. See section 3.13 for more information regarding the filler metal database. If the user has already selected a filler metal from the data base, this information will already be filled in.

- **Filler Metal Variety:** List the type of supplementary filler metal.
- **Number of Layers Deposited:** Total number of weld layers deposited per process.
- **Weld Deposit Thickness:** Measure and record the thickness of weld metal deposited, per process.
- **Weld Position:** From the drop down menu select the position that was actually used for the test weld. The range qualified will be filled in automatically based on the selection.
- **Progression:** If vertical welding, then select a progression from the drop down menu.
- **Backing Gas:** If the process selected has an option for backing gas, select from the drop down menu whether it was used or not.
- **GMAW Transfer Mode:** If using a GMAW process, this box will appear. From the drop down menu select the transfer mode used.
- **GTAW Current/Polarity:** If using a GTAW process, this box will appear. From the drop down menu select the current/polarity used.

There may be more information to fill out depending on the process(es) selected.

Remember not to fill in the Range qualified sections, these will be filled out automatically if Code checking is on.

3.5.7 Test section

TESTS

Type of test	Acceptance criteria	Result	Comments
2 transverse side bends per QW-161.1 and QW-462.2	QW-163	Acceptable	see - ASME IX - QW-452.1 (a)
Visual examination per QW-302.4	QW-194	Acceptable	see - ASME IX - QW-452.1 (a)

Notes

This section will be filled in automatically. Based on the information previously entered, WPQ's code checking automatically specifies the required testing.

The user can, however, change any of the information by clicking in the field and then either typing in the new information or selecting another item from the drop down menus.

To turn off the automatic creation of test comments see section 3.1.4, Form settings.

3.5.8 Certification section

CERTIFICATION

Tests conducted by	<input type="text" value="Test Lab"/>	Laboratory test number	<input type="text" value="032"/>
Mechanical testing by	<input type="text" value="Test Lab"/>	Test file number	<input type="text" value="032"/>

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Welding Engineer		Q.A. Manager	
Name	Signature	Name	Signature
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Date		Date	
<input type="text"/>		<input type="text"/>	

- **Tests conducted by:** Enter the name of the person or firm who conducted the testing. If the user has entered any of this information before or added it to the drop down menus, it will be available through the drop down menu.

- **Laboratory test number:** Enter the test number used at the lab.
- **Mechanical testing by:** Enter the name of the person or firm who conducted the mechanical testing. If the user has entered any of this information before or added it to the drop down menus, it will be available through the drop down menu.
- **Test File number:** Enter the test file number used by the lab.
- **Certification Statement:** The certification statement is placed automatically depending on the code selected. To change the certification statement, go to Form Settings (see section 3.1.4).
- **Signatures:** To change a signature field title and set up how many signatures are required, go to Form Settings (see section 3.1.4). To sign the document, click in the signature box. WeldOffice® WPQ will automatically input the signature (of the person logged in to the software), their name and the current date if the user has been setup (see section 2.4.2).

To learn more about setting up users, see section 2.4.2.

To learn more about setting up hierarchies with the signatures, see section Program Wide Settings, 3.1.1.6)

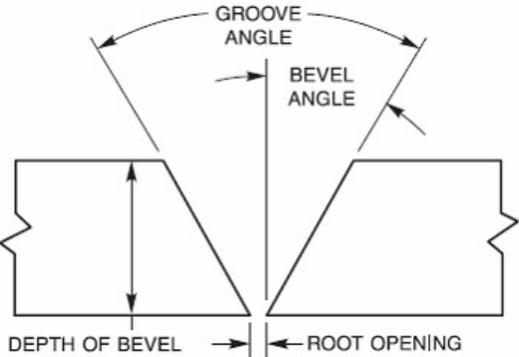
To make the electronic signatures active, see section 3.1.1.4.

To lock signed records, see section 3.1.1.5.

To make the password system active to allow only signatures by the person logged in the system, see section 3.1.1.3.

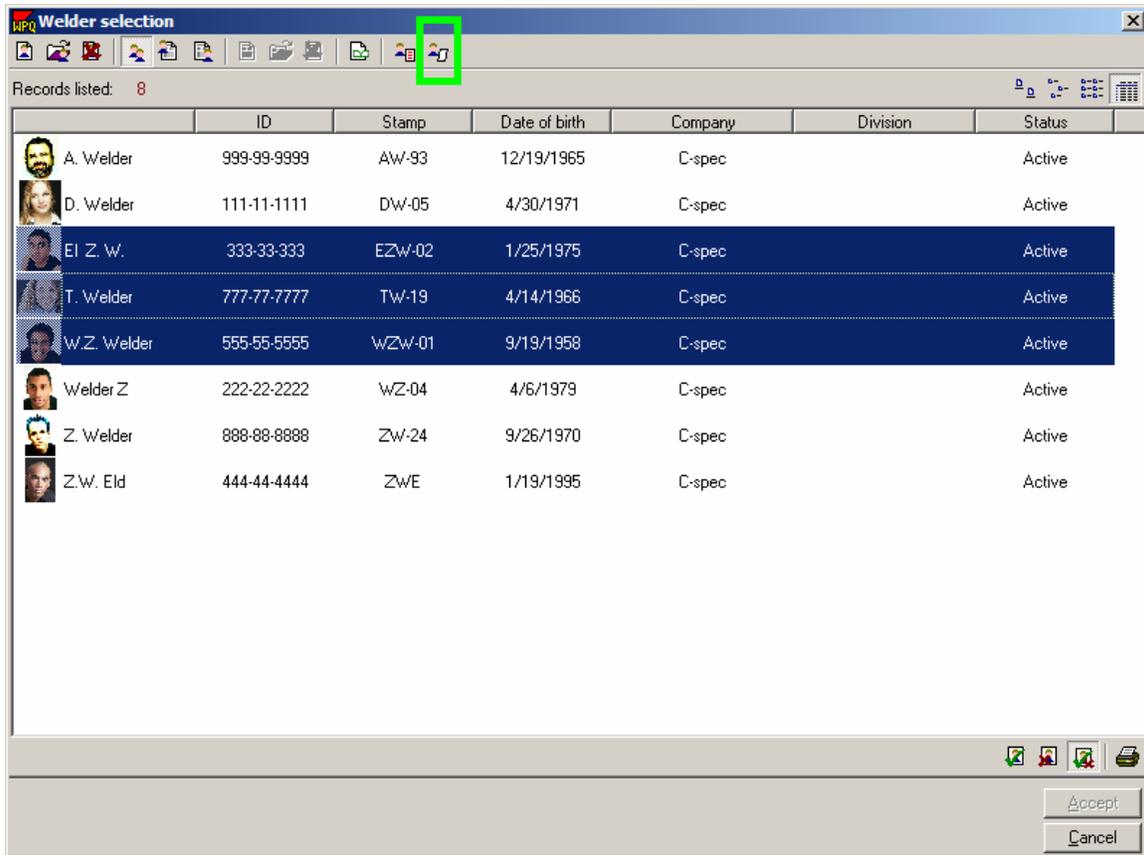
3.5.9 Fill in the Additional Information section

Here, the user can enter any information that they would like. They can link to excel files, import welding video, import sound clips of welding, etc.

Welder Performance Qualification		Additional information	
			
C-spec P.O. Box 27604, Concord, California 94527, +1-877-977-7999 WPQ - Additional Information C-spec WeldOffice® Software			
Welder's name		Test date	4/11/2005
ID Number		WPQ record number	
<p>The user can add any additional information here, that may be necessary. The user can use the copy/paste feature to list additional diagrams or photographs.</p> <p>The user can also change all of the font <i>settings</i> for this <u>page</u>.</p> 			

3.6 Creating a Qualified Ranges Report

1. Open the Welder Profiles Database by clicking on **Tools** and then **Welder Profiles**.
2. Select the welder(s) for which a Qualification Ranges Report is to be generated. To select multiple welders, hold the **ctrl** key down while clicking on each of the desired welder's names.



3. Click on the **Show Welder Qualification Ranges Report** icon  .

Welder details					Welder's qualified ranges						
Picture	Name	ID n°	Stamp n°	Division	Weld type	Welding process	Process type	Backing	F numbers	Max weld deposit	Min pipe dia
	Ei Z. W.	333-33-333	EZW-02	-	fillet	FCAW	Semi-automatic	With	6	0.25	no limit
	Ei Z. W.	333-33-333	EZW-02	-	groove	FCAW	Semi-automatic	With	6	0.25	2.875
	Ei Z. W.	333-33-333	EZW-02	-	fillet	SMAW	Manual	With	1.4	0.25	no limit
	Ei Z. W.	333-33-333	EZW-02	-	groove	SMAW	Manual	With	1.4	0.25	2.875
	Ei Z. W.	333-33-333	EZW-02	-	fillet	GTAW	Manual	With, without	6	0.25	no limit
	Ei Z. W.	333-33-333	EZW-02	-	groove	GTAW	Manual	With, without	6	0.25	2.875
	W.Z. Welder	555-55-5555	WZW-01	-	fillet	SMAW	Manual	With	1.4	0.5	no limit
	W.Z. Welder	555-55-5555	WZW-01	-	groove	SMAW	Manual	With	1.4	0.5	2.875
	W.Z. Welder	555-55-5555	WZW-01	-	fillet	GTAW	Manual	With, without	6	0.614	no limit
	W.Z. Welder	555-55-5555	WZW-01	-	groove	GTAW	Manual	With, without	6	0.614	2.875
	T. Welder	777-77-7777	TW-19	-	hfo	SMAW	Manual	With	1.4	no limit	2.875

Records listed: 13

Close

Welder Qualification Ranges Report

4. Several icons are provided to change the content being displayed in the Welder qualifications ranges report. These are described below.

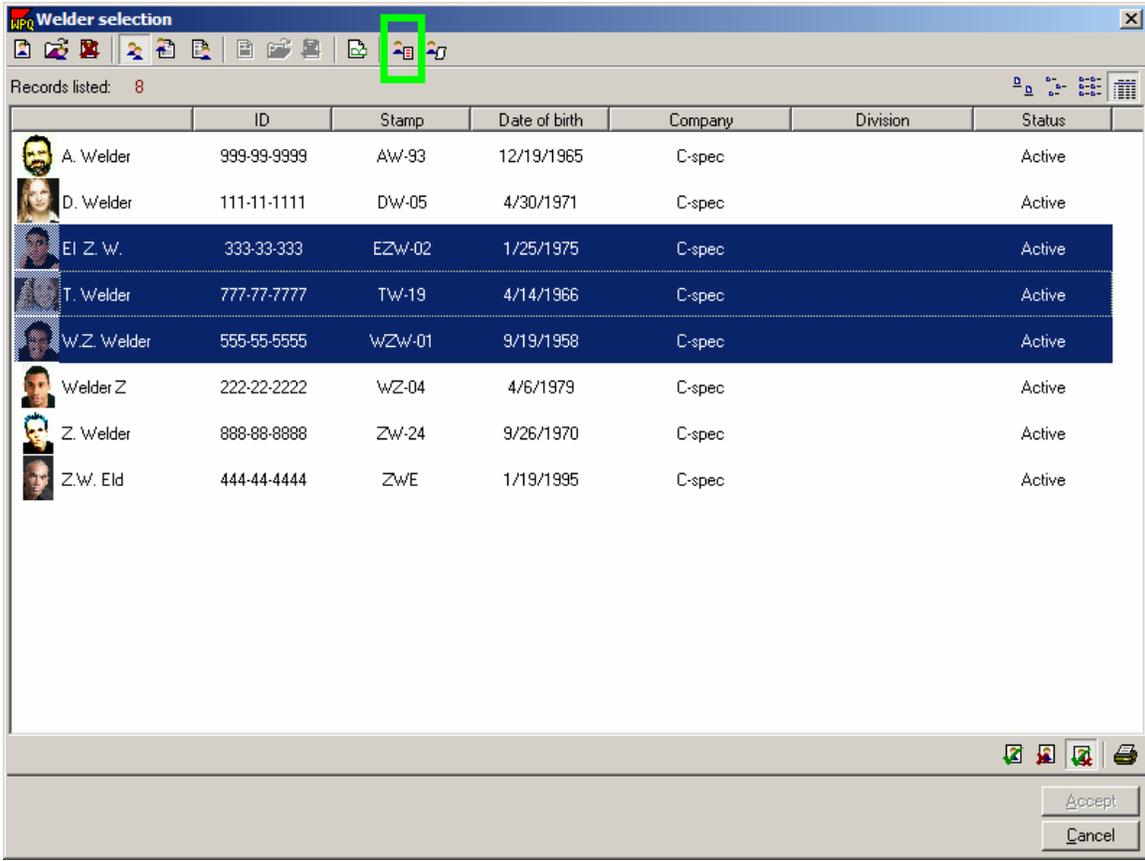
Icon	Description
EN	EN Code: Click on this icon to view the welders and/or operators that are qualified to the EN code.
	ASME Code: Click on this icon to view the welders and/or operators that are qualified to the ASME code.
	AWS Code: Click on this icon to view the welders and/or operators that are qualified to the AWS code.

	Show Process Qualification Summary: Click on this icon to view the processes that the selected welders are qualified.
	Show Test Qualification Summary: Click on this icon to view the test qualification summary for the selected welders.
	Show WPS Qualification Summary: Click on this icon to view the welders qualified to the recorded WPS's.
	Combine Welders Qualified Thickness Range: Click on this icon to combine the thicknesses qualified.
	Print Click on this icon to print the current report.

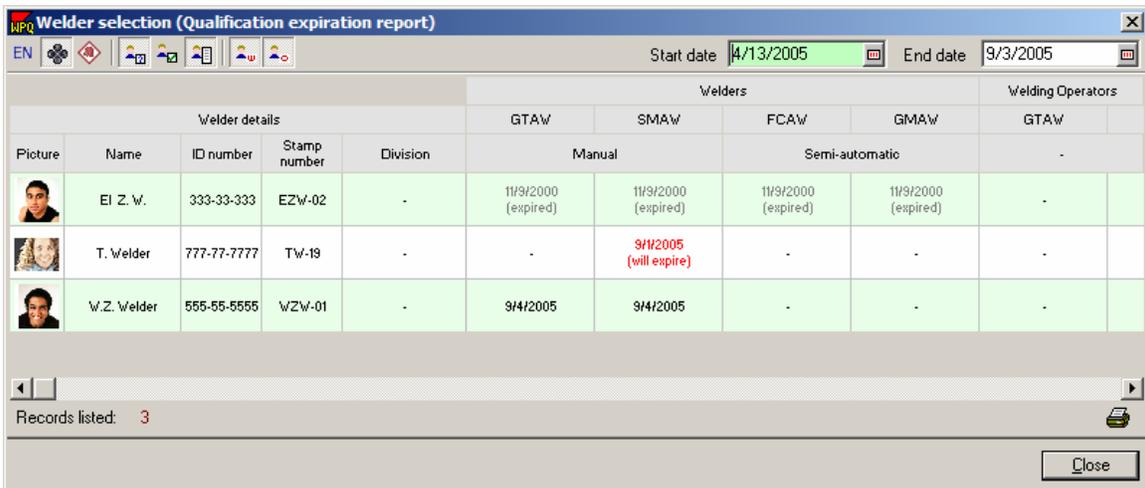
5. The items that are viewed in the qualification ranges report can be modified by going to the main WPQ screen and selecting **Tools** and then **Options**. Then click on the **Selection Lists** tab. See section 3.2.5 to find out more about modifying the selection list.

3.7 Creating an Expiration Report

1. Open the Welder Profiles Database by clicking on **Tools** and then **Welder Profiles**.
2. Select the welder(s) for which an Expiration Report is to be generated. To select multiple welders, hold the **ctrl** key down while clicking on each of the desired welder's names.



3. Click on the **Show Welder Expiration Report** icon



The user will have to select the dates that they would like to view. The dates shown for each welder under the process are categorized as:

- Black dates are those that will expire after the specified dates.
- Red dates are those that will expire within the specified dates.
- Gray dates are those that are already expired.

4. Several icons are provided to change the content being displayed in the expiration report.

Icon	Description
	EN Code: Click on this icon to view the welders and/or operators that are qualified to the EN code.
	ASME Code: Click on this icon to view the welders and/or operators that are qualified to the ASME code.
	AWS Code: Click on this icon to view the welders and/or operators that are qualified to the AWS code.
	Show All Welders: Click on this icon to view all welders even if they will not expire during the selected dates.
	Show All Welders that will Expire: Click on this icon to view only the welders/operators who will expire within the dates selected.
	Show Selected Welders: Click on this icon to view only the welders that were selected. This icon must be used with either the Show all Welders or Show all Welders that will Expire icons.
	Show Welders: Click on this icon to view only welders, not operators.

	Show Operators: Click on this icon to view only operators, not welders.
	Print Click on this icon to print the current report.

3.8 Welder Maintenance Log

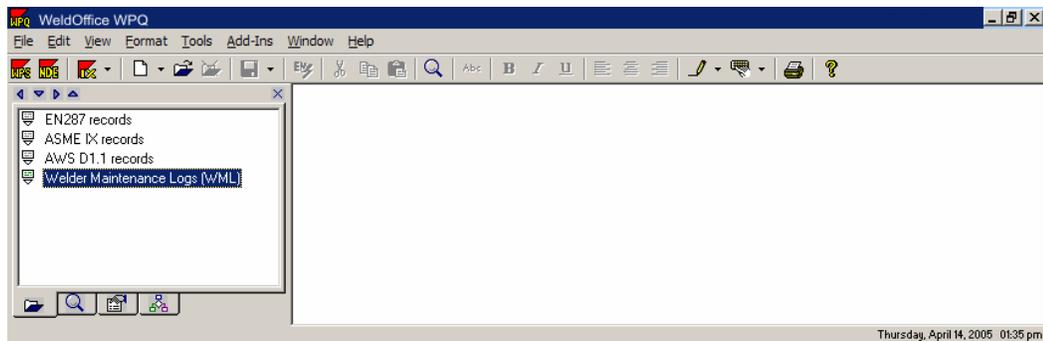
History of processes used by a welder

The Welder Maintenance Log is designed to maintain a continuous history of a welder's use of a process. Use the Welder Maintenance Log to document a welder's use of a process and to provide evidence that qualifications have not expired.

Note: These logs are created automatically when a welder is added to the Welder Profile database. Manual creation of a Welder Maintenance log is not necessary.

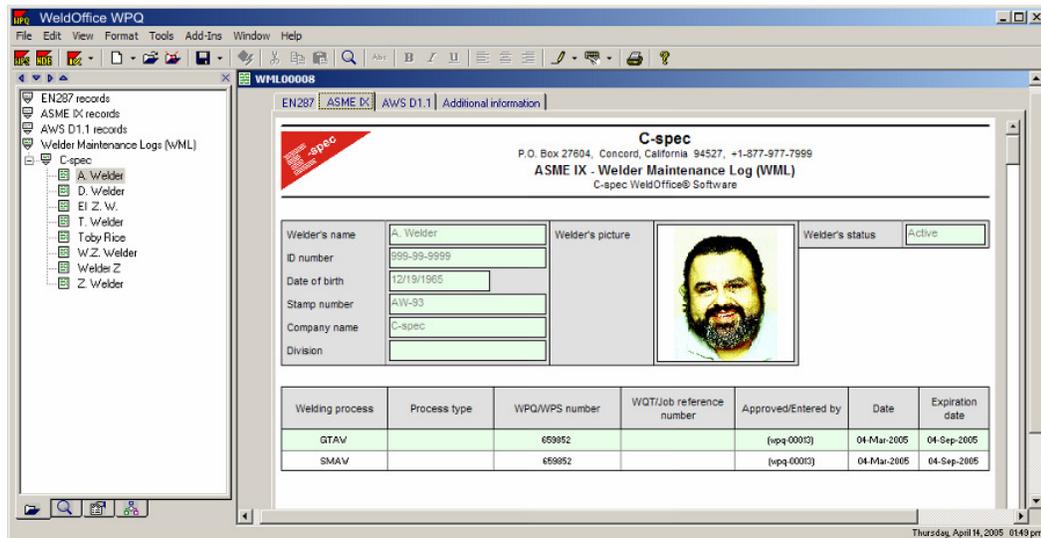
1. There are three ways to open a Welder Maintenance Log

- From the navigation bar, double click on **Welder Maintenance Log**

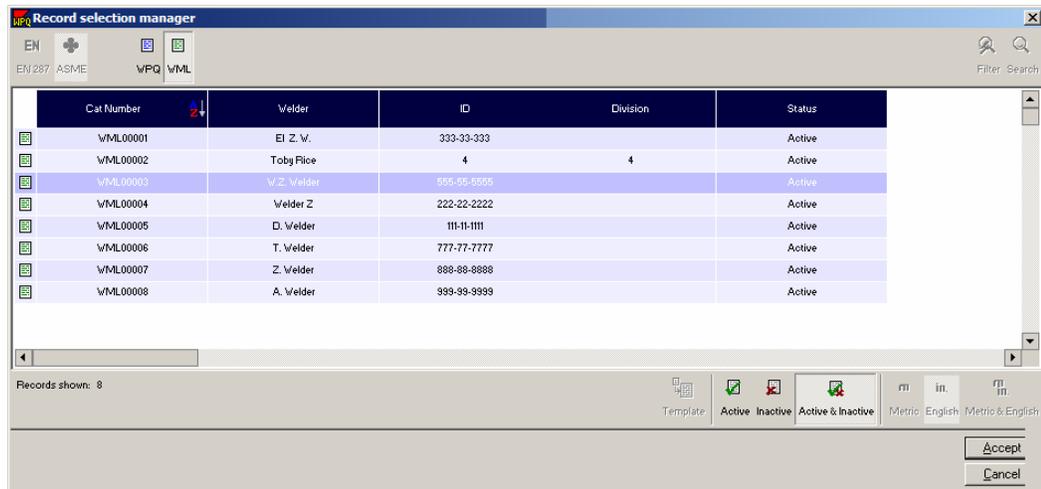


A list of items will appear based on how the default settings were determined in the default settings for the navigation bar (see section 3.1.1.10). In this example the company name is listed and then the welder's names.

Double click on a welder to open their Welder Maintenance Log.



- From the main WPQ screen, click on **File** then **open**. This will open the **Record Selection Manager** screen.



Select the WML icon to show all the WML records. Double click on a welder to open the Welder Maintenance log. To select multiple welders hold down the ctrl button while making selections and then click on the **Accept** button.

- From the main WPQ click on **View** which will open the **Record Selection Manager**. Follow the steps listed above.

2. The WML

EN287 ASME IX AWS D1.1 Additional information

C-spec

P.O. Box 27604, Concord, California 94527, +1-877-977-7999

ASME IX - Welder Maintenance Log (WML)

C-spec WeldOffice® Software

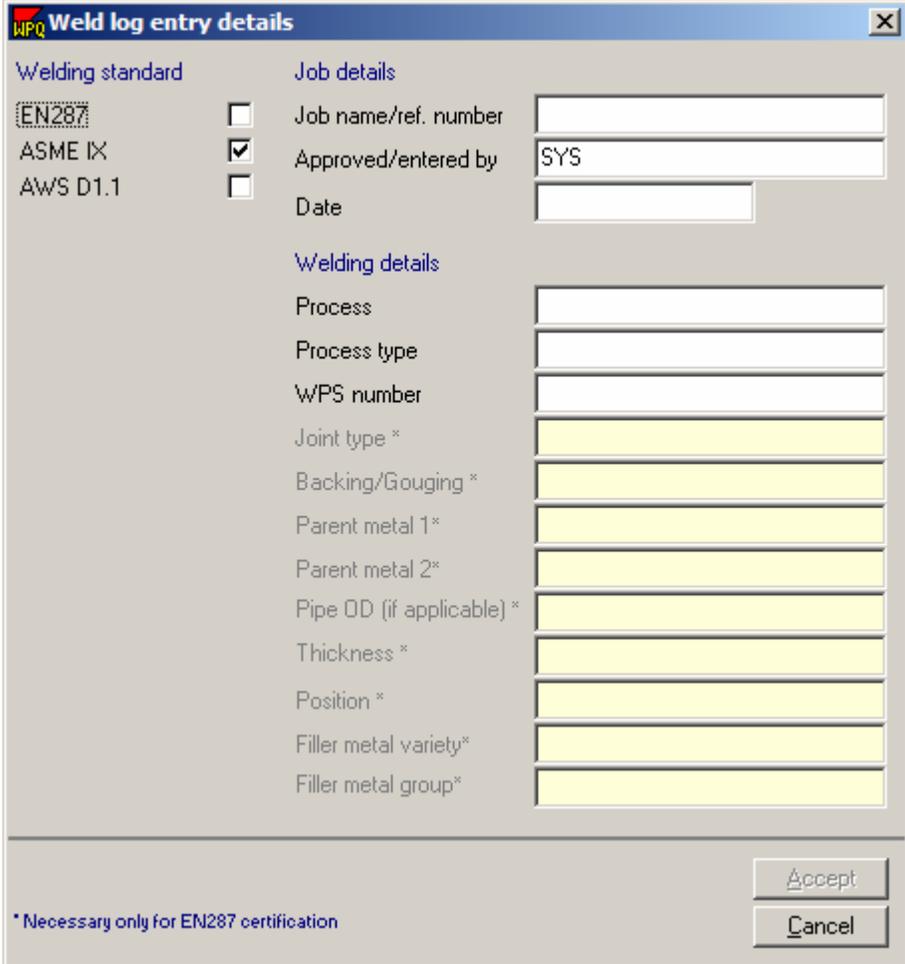
Welder's name	El Z. W.	Welder's picture		Welder's status	Active
ID number	333-33-333				
Date of birth	1/25/1975				
Stamp number	EZW-02				
Company name	C-spec				
Division					

Welding process	Process type	WPQ/WPS number	WQT/Job reference number	Approved/Entered by	Date	Expiration date
ESW	Automatic	995	ex	SYS	24-Mar-2004	24-Sep-2004
	Machine	995	ex	SYS	24-Mar-2004	
FCAW	Semi-automatic		548	SYS	14-Feb-2004	14-Aug-2004
			548	SYS	17-Oct-2003	
		PI-BT-V-EZW	33	(wpq-00009)	09-May-2000	
GMAW	Semi-automatic		548	SYS	14-Feb-2004	14-Aug-2004
			548	SYS	17-Oct-2003	
		PI-BT-V-EZW	33	(wpq-00009)	09-May-2000	
GTAW	Manual	PI-BT-V-EZW	33	(wpq-00009)	09-May-2000	09-Nov-2000
SMAW	Manual	PI-BT-V-EZW	33	(wpq-00009)	09-May-2000	09-Nov-2000

- The line items in this example that have a WPQ/WPS number were entered automatically when a Welder Performance Qualification WPQ had been entered for this welder. Entries linked to a WPQ can not be deleted or altered.
- The other entries were entered manually usually with reference to a Job Reference number to provide evidence of why the item was entered.
- All entries made for a single process and type are grouped together. This grouping allows WeldOffice® WPQ to calculate the current expiration date by adding 6 months to the highest date in the group. If an expiration date other than 6 months from highest date is desired, this setting can be changed in Tools/Options/Default Settings/Rules for Qualification Maintenance (see section 3.1.1.13).

3.9 Add Entry to Welder Maintenance Log

1. Open a Welder Maintenance Log (see section 3.8)
2. Click on the **Enter New Job/Weld** icon  (in the bottom right corner of the WML) which will bring up the Weld Log Entry Details screen as shown below.



Weld log entry details

Welding standard

EN287

ASME IX

AWS D1.1

Job details

Job name/ref. number

Approved/entered by: SYS

Date

Welding details

Process

Process type

WPS number

Joint type *

Backing/Gouging *

Parent metal 1*

Parent metal 2*

Pipe OD (if applicable) *

Thickness *

Position *

Filler metal variety*

Filler metal group*

Accept

Cancel

* Necessary only for EN287 certification

Select the applicable standard and then fill in the pertinent details. When finished click on **Accept**.

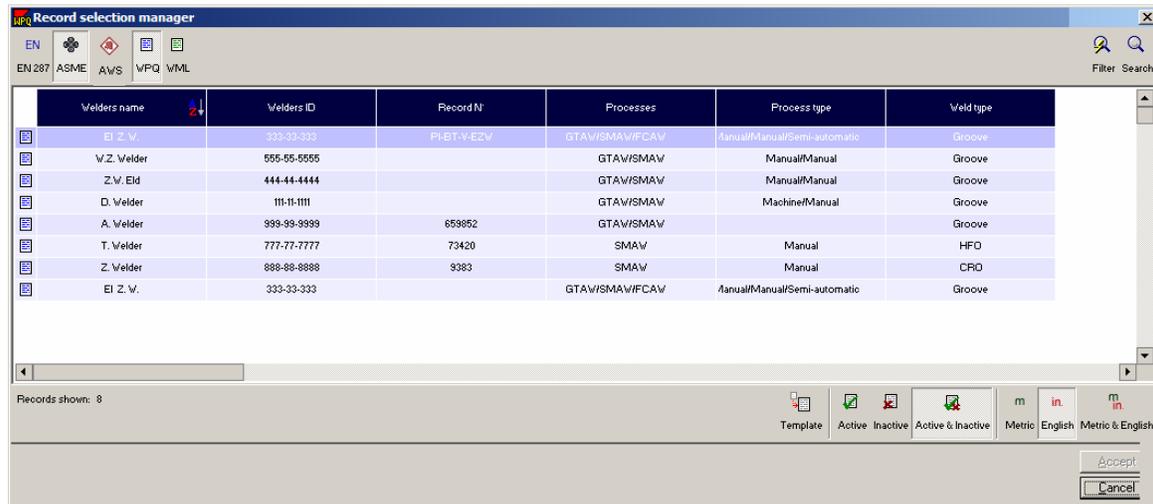
3.10 Finding Records

Using the Record Selection Manager

The *Record Manager* displays a list of documents (WPQs, WMLs, etc.) which are currently held on file for the appropriate welding standard. This *Record Manager* is used in a number of places in *WeldOffice® WPQ* including:

- Selecting documents to open for editing (*Record Selection Manager*)
- Selecting documents to print (*Record Print Manager*)
- Selecting documents to export (*Record Export Manager*)
- Selecting documents to view (*Record Selection Manager*)

To open the *Record Selection Manager*, click on **File** and then **Open**. The *Record Selection Manager*, as shown below, will open.



2. Select the code applicable to the desired record.



3. Then specify the type of record to be opened by selecting WPQ or WML.



4. To easily locate a specific record, use one or more of the following Sorting/Filtering tools:

- Clicking on a column header will sort the records alphabetically by that column. Use this feature to easily scroll through all of the records.
- A series of filtering icons have been provided to show only the desired records.



By clicking on this button, the software will show only the records that are templates.



By clicking on this button, the software will show only the records that are active in the system.



By clicking on this button, the software will show only the records that are inactive in the system.



By clicking on this button, the software will show the records that are active and inactive in the system.



By clicking on this button, the software will show only the records that are in metric units.



By clicking on this button, the software will show only the records that are in English units.

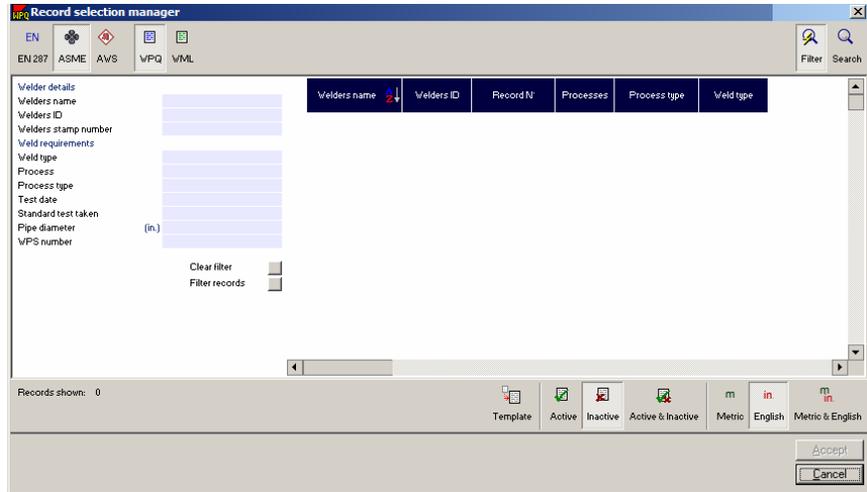


By clicking on this button, the software will show all the records that are in metric and English units.

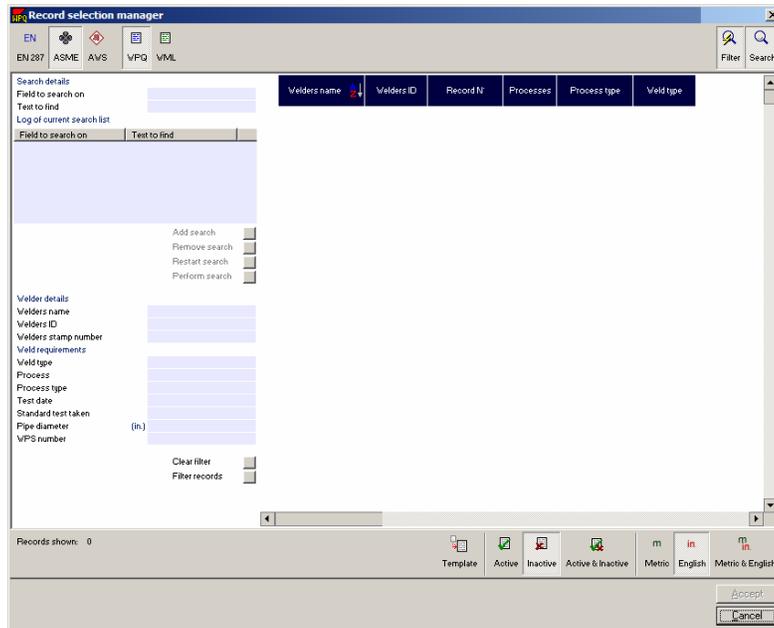
- For the most comprehensive searching capabilities, click on one of the search buttons to convert the *Record Selection Manager* into a Search Engine.



The filter button allows the user to filter documents based on information that has been entered into the records. If clicked on, the screen below will open where the user can select information to filter upon.



The search button allows the user to search documents based on keywords that have been entered. If clicked on, the screen below will open where the user can enter information to filter upon.



5. When the desired record has been located, select it by clicking the cursor in the box of the record to highlight it. To select multiple records, hold the **ctrl** key and click on any additional records.

6. With all desired records(s) selected, click on the **Accept** icon at the bottom right hand corner of the screen.

or

7. Double click on a single record to open it.

3.11 Find Qualified Welders

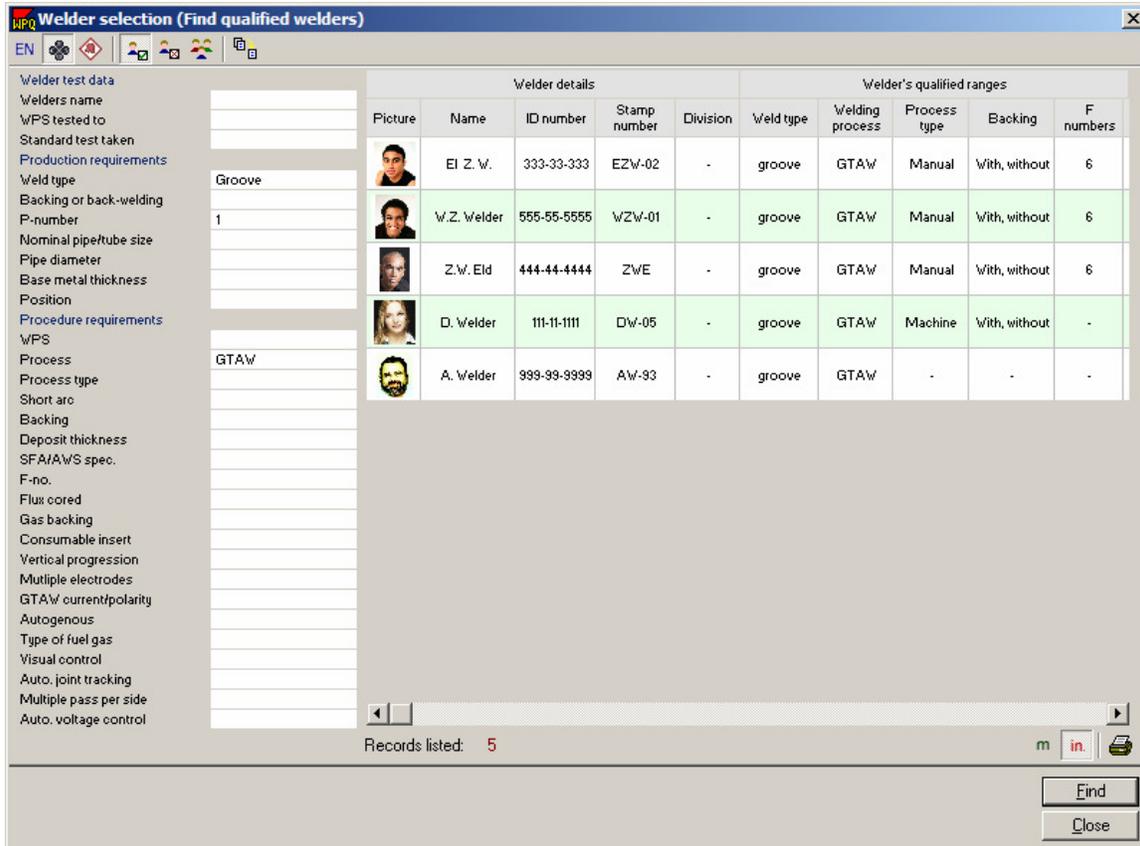
1. Click on **Tools** and then **Find Qualified Welders**.

2. In the fields provided, enter a few of the welding variables for the desired qualifications. Typically these will be actual variables that will be encountered on work that is to be performed.

3. Click on the **Find** button.

4. The welders that have qualified ranges covering the variables that were specified are displayed.

Note: This search engine is searching welders qualified for specific code conditions. Entering variables that do not disqualify welders will not filter them from being displayed.



As with most of the database reports generated in WeldOffice® WPQ, the information listed in columns that appear are changeable in order to fit a wide variety of needs. For more information on customizing columns that appear in reports, please refer to the Selection lists section (see section 3.2.5).

There are several icons provided which allow the displayed content to be changed. Move the mouse pointer over these icons to see a definition of each one. The definitions are also listed below.

Icon	Description
	EN Code: Click on this icon to view the welders and/or operators that are qualified to the EN code.
	ASME Code: Click on this icon to view the welders and/or operators that are qualified to the ASME code.

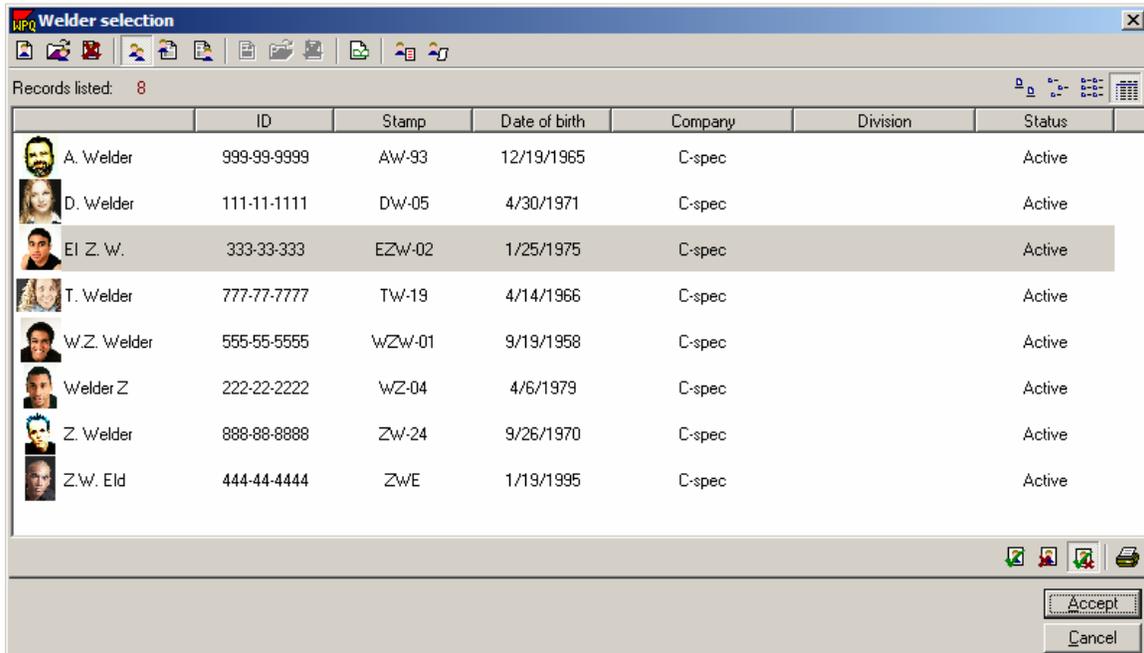
	AWS Code: Click on this icon to view the welders and/or operators that are qualified to the AWS code.
	Welders Qualified to Complete the Whole Weld: Click on this icon to view all welders that are qualified to complete the whole weld.
	Welders that are not Qualified for the Specific Conditions: Click on this icon to view only the welders who are not qualified for the conditions specified.
	Welders Qualified for Partial Welds: Click on this icon to view only the welders that are qualified to weld partial welds.
	Combine Qualified Thickness Ranges: Click on this icon to combine the welders qualified thickness ranges.
	Metric: Click on this icon to search only in metric records.
	Inches: Click on this icon to search only in imperial records.
	Print Click on this icon to print the current report.

3.12 Managing Welders

Using the Welder Profiles Database

Use this tool to add, delete, edit and group welders as well as generate expiration and qualification reports.

To open the **Welder Selection Database**, click on **Tools** and then **Welder Profiles**.



Icon	Description
	Add Welder: Click on this icon to open the welder details screen which will allow the user to type in information about the new welder.
	Edit Welder Profile: Click on this icon to open the welder details screen for the selected welder to make changes.
	Delete Welder: Click on this icon to delete the selected welder(s).

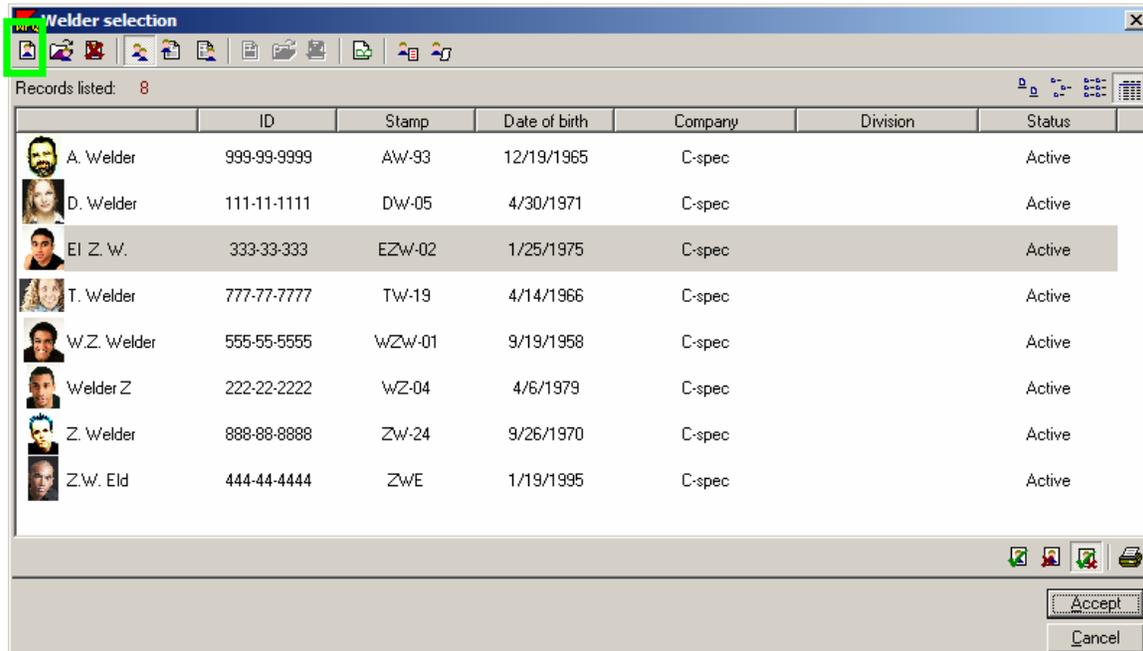
	Show All Welders: Click on this icon to view only the welders
	View Welders in Each Group: Click on this icon to view both the group listings and welder listings.
	Assign Groups to Individual Welders: Click on this icon to be able to assign groups to individual welders.
	Add a New Group: Click on this icon to open a Welder Group window which will allow the user to input a group name and notes about that group.
	Edit Group: Click on this icon to edit an existing group's details (i.e. name and notes).
	Delete Group: Click on this icon to delete the group that has been selected.
	Add Weld Log Entry: Click on this icon to add an entry into the welders profile about jobs that they have completed.
	Record Expiration Report: Click on this icon to view welders and operators who will expire during a certain time frame.
	Qualification Ranges Report: Click on this icon to view qualification ranges for the selected welders.
	Large Icons: Click on this icon to view large icon images of the welders pictures and names.
	Small Icon: Click on this icon to view small icon images of the welders pictures and names.

	Details: Click on this icon to view the welders and their details (i.e. name, ID, stamp, birth date....)
	Small Icons Vertically Arranged: Click on this icon to view small icon images of the welders pictures vertically arranged.
	Show Active Welders: Click on this icon to view only the active welders.
	Show Inactive Welders: Click on this icon to only view the inactive welders.
	Show All Welders: Click on this icon to view the active and inactive welders.
	Print: Click on this icon to print the welder list.

The following sections will discuss adding, delete, editing and group welders.

3.12.1 Adding Welders

Click on **Tools** and then **Welder Profiles** to open the **Welder Selection** screen.



Welder Selection Screen

1. Click on the **Create a New Welder** icon and the **Welder details** box will appear.

Welder details

Name

ID number

Stamp number

Date of birth

Company

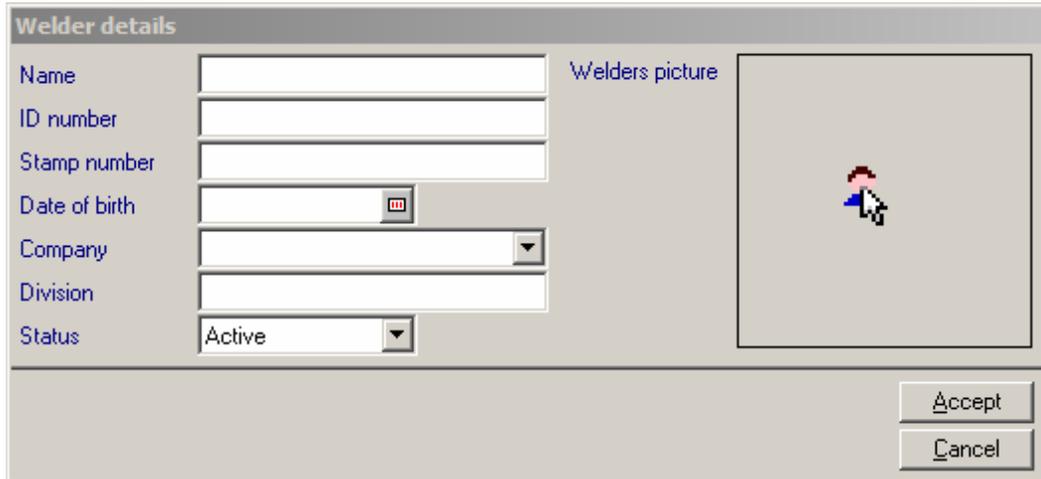
Division

Status

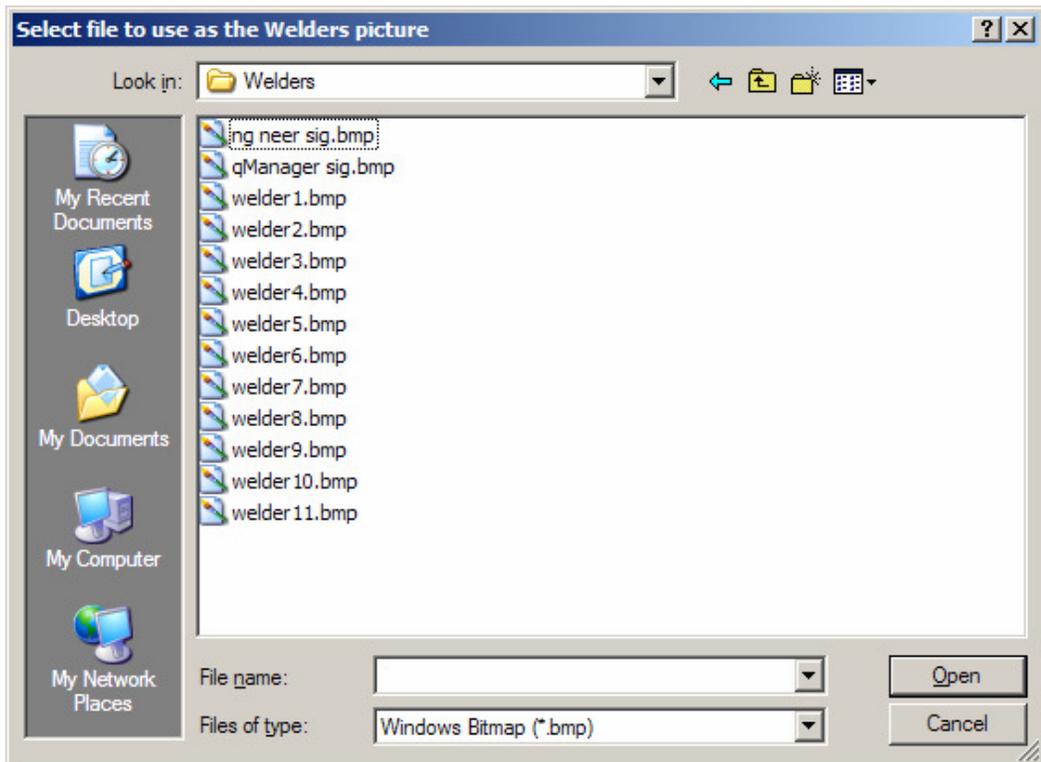
Welders picture

2. Fill in the details about the welder. Remember to use the drop down menus where possible.

3. Select a picture to represent the welder. Click inside the **Welders Picture** box (notice that the mouse changes to a welder).



This will open a Select File screen, where the user can choose a bitmap to use as the welder's picture.

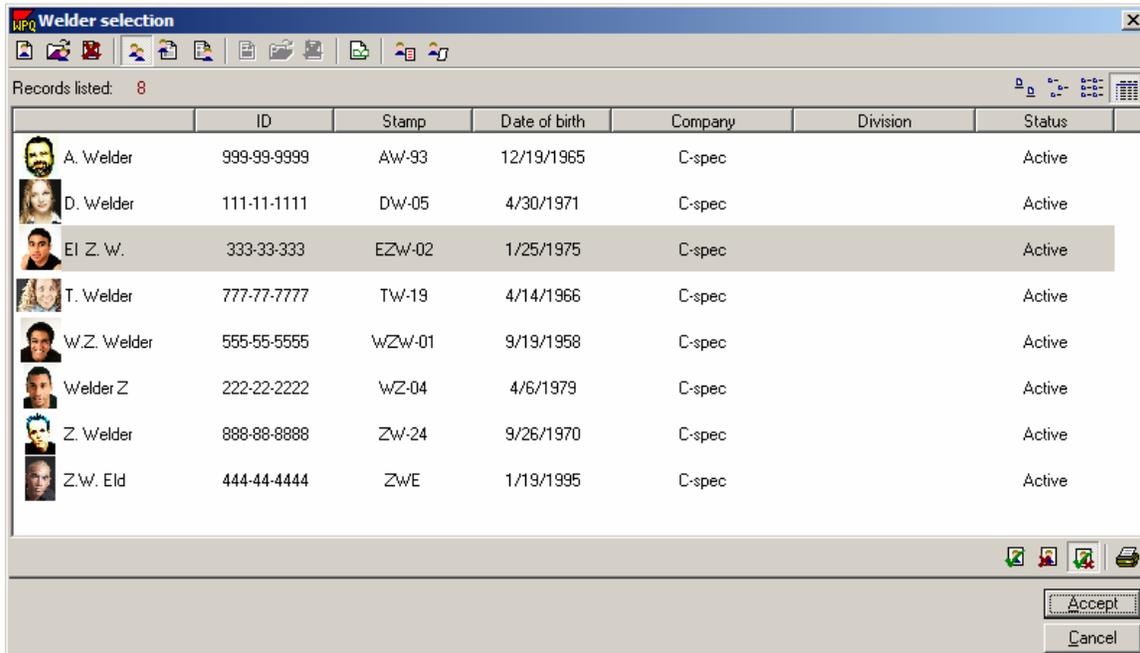


Click **Open** when finished.

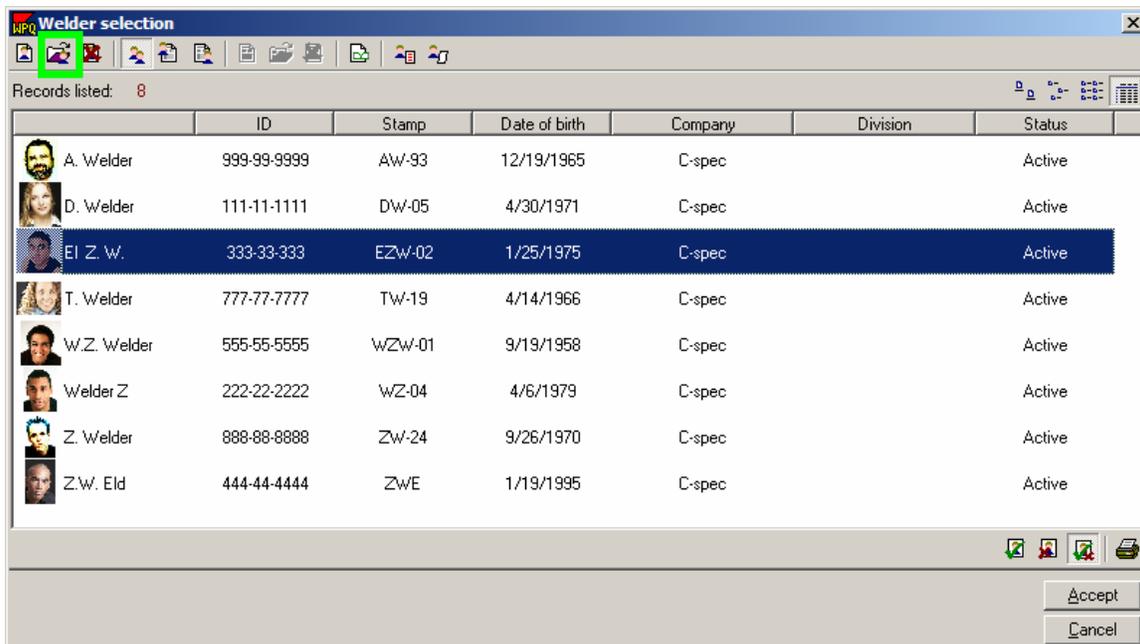
4. Click **Accept** when finished entering information to be taken back to the **Welder Selection screen**.

3.12.2 Edit Welders

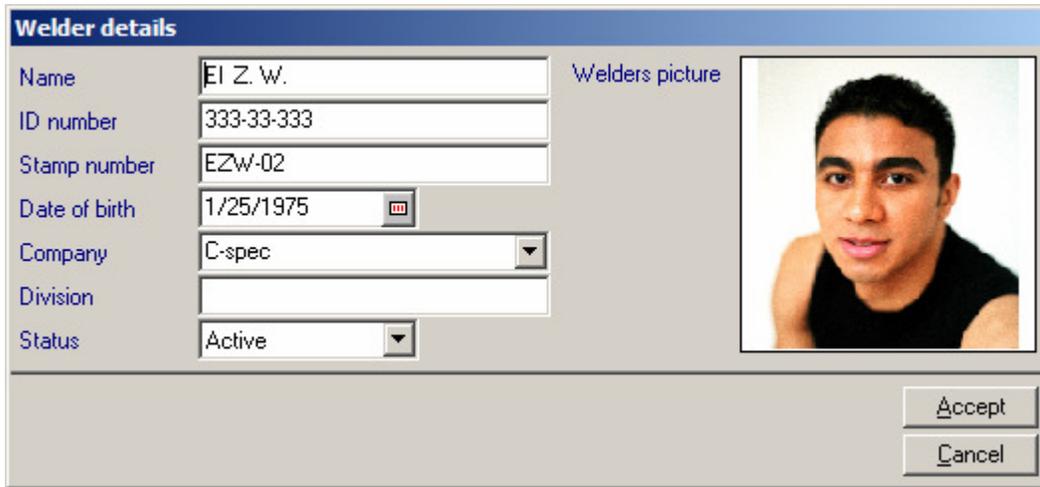
1. Click on **Tools** and then **Welder Profiles** to open the **Welder Selection** screen.



2. Select a Welder to edit by clicking on the welder. Only one welder can be edited at a time.



3. Click on the **edit icon**  to bring up the welder details for the selected welder.



The image shows a 'Welder details' dialog box with the following fields and controls:

Field	Value
Name	EI Z. W.
ID number	333-33-333
Stamp number	EZW-02
Date of birth	1/25/1975
Company	C-spec
Division	
Status	Active

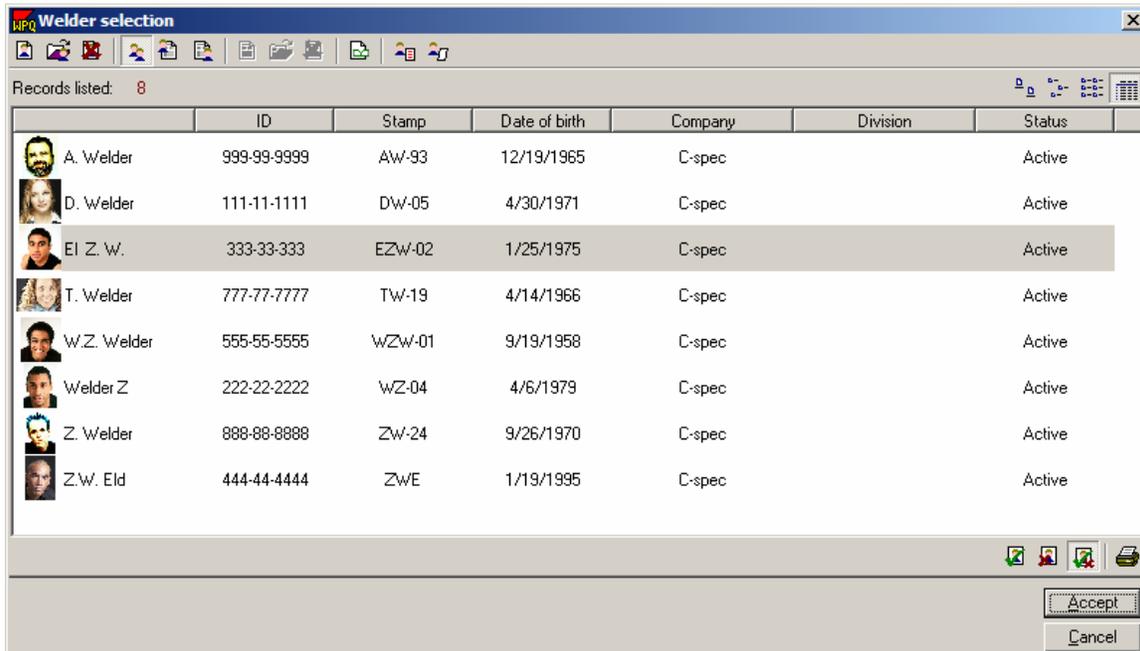
Welders picture: 

Buttons: Accept, Cancel

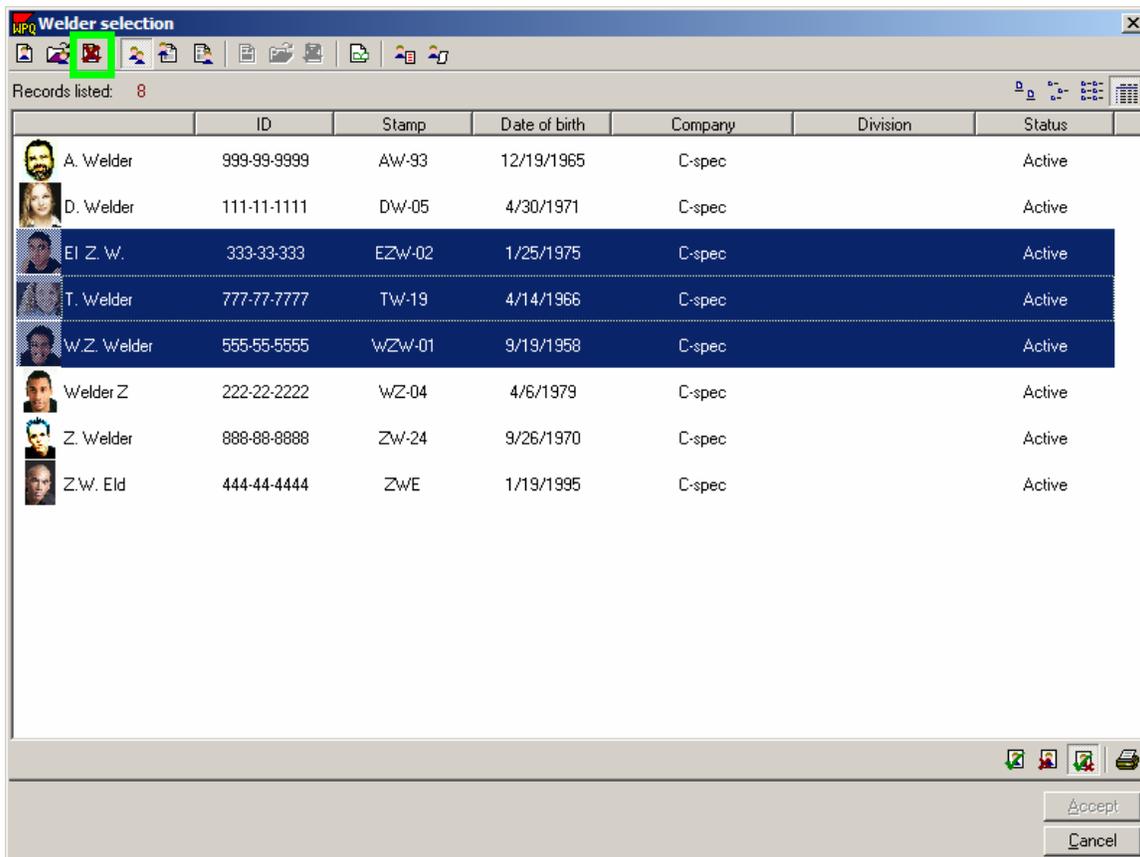
4. Make changes that need to be made then click on **Accept**.

3.12.3 Delete Welders

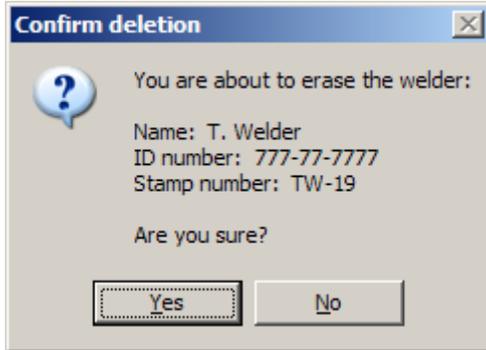
1. Click on **Tools** and then **Welder Profiles** to open the **Welder Selection screen**.



2. Select a Welder to delete by clicking on the welder. To delete multiple welders, hold the **ctrl** button down and select the welders.



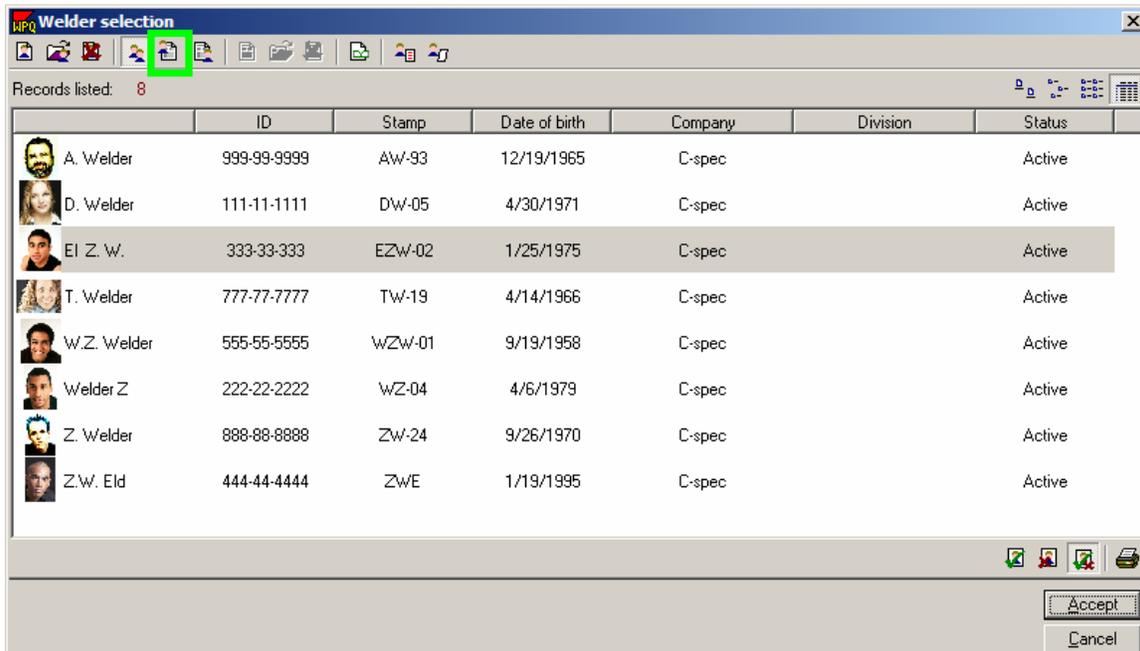
- Click on the **delete icon**  or press the delete button to delete the selected welders. A message will appear asking if the user would like to continue, click yes or no.



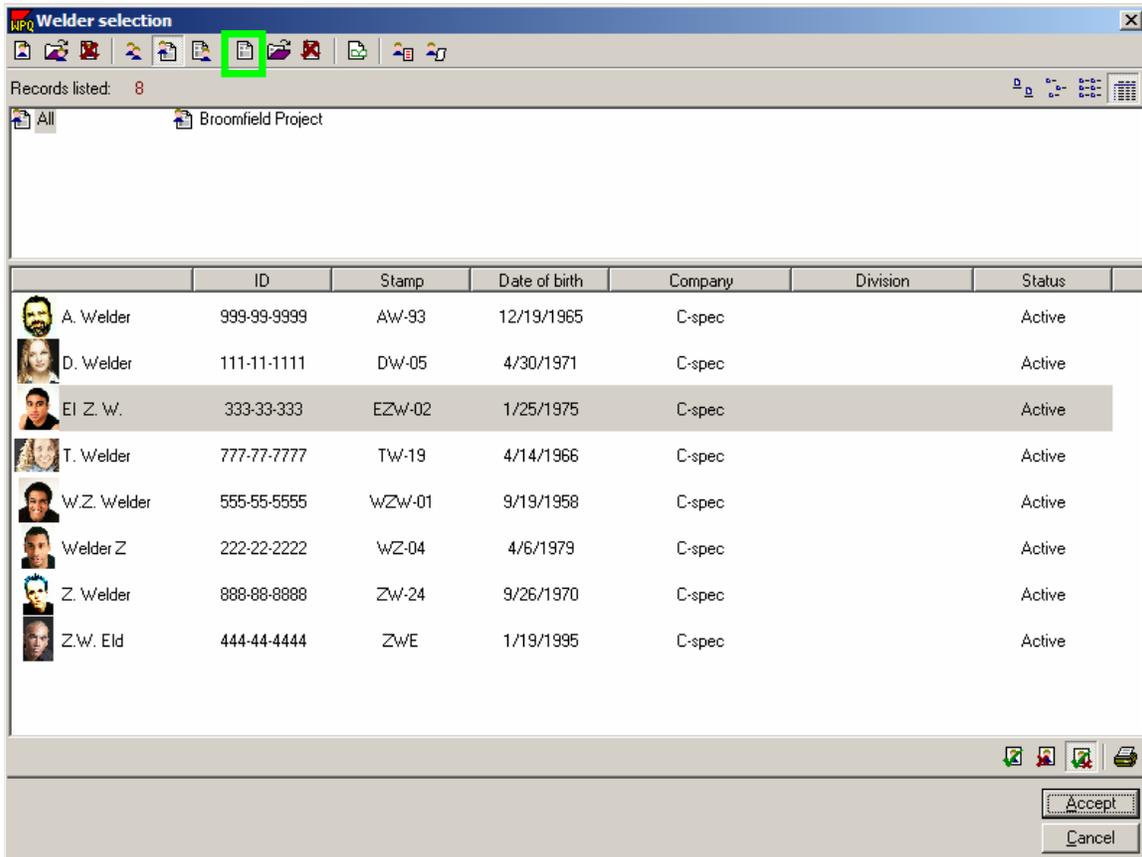
3.12.4 Adding Groups

Combine welders into groups based jobs, process, etc

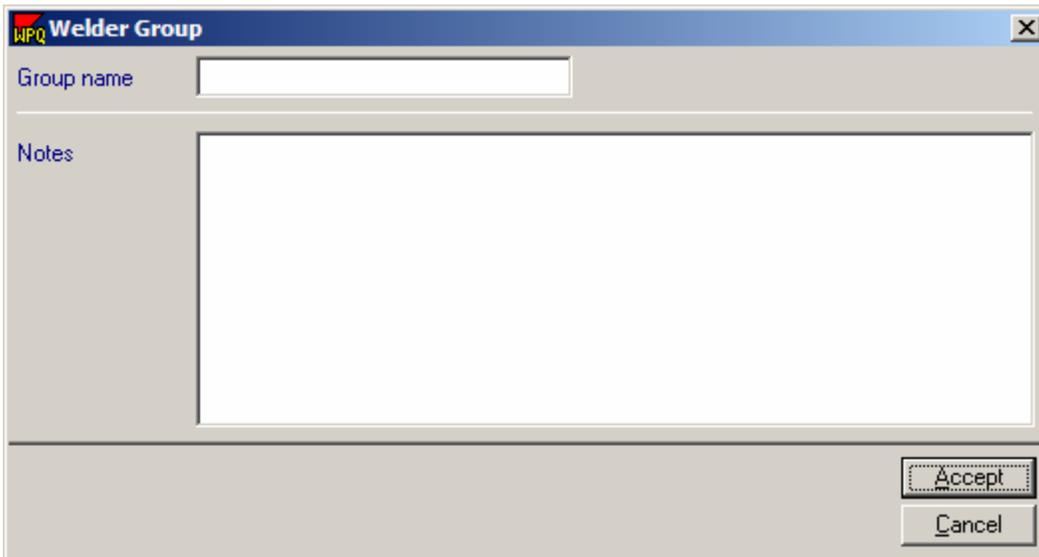
- Click on **Tools** and then **Welder Profiles** to open the **Welder Selection screen**.



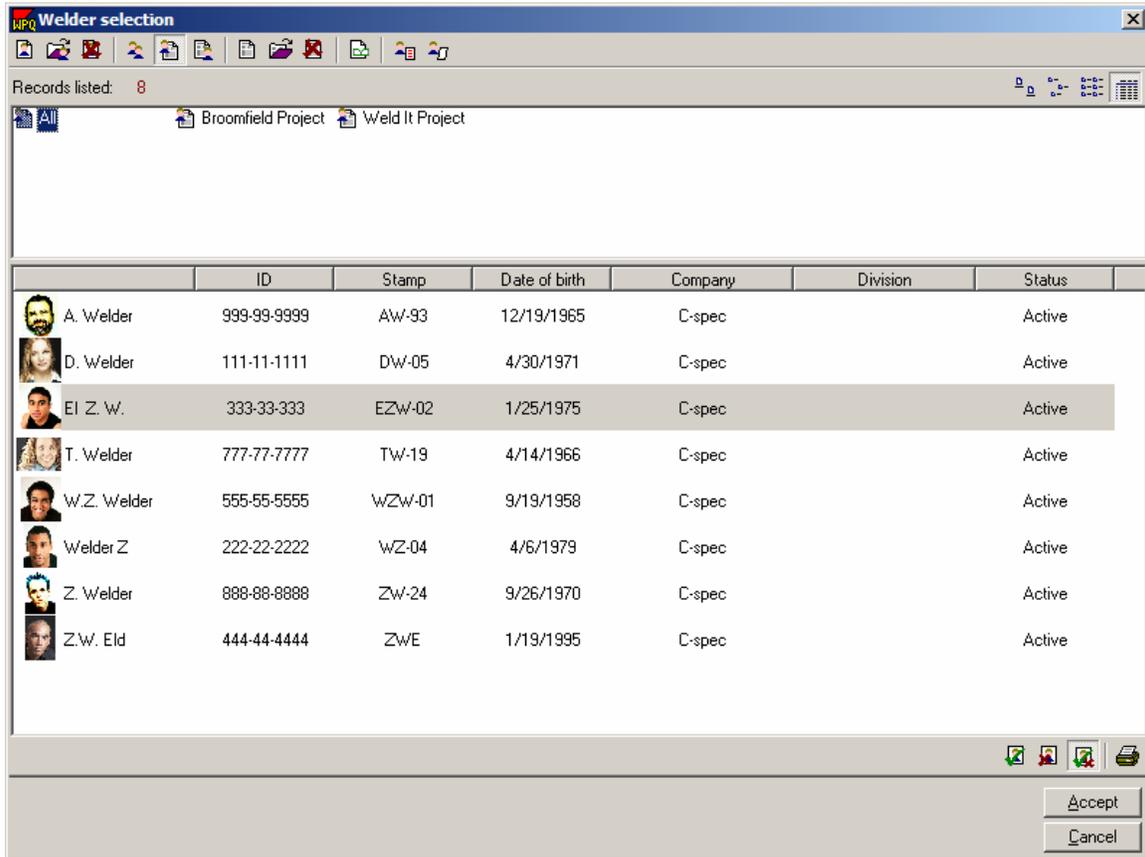
2. Click on the **View Welders in each Group** icon  to view both the groups and welders.



3. Click on the **Add Group** icon  to open the welder group window.

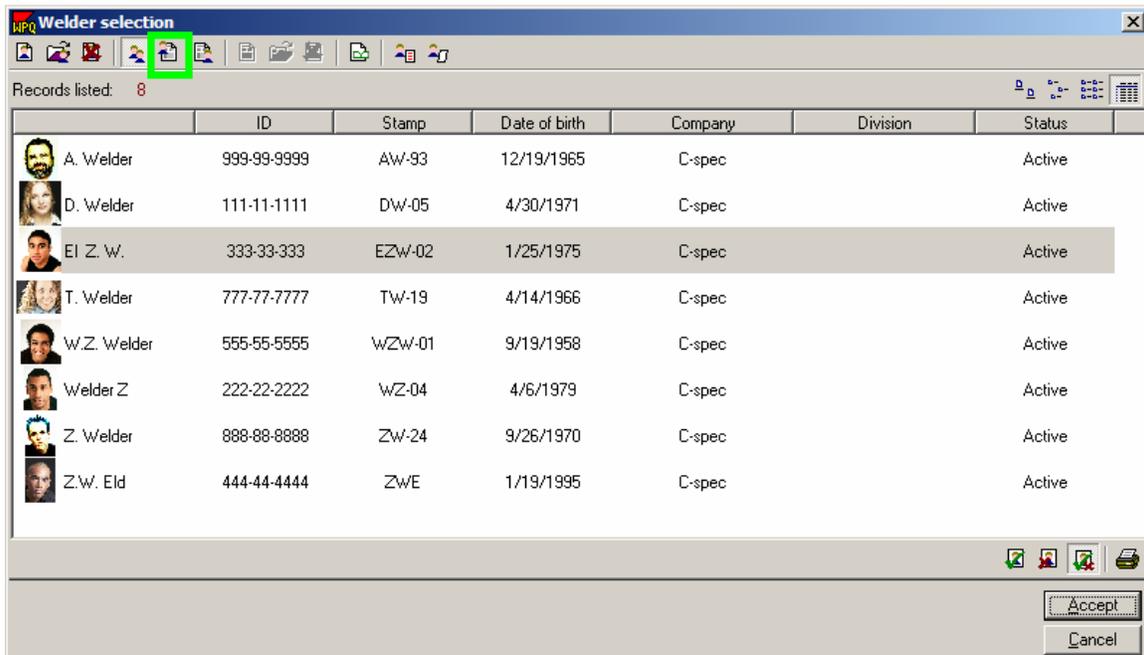


4. Type the group name and then any details about the group and press **Accept**. The new group will now show up in the group listings.

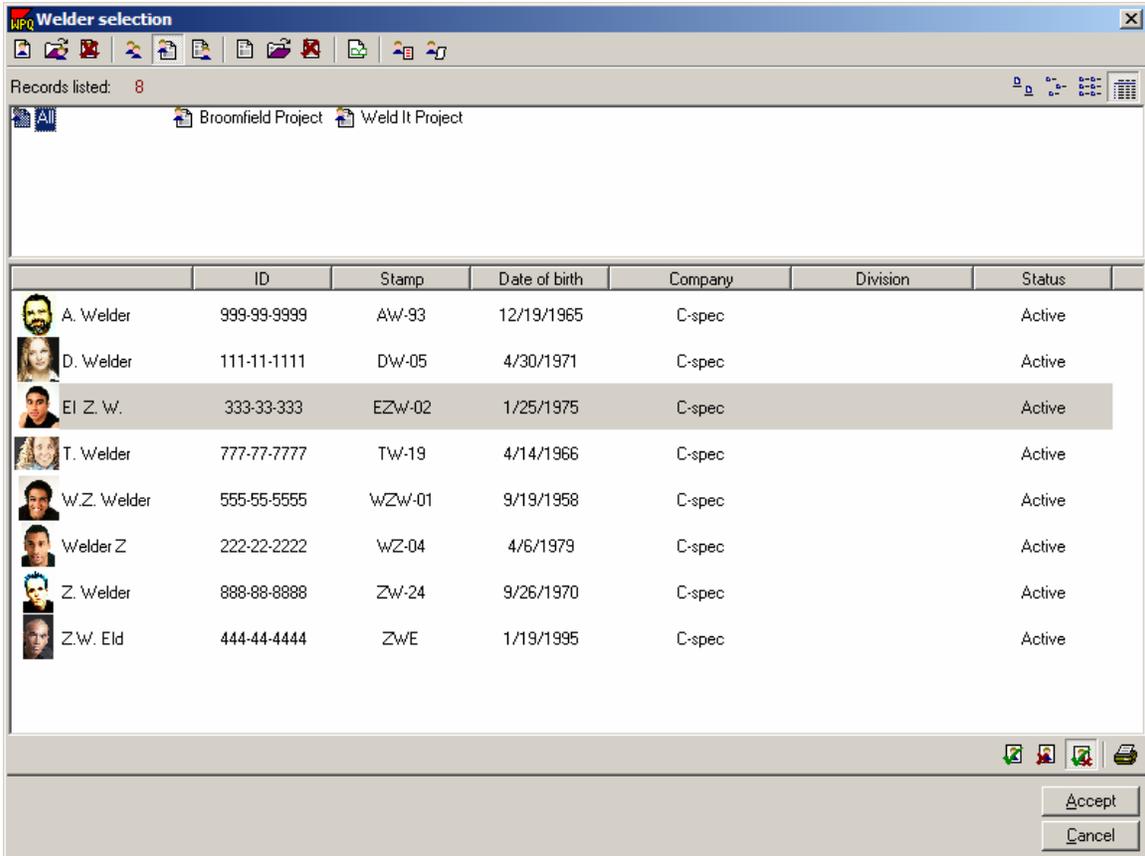


3.12.5 Adding Welders to Groups

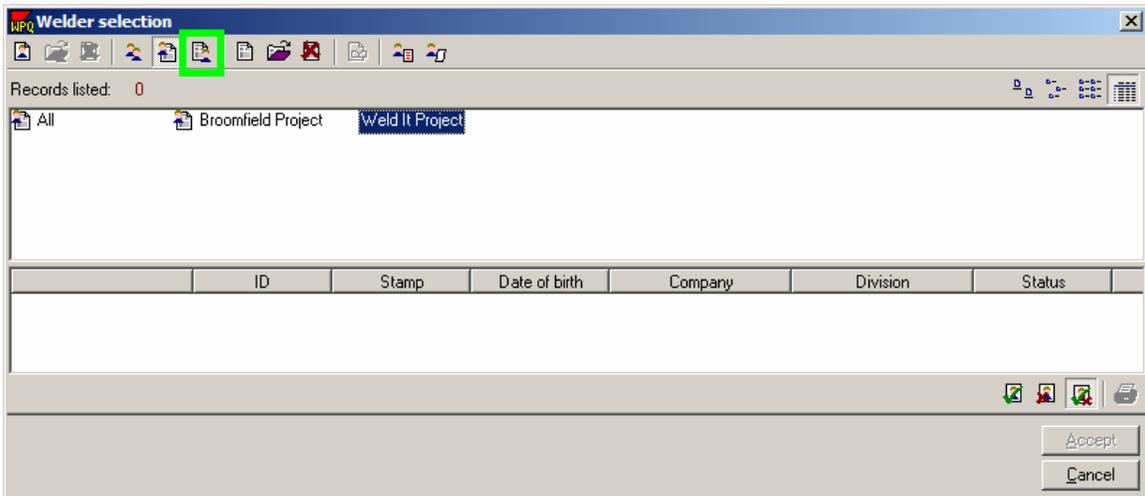
Click on **Tools** and then **Welder Profiles** to open the **Welder Selection** screen.



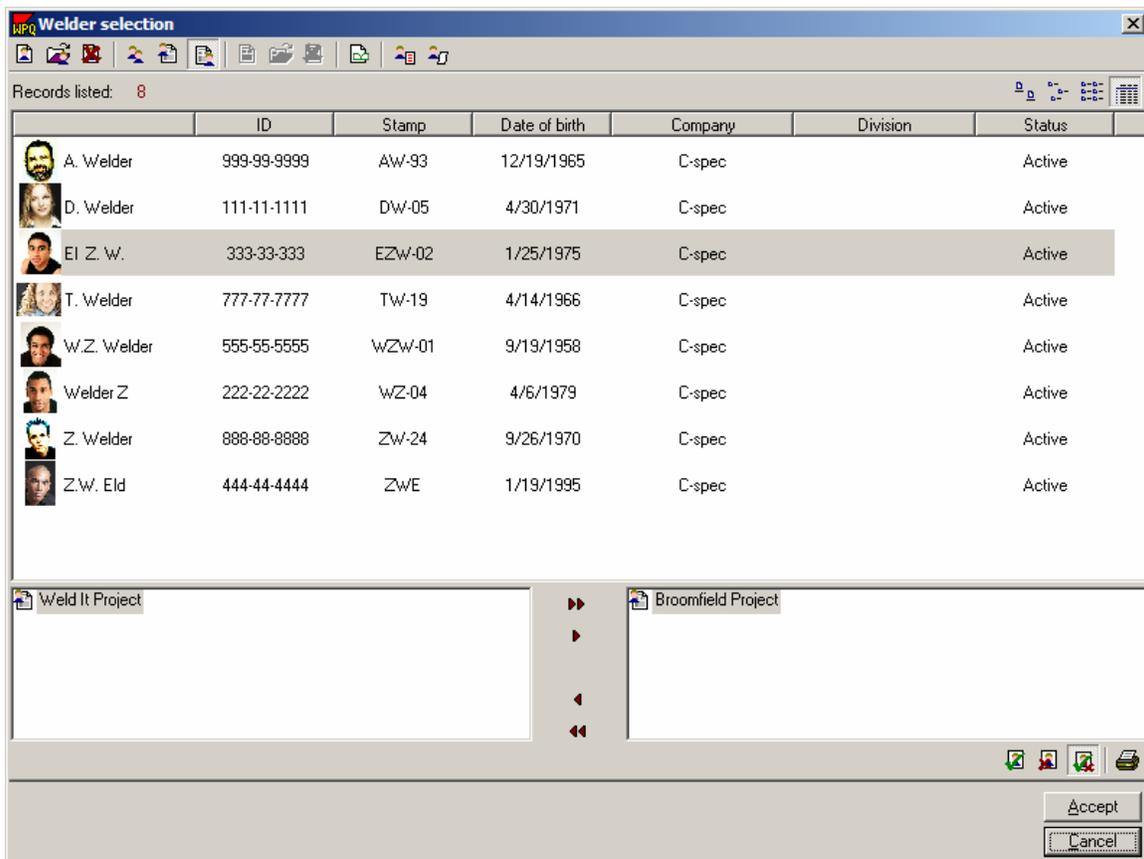
Click on the **View Welders in each Group** icon  to view both the groups and welders.



Click on the group that the user wants to add welders to.



Click on the **Assign Welders to Group** icon  which will open a different Welder selection screen as shown below. This screen shows all the welders and groups and it allows welders to be placed in a group.



Grouping information will appear in the two large boxes at the bottom of the screen. The left box contains the groups that are assignable to the selected welder and the right box contains the groups that are currently assigned to the selected welder.

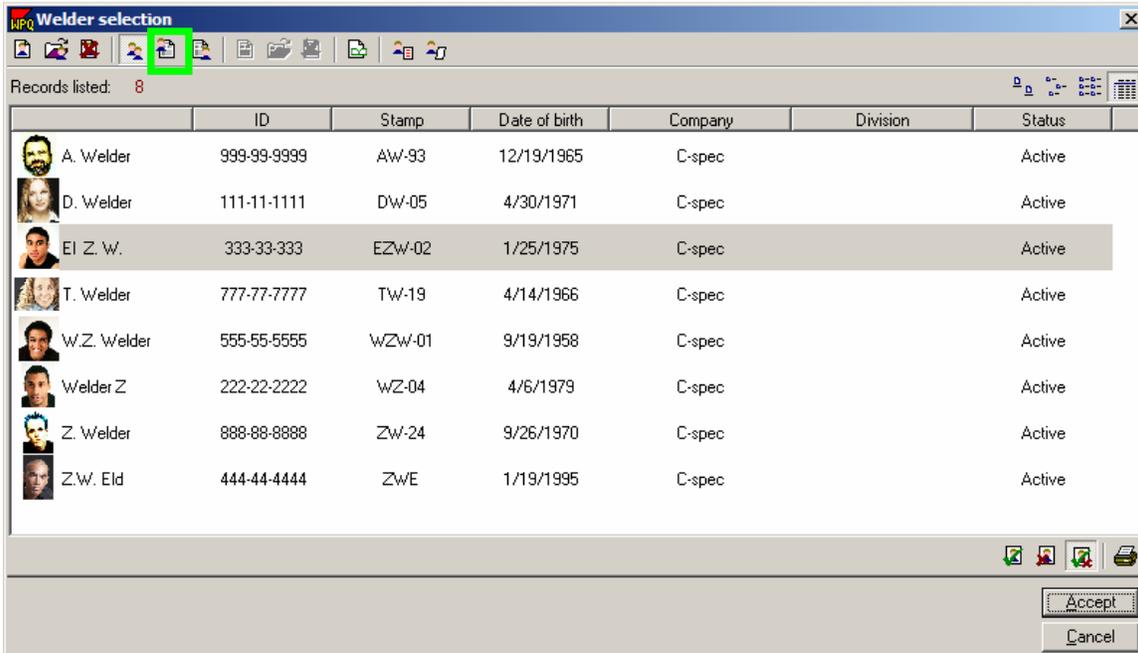
To assign a group to a welder, click on the desired group in the left box. Then click on the **red arrow** that points to the right. This will move the group into the box on the right, attaching the welder to the group.

In the above screen, Welder El Z. W. is assigned to the Broomfield project already. To assign him to the Weld It Project, leave the welder selected, then click on the **Weld It Project**. Click on the **Red Arrow** to move the Weld it Project to the right hand side of the screen. Now, El Z. W. is assigned to both projects.

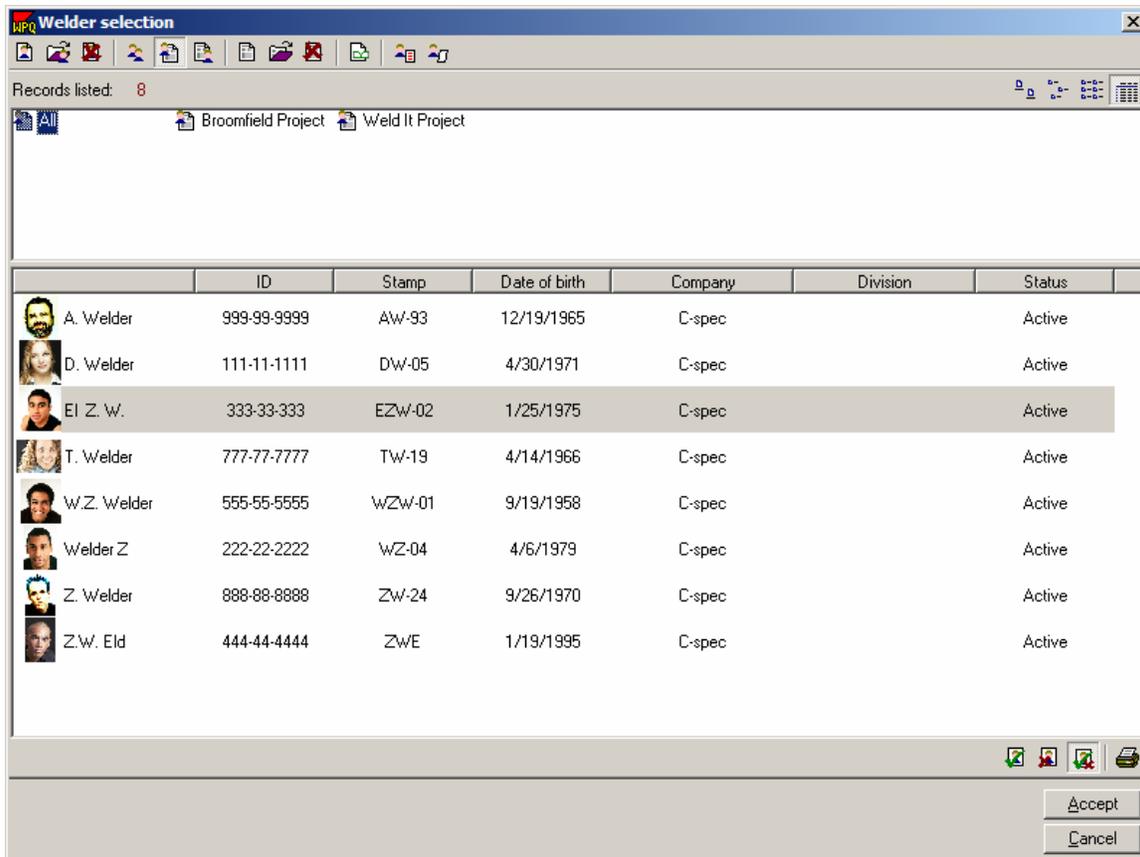
To add all projects to a welder, click on the double right arrows

3.12.6 Delete a Welder from a Group

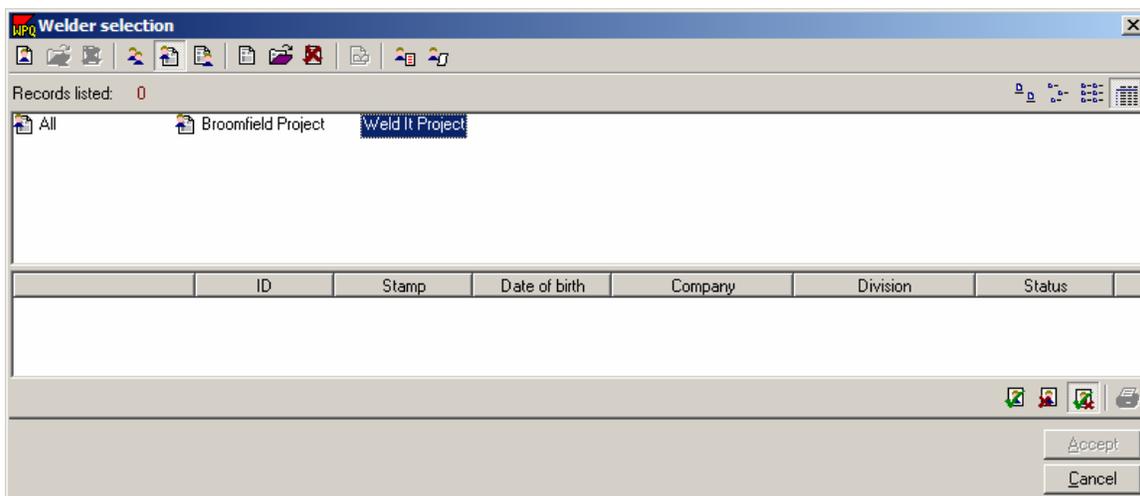
1. Click on **Tools** and then **Welder Profiles** to open the **Welder Selection** screen.



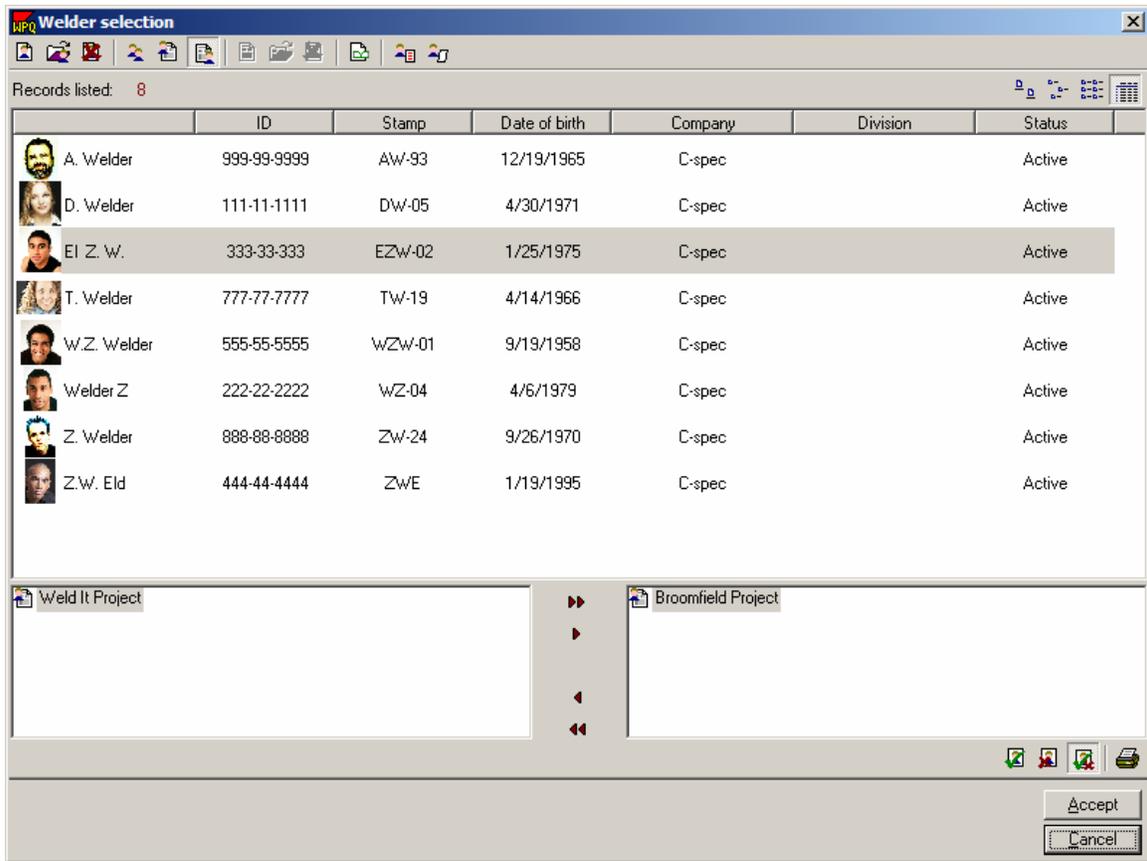
2. Click on the **View Welders in each Group** icon  to view both the groups and welders.



3. Click on the group to modify.



4. Click on the **Assign Welders to Group** icon  which will open a different Welder selection screen as shown below. This screen shows all the welders and groups and it allows welders to be placed in a group.



Grouping information will appear in the two large boxes at the bottom of the screen. The left box contains the groups that are assignable to the selected welder and the right box contains the groups that are currently assigned to the selected welder.

To delete a welder from a group, select the welder, click on the desired group in the box on the right. Then click on the **red arrow** that points to the left. This will remove the group from the welder and move the group to the box on the left.

In the above screen, Welder El Z. W. is assigned to the Broomfield project already. To remove him from the Broomfield Project group, make sure he is selected. Then click on the **Broomfield Project**. Click on the **Left Red Arrow** to move the Broomfield Project to the left hand side of the screen.

To remove all the groups from a welder, click on the double left arrow icon to move all the groups for the selected welder to the left box.

3.13 Material Databases

Using the databases of Base Metals, Filler Metals, and Pipe Schedules

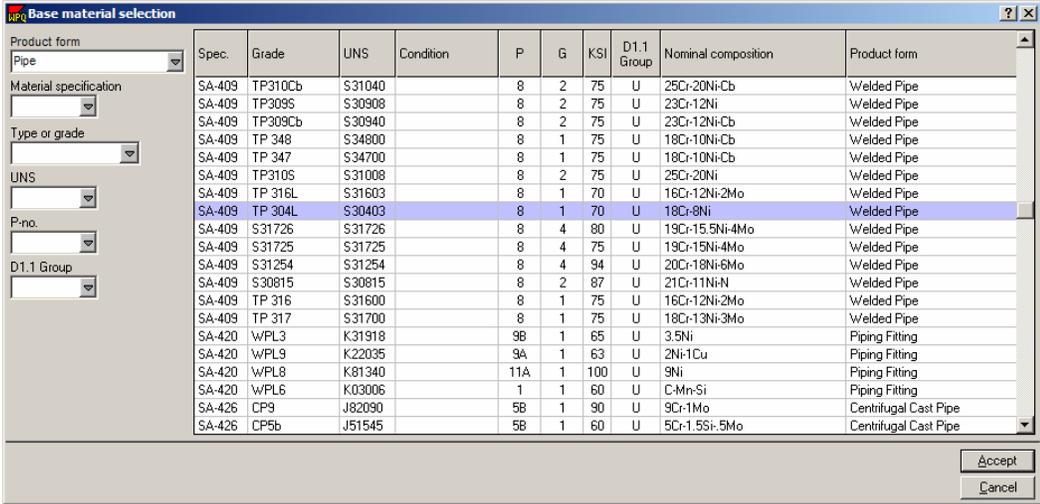
1. Access to the materials databases can be done by clicking on the database icon  in one of the following fields on any form.

- Base Metal specification (Base material database)
- Base metal P-no. (Base material database)
- Base metal G-no. (Base material database)
- Filler metal specification (Filler material database)
- Filler metal classification (Filler material database)
- Filler metal F-number (Filler material database)
- Filler metal A-number (Filler material database)
- Base metal size (Pipe schedule log)
- Base metal schedule (Pipe schedule log)
- Base metal thickness (Pipe schedule log)
- Base metal diameter (Pipe schedule log)

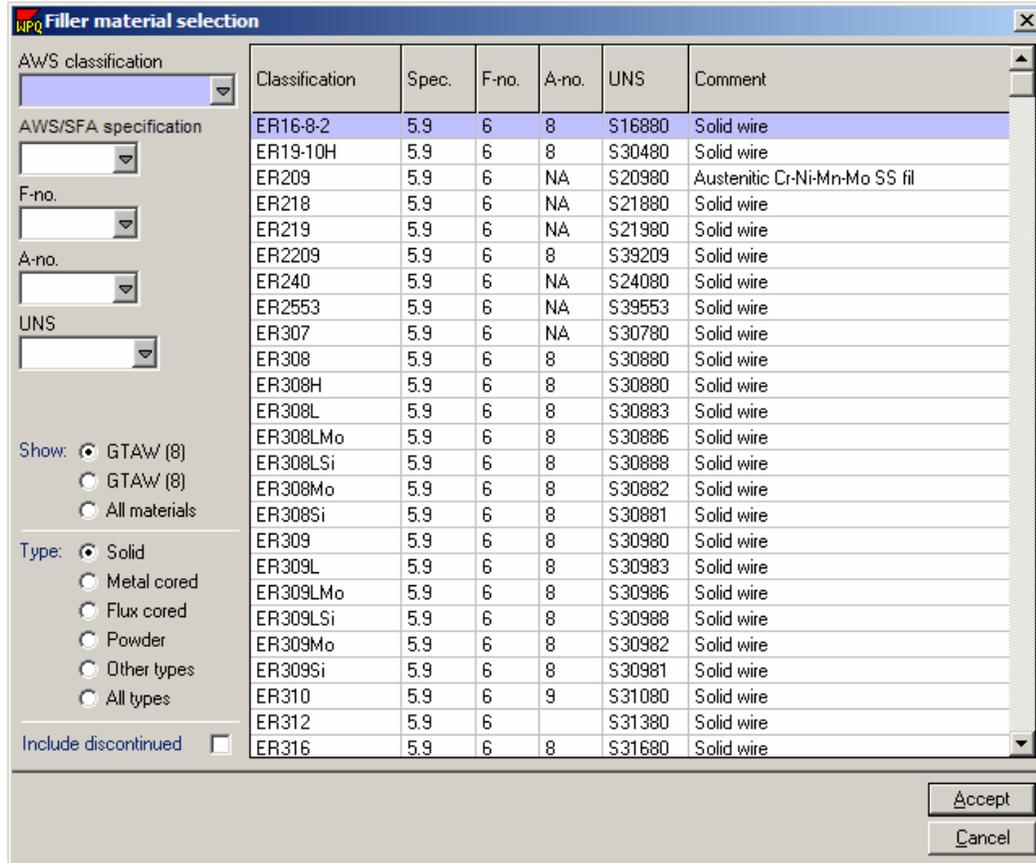
2. The filler and base metal databases contain over 2000 ASME and AWS materials each. To easily locate the desired material, use one of the following Sorting/Filtering methods:

A. Several fields are provided on the left hand side of the databases to allow filtering of the data. From one or more of these fields, select known variables (such as P-no. or SFA). This will narrow the database down which will allow easier location of the desired materials.

B. Clicking on the header of any column will sort the materials alphabetically by that column.



Product form	Spec.	Grade	UNS	Condition	P	G	KSI	D1.1 Group	Nominal composition	Product form
Pipe	SA-409	TP310Cb	S31040		8	2	75	U	25Cr-20Ni-Cb	Welded Pipe
	SA-409	TP309S	S30908		8	2	75	U	23Cr-12Ni	Welded Pipe
	SA-409	TP309Cb	S30940		8	2	75	U	23Cr-12Ni-Cb	Welded Pipe
	SA-409	TP 348	S34800		8	1	75	U	18Cr-10Ni-Cb	Welded Pipe
	SA-409	TP 347	S34700		8	1	75	U	18Cr-10Ni-Cb	Welded Pipe
	SA-409	TP310S	S31008		8	2	75	U	25Cr-20Ni	Welded Pipe
	SA-409	TP 316L	S31603		8	1	70	U	16Cr-12Ni-2Mo	Welded Pipe
	SA-409	TP 304L	S30403		8	1	70	U	18Cr-8Ni	Welded Pipe
	SA-409	S31726	S31726		8	4	80	U	19Cr-15.5Ni-4Mo	Welded Pipe
	SA-409	S31725	S31725		8	4	75	U	19Cr-15Ni-4Mo	Welded Pipe
	SA-409	S31254	S31254		8	4	94	U	20Cr-18Ni-6Mo	Welded Pipe
	SA-409	S30815	S30815		8	2	87	U	21Cr-11Ni-N	Welded Pipe
	SA-409	TP 316	S31600		8	1	75	U	16Cr-12Ni-2Mo	Welded Pipe
	SA-409	TP 317	S31700		8	1	75	U	18Cr-13Ni-3Mo	Welded Pipe
	SA-420	wPL3	K31918		9B	1	65	U	3.5Ni	Piping Fitting
	SA-420	wPL9	K22035		9A	1	63	U	2Ni-1Cu	Piping Fitting
	SA-420	wPL8	K81340		11A	1	100	U	9Ni	Piping Fitting
	SA-420	wPL6	K03006		1	1	60	U	C-Mn-Si	Piping Fitting
	SA-426	CP9	J82090		5B	1	90	U	9Cr-1Mo	Centrifugal Cast Pipe
	SA-426	CP5b	J51545		5B	1	60	U	5Cr-1.5Si-5Mo	Centrifugal Cast Pipe



3. The filler material database offers even more filtering capabilities. Based on the base materials and process specified on the record (GTAW with P8 material in the example above) the database has offered two additional filtering buttons. The first one allows filtering the database to show only those filler metals possible to weld with GTAW and P8 while the second button is useful for welding dissimilar materials. If this weld was a P8 to P1, then the second button would show the possibilities for GTAW P1.

4. The Pipe Schedule log offers an easy to read matrix for finding the desired pipe size and schedule. Locate the diameter in the left hand column and then move to the right to find the proper schedule.

The pipe schedule log also offers three different tables for Carbon Steel, Stainless Steel and Tube/Gauge thickness.

Pipe schedule log

Carbon steel and alloys (ANSI-B36.10) | Stainless steel (ANSI-B36.19) | Tube gauge/thickness table

Nominal pipe size	Outside diameter	Schedule 10	Schedule 20	Schedule 30	Standard	Schedule 40	Schedule 60	XS	Schedule 80	Schedule 100	Schedule 120	Schedule 140	Schedule 160	XX
(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
0.125	0.405				0.068	0.068		0.095	0.095					
0.25	0.540				0.088	0.088		0.119	0.119					
0.375	0.675				0.091	0.091		0.126	0.126					
0.50	0.840				0.109	0.109		0.147	0.147				0.188	0.294
0.75	1.050				0.113	0.113		0.154	0.154				0.219	0.308
1	1.315				0.133	0.133		0.179	0.179				0.250	0.358
1.25	1.660				0.140	0.140		0.191	0.191				0.250	0.382
1.50	1.900				0.145	0.145		0.200	0.200				0.281	0.400
2	2.375				0.154	0.154		0.218	0.218				0.344	0.436
2.50	2.875				0.203	0.203		0.276	0.276				0.375	0.552
3	3.5				0.216	0.216		0.300	0.300				0.438	0.600
3.50	4.0				0.226	0.226		0.318	0.318					
4	4.5				0.237	0.237		0.337	0.337		0.438		0.531	0.674
5	5.563				0.258	0.258		0.375	0.375		0.500		0.625	0.750
6	6.625				0.280	0.280		0.432	0.432		0.562		0.719	0.864
8	8.625		0.250	0.277	0.322	0.322	0.406	0.500	0.500	0.594	0.719	0.812	0.906	0.875
10	10.75		0.250	0.307	0.365	0.365	0.500	0.500	0.594	0.719	0.844	1.000	1.125	1.000
12	12.75		0.250	0.330	0.375	0.406	0.562	0.500	0.688	0.844	1.000	1.125	1.312	1.000
14	14.0	0.250	0.312	0.375	0.375	0.438	0.594	0.500	0.750	0.938	1.094	1.250	1.406	
16	16.0	0.250	0.312	0.375	0.375	0.500	0.656	0.500	0.844	1.031	1.219	1.483	1.594	
18	18.0	0.250	0.312	0.438	0.375	0.562	0.750	0.500	0.938	1.156	1.375	1.562	1.781	
20	20.0	0.250	0.375	0.500	0.375	0.594	0.812	0.500	1.031	1.281	1.500	1.750	1.969	
22	22.0	0.250	0.375	0.500	0.375		0.875	0.500	1.125	1.375	1.625	1.875	2.125	
24	24.0	0.250	0.375	0.562	0.375	0.688	0.969	0.500	1.218	1.531	1.812	2.062	2.344	
26	26.0	0.312	0.500		0.375			0.500						
28	28.0	0.312	0.500	0.625	0.375			0.500						
30	30.0	0.312	0.500	0.625	0.375			0.500						
32	32.0	0.312	0.500	0.625	0.375	0.688		0.500						
34	34.0	0.312	0.500	0.625	0.375	0.688		0.500						
36	36.0	0.312	0.500	0.625	0.375	0.750		0.500						
38	38.0				0.375			0.500						
40	40.0				0.375			0.500						
42	42.0				0.375			0.500						

Accept
Cancel

5. When the desired material has been located in any one of these databases, click on the material to select it and then press the Accept button, located in the lower right hand corner. This will input all the associated data in the appropriate fields on the record.

4 Using WeldOffice® WPS

4.1 Document Types

Each code/standard features three document types. WPSs and PQRs will be familiar to most users, but *WeldOffice® WPS* also features a new document type, called a PQRD (Procedure Qualification Record Data). The PQRD has been designed to be used to record all of the data, pass by pass, relevant to welding procedure tests. The PQR will usually only summarize the conditions used in the procedure test, especially for thick section welding, when a large number of passes are used. Use of the PQRD is optional but it could save time and reduce errors caused by misinterpretation of the code and transcription.

Essentially, the PQRD consists of a front page which describes the process(es) to be used, the base material, the joint design, the cleaning/heat treatment, and one or more pages which are used to record pass-by-pass information. The second and subsequent pages are used to record details on filler materials, welding position, preheat, gas, electrical conditions and technique. It is important to stress that the software only prompts the user to enter the variables required by the code for the relevant process(es).

It is easy to create a PQRD, print out the PQRD to function as a data collection sheet, add procedure test data, create a PQR automatically from the PQRD, and create a WPS electronically from the PQR.

Definitions:

PQRD: Procedure Qualification Record Datasheet

WeldOffice® WPS uses a new code-intelligent weld test data collection sheet (PQRD) to provide the user with directions as to allow the user to record the exact parameters used, pass by pass, during the procedure qualification test. Once this data has been entered into the PQRD form, a PQR will generate automatically for the user. *WeldOffice® WPS* can also electronically create a WPS from one PQR, multiple PQRs or a WPS. The use of the PQRD is entirely optional, however this invaluable tool will keep track of the entire qualification history, including material traceability.

The PQRD serves two purposes:

- As a data collection sheet. When a PQRD is created within *WeldOffice*[®] *WPS*, the user is prompted to specify the welding process or processes to be used. The system then creates a tailored document. Only essential, supplementary essential and non-essential variables relevant to that process or combination of processes are displayed, so the PQRD acts as a check that the correct information has been supplied. The user can then print the (partially completed) PQRD, take it to the welding station and record the actual values from the welding test. These can then subsequently be entered into the PQRD on-screen.
- As a traceability document. The PQR only comprises a summary of the welding procedure test, but the PQRD form records all the welding conditions, pass by pass.

PQR: *Procedure Qualification Record*

This document is used to record the welding variables used to produce an acceptable test weldment and the results of the test conducted on the weldment to qualify a welding procedure. This is only a summary of the procedure test.

WPS: *Welding Procedure Specification*

A document providing the required welding variables for a specific application to assure repeatability by properly trained welders and welding operators.

4.2 Default Settings

Specifying the program default settings

The figure shown below highlights the number of customizing options that are available in the Default Setting Tab.

The main sections of the WPS default settings are:

- Program Wide Settings
- Initial record settings
- Printing/Screen defaults
- Form Settings

These main sections will be discussed below.

To get to the default settings, follow the instructions below.

1. Click on ***Tools*** and then ***Options*** to open the options window. Click on the third tab called **Default Settings**.
2. Click on a setting to edit.

3. Depending on how the setting is set up, there are a couple of ways to change the setting.

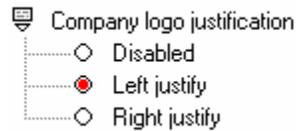
A. Once the setting is highlighted, then Click on the *Edit selected setting* button  *Edit selected setting* if it is illuminated. Or

B. It is simply a check box, and clicking on the setting will toggle between a red "x" in the box (meaning that the setting is on or active) and a blank box (meaning that the setting is not on or not-active). For example:

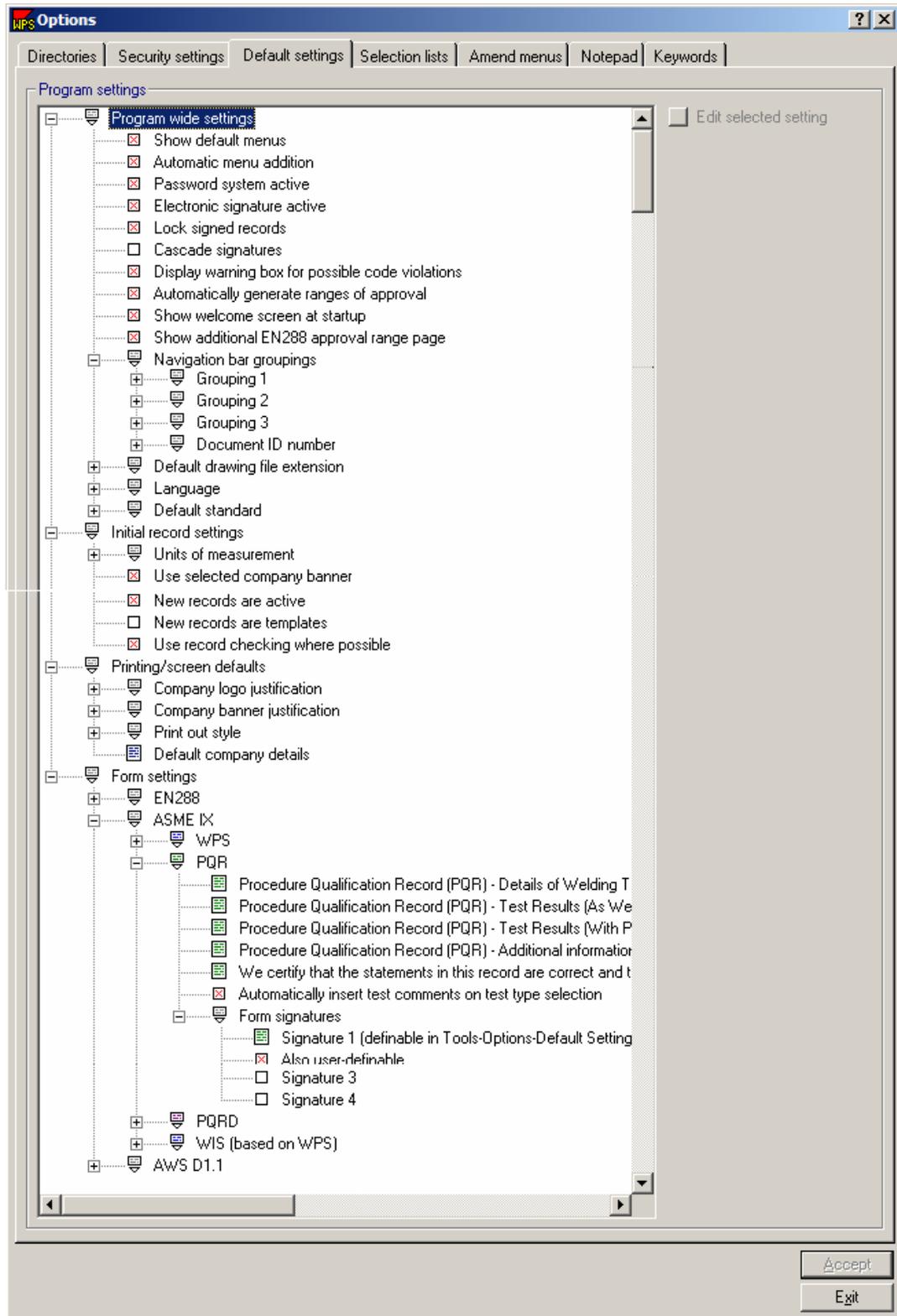
Use selected company banner , the company banner will be displayed.

Or

C. It is a toggle switch between a number of choices. For instance:

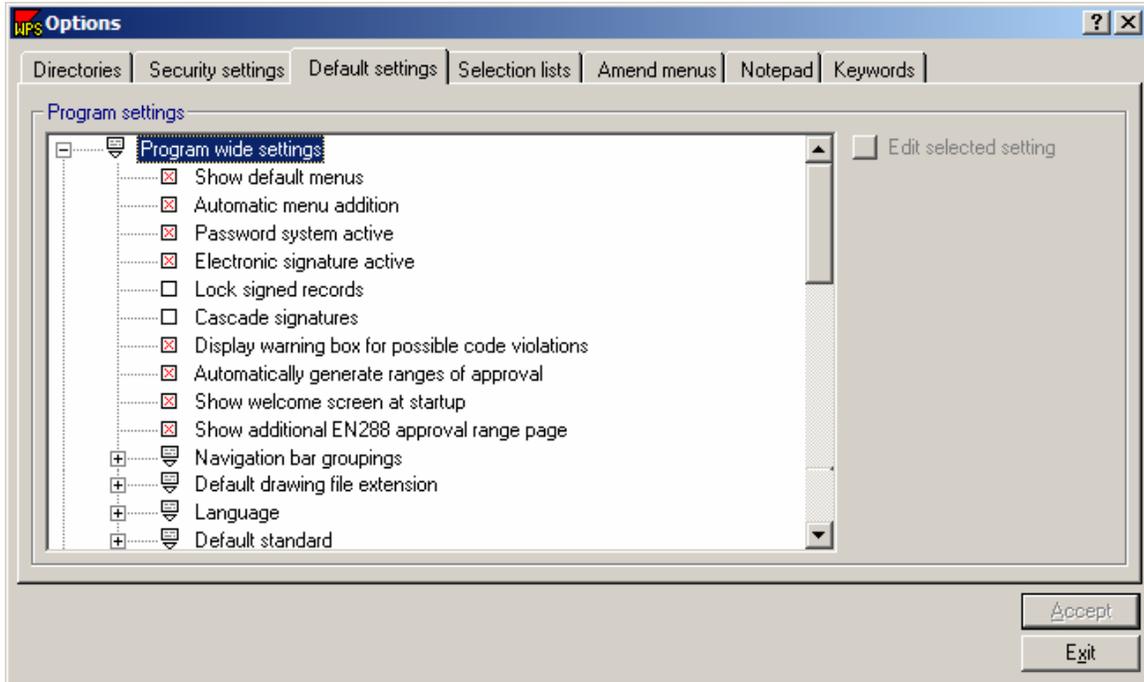


There are three choices for the "Company logo justification". By clicking on right justify, the red circle would move to that option, but one of the options must have the red circle in front of it.



4.2.1 Program Wide Settings

The *Program wide settings* under *Default settings* can be used to set up defaults throughout the WeldOffice® WPS program.



The headings under Program wide settings are:

- Show Default menus
- Automatic menu addition
- Password system active
- Electronic signature active
- Lock signed records
- Cascade signatures (Hierarchy of signatures)
- Display warning box for possible code violations
- Automatically generate ranges of approval
- Show welcome screen at startup
- Show additional EN288 approval range page
- Navigation bar groupings
- Default drawing file extension
- Language
- Choose a default code/standard

Each topic will be described below.

4.2.1.1 Show Default Menus

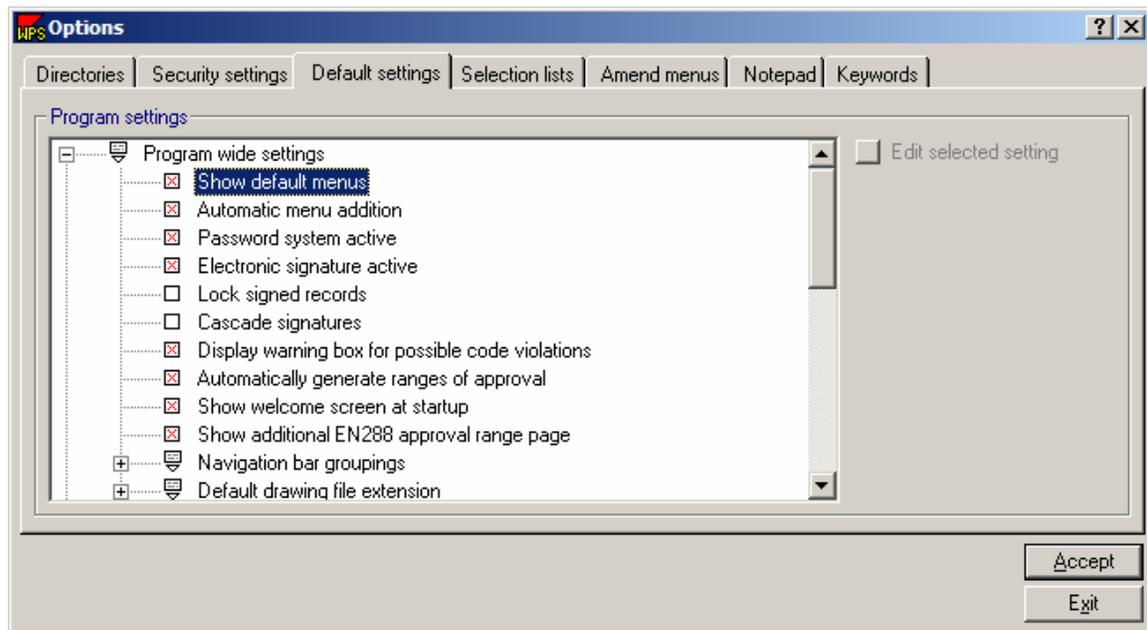
Specify drop down menus

WeldOffice® WPS is supplied with a set of default drop-down menus for many variables. Whenever entering data into a WPS document, the system displays a drop-down list for all variables with an associated menu. WeldOffice® WPS allows the user to add items to all these menus, but it distinguishes between the default menus supplied with the software and those the user has added. This is so that upgrades to the software do not overwrite the items the user has added.

We recommend that the user always use the default menus and the default terminology whenever possible as the code rules built into the software rely on using consistent terminology. This is particularly important for variables such as welder's name, welding process(es) or joint type, as a large number of code rules depend on these variables.

However, if the user does not want to take advantage of the code rules built into the software, they can use their own drop-down menus.

This option is used to turn off the default menus, so only the items added by the user are displayed.

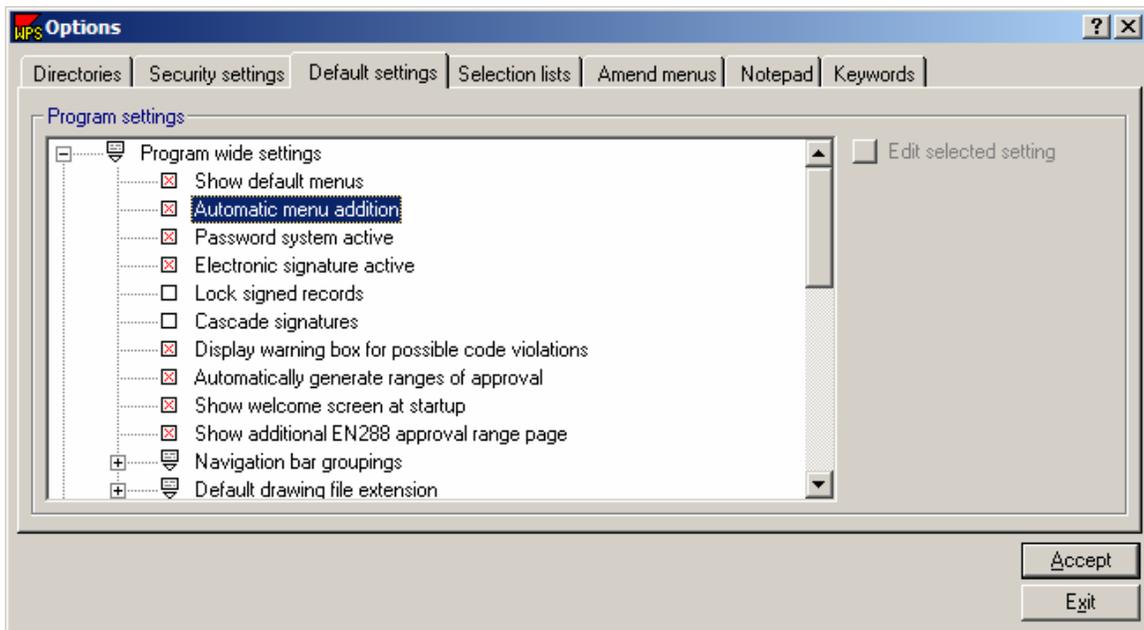


Click on **Show default menus** (or the box in front of the text) to toggle this option on or off. A red 'X' in the box signifies the item is on (i.e. the default menus are displayed).

4.2.1.2 Automatic Menu Addition

Add additional items to the drop down menus

Almost all the variable boxes which have drop-down menus also allow the user to type their own value into the box. If set to on, this option will automatically ask the user if they want to add the new item to the menu, if the value typed is not already present in the menu. For consistency of data entry, we recommend that the default drop-down menus and variables be used wherever possible.

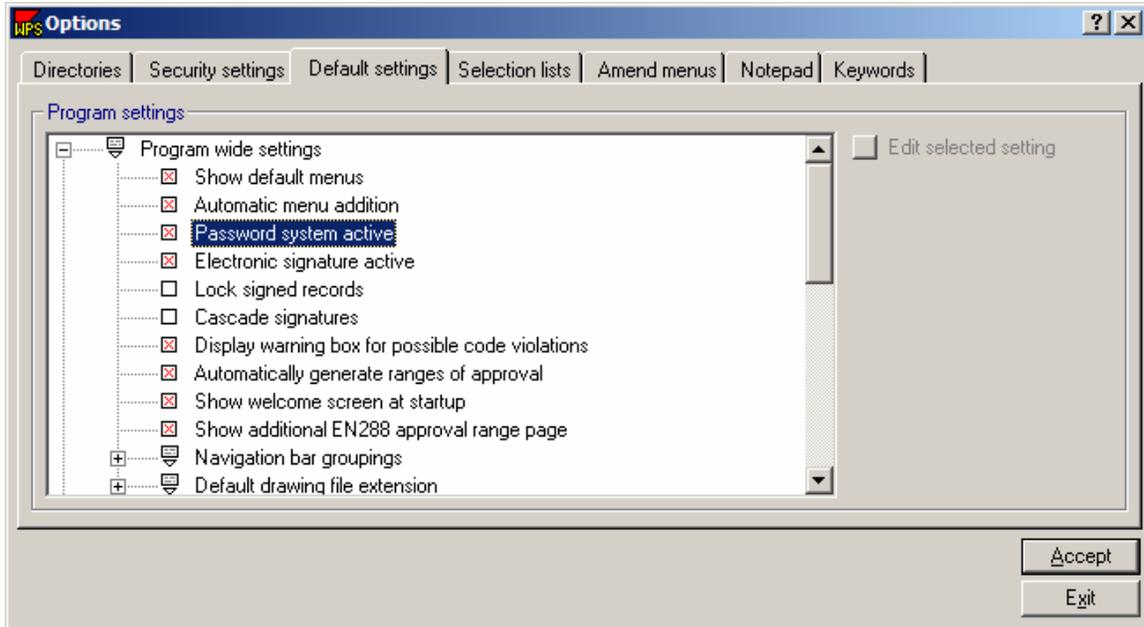


Click on **Automatic Menu addition** or the box to toggle this option on or off. A red 'X' in the box signifies that this setting is on and that the user will be prompted to add the new item that was just typed to the drop down menus.

4.2.1.3 Password System Active

Allow only authorized personnel to electronically sign documents

WeldOffice®WPS features a sophisticated security system, which allows the user to use electronic signatures to verify and authorize documents. This system relies on the use of passwords to verify that only authorized personnel can access the documents. The password system allows the users to open WeldOffice®WPS with a password. They can then have the ability to electronically sign documents if the Electronic signature is active (section 4.2.1.4)



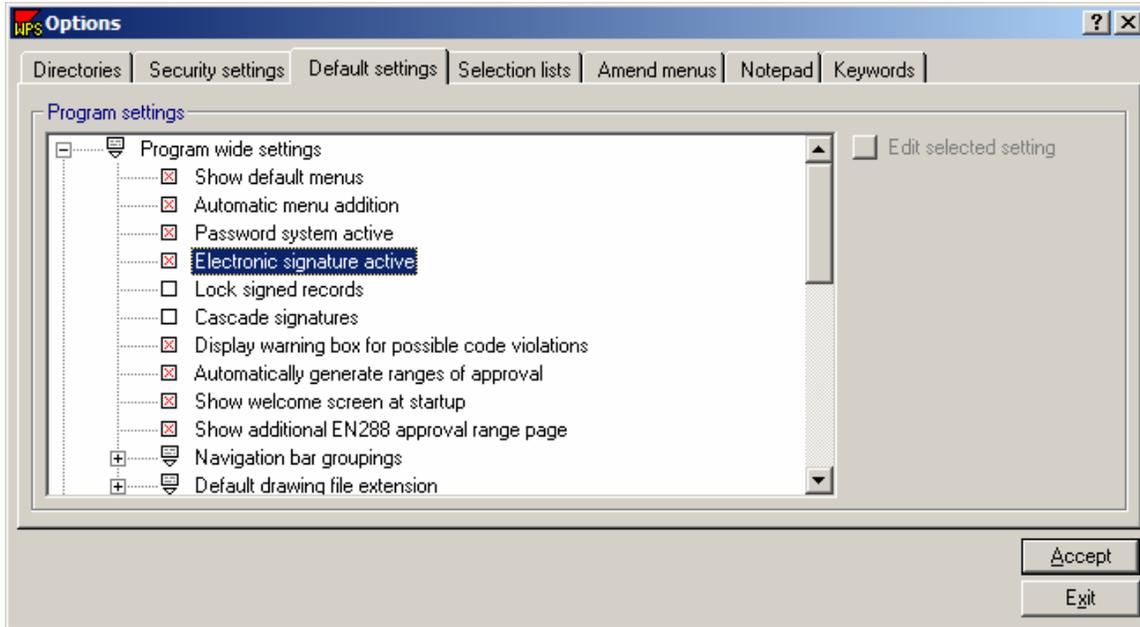
If the user does not need to have a sophisticated password system, turn the system off by clicking on **Password system active** or in the box in front of the text. A red 'X' signifies that this setting is on.

4.2.1.4 Electronic Signature Active

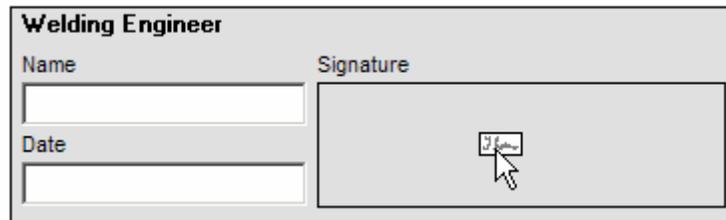
Import a signature by clicking in the signature box

The user can turn off the electronic signature facilities if there is no need for this feature. If this option is turned off, the user will not be able to 'sign' a document simply by clicking in the signature box.

If this option is turned on, the user can sign documents by clicking in the signature box. Note that a 'signed' document does not have to have a bitmap signature. A signed document (which can optionally be locked) simply has a name in the box entitled 'Name' at the bottom of the document. See the section of *Security Settings/Signature (2.4.2.5)* to select a bitmap of a Signature to be automatically imported upon clicking in the Signature box.



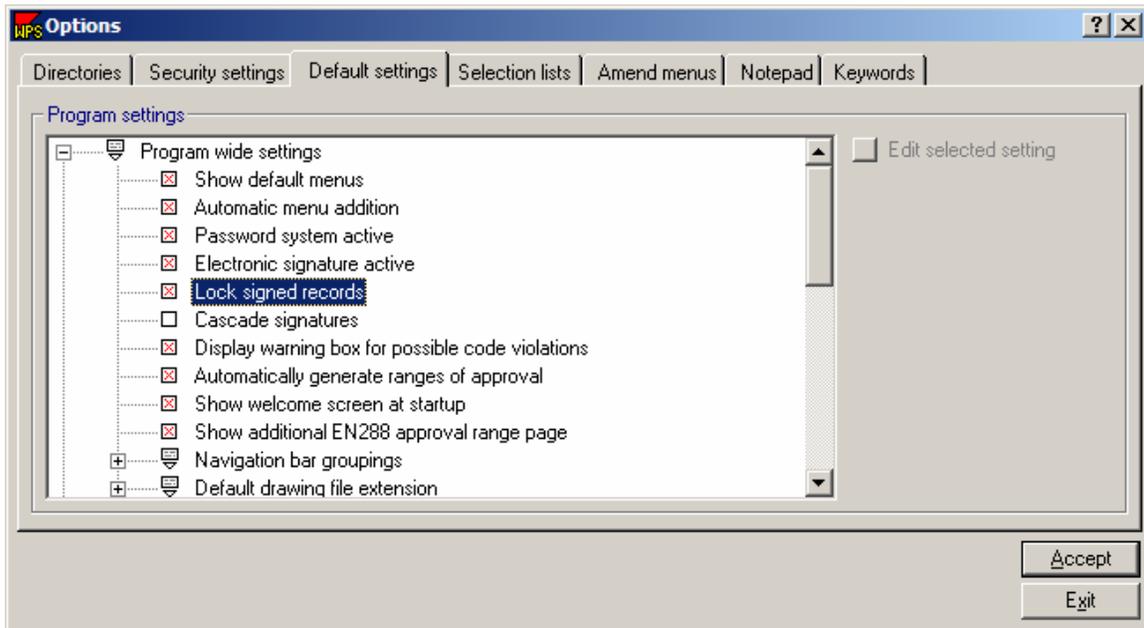
Click on **Electronic signature active**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.



If **Electronic signature active** is on, the mouse will turn into an icon of a signature when moved over the signature box.

4.2.1.5 Lock signed records

This option allows the user to define whether the addition of one or more signatures to a document will lock that document. If a document is locked, it cannot be edited unless the signature(s) are removed by the person who added the signature(s) (or the System Administrator).



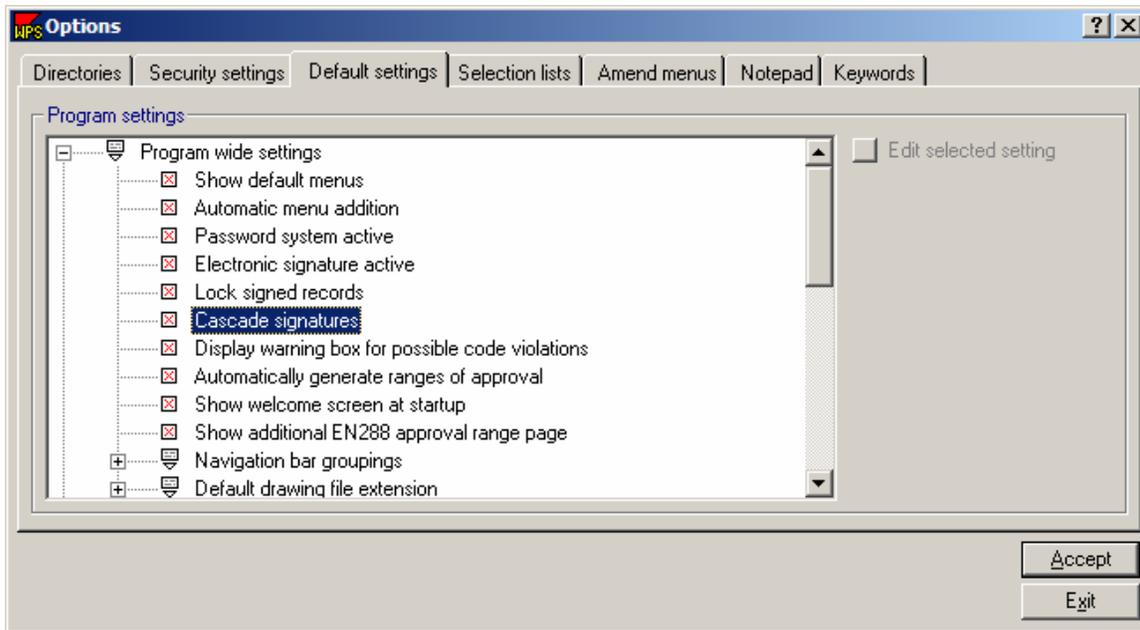
Click on **Lock signed records**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.

4.2.1.6 Cascade Signatures

Determine the hierarchy of signatures

Each document type in WeldOffice® WPS can have between one and four signatures depending on the document type. This option allows the user to define whether the signatures need to be placed in a hierarchy (Signature 1 is on the form before Signature 2 can be put on the form and so on). If this option is set to on, signatures must be added in order. It will not be possible to add signature two unless signature one has been entered, etc.

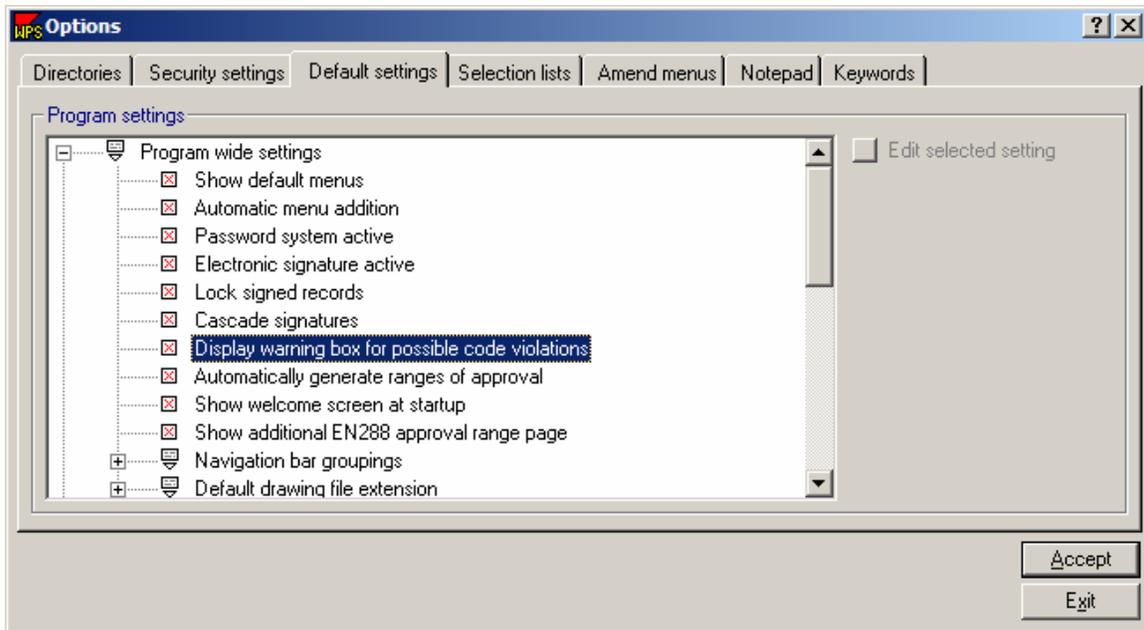
In addition, if the user wants to change a document which has already been signed off, the signatures must be removed in reverse order.



Click on **Cascade signatures**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.

4.2.1.7 Display Warning Box for Possible Code Violations

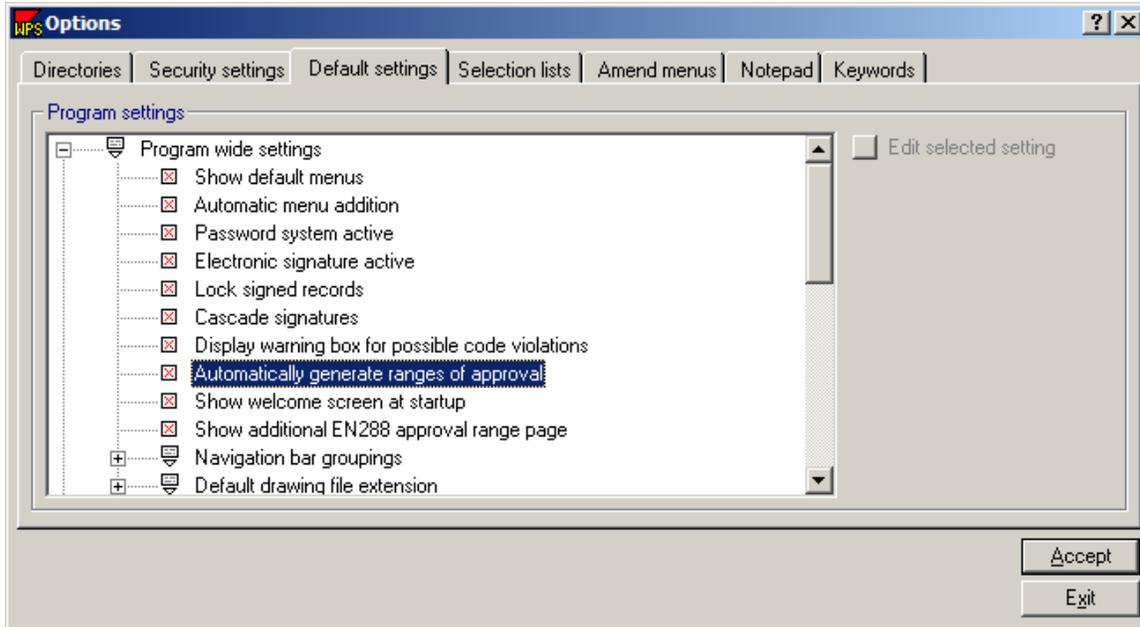
WeldOffice® WPS has a large number of built-in routines which reflect the rules of the relevant code/standard. For example, the software knows which variables are essential, non-essential and supplementary essential for each process. As the user enters data into a document, the program checks to ensure that the relevant code/standard is not being violated. This option (if active) additionally displays a warning box which must be acknowledged before the user is allowed to continue.



Click on "**Display warning box for possible code violations**" or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on.

4.2.1.8 Automatically generate ranges of approval (qualification)

This option allows the program to generate the range of qualification automatically, based on the code/standard selected.



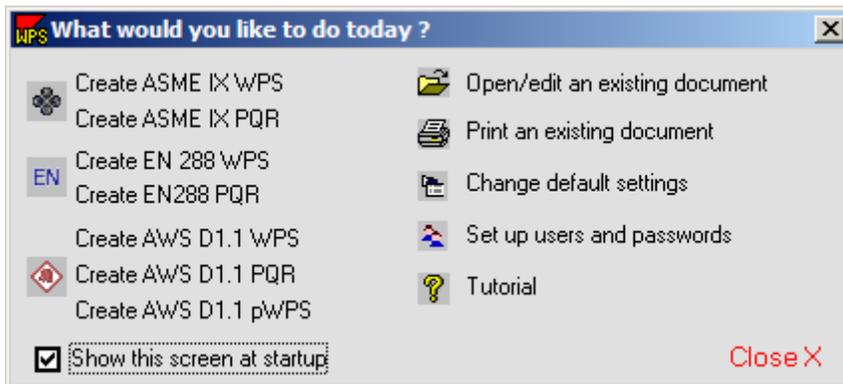
Click on **Automatically generate ranges of approval**, or the box in front of the text, to toggle this option on or off. A red 'X' signifies that this setting is on and the software will automatically generate ranges of approval (qualification).

Shown below is an actual WPS with range qualified section that was automatically filled in based on the referenced PQR.

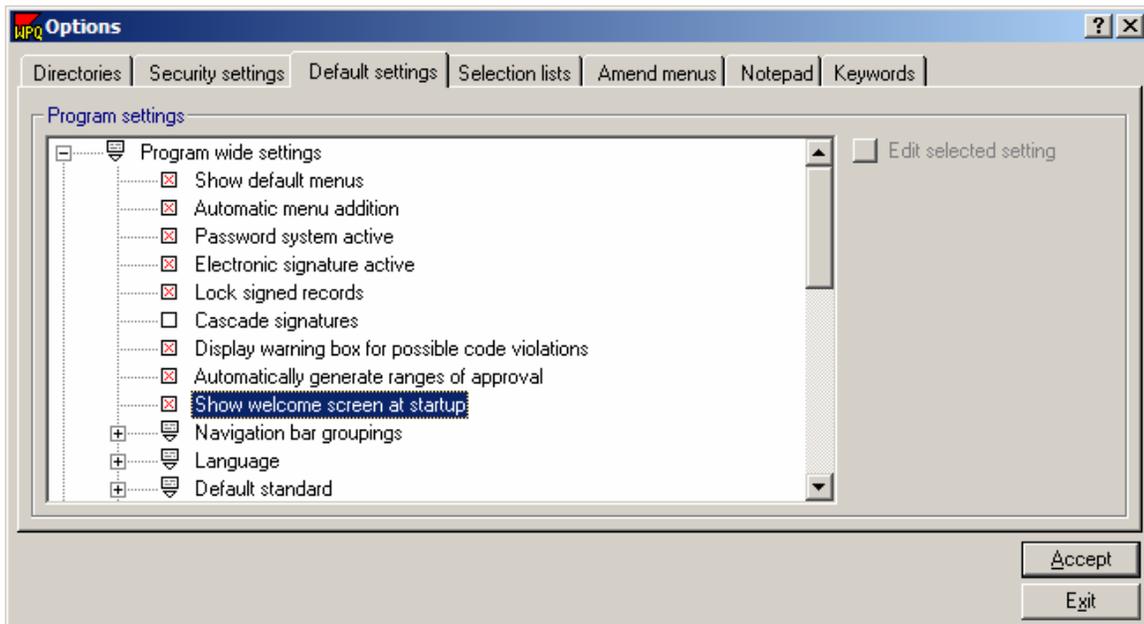
BASE METALS (QW-403)					THICKNESS RANGE QUALIFIED (in.)				
Type	Carbon steel (P1)	P-no.	1	Grp-no.	1	As-welded		With PWHT	
Welded to	Carbon steel (P1)	P-no.	1	Grp-no.	1	Min.	Max.	Min.	Max.
Backing:	None	P-no.		Grp-no.		Complete pen.	0.188	0.864	
Retainers					Impact tested	-	-		
Notes					Partial pen.	0.188	0.864		
					Fillet welds	no min.	no max.		
					DIAMETER RANGE QUALIFIED (in.)				
Pipe/Tube diameter range qualified					Nominal pipe size	As-welded	With PWHT		
						Min.	Max.	Min.	Max.
						no min.	no max.		

4.2.1.9 Show Welcome Screen at Startup

When WeldOffice® WPS opens, an initial start up screen appears asking "What would you like to do today". From this screen the user can select to: Create a WPS, create a PQR, open an existing document, print, change default settings, set up user and passwords, or see a tutorial. The user may also decide that they do not want this screen to appear at the startup. They could simply click on the box in front of "Show this screen at startup", which will delete the check in the box, and not show this screen again during startup.



Another way to turn this startup screen on or off is in the **Default Settings** under **Program Wide Settings**.



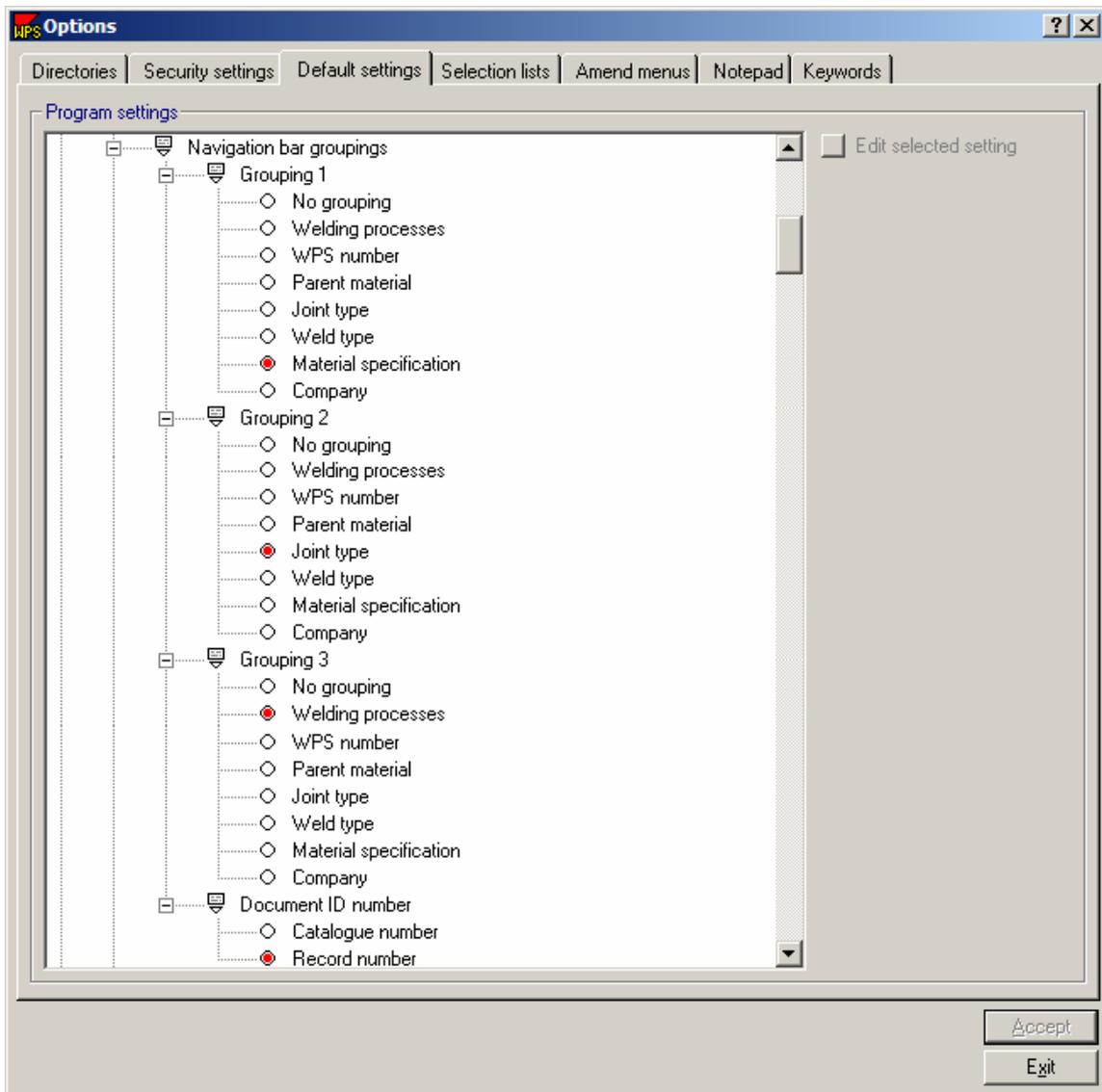
Click on **Show welcome screen at startup** or the box in front of the text to toggle this option on or off. A red 'X' signifies that this setting is on and the welcome screen will appear each time the software is opened.

4.2.1.10 Navigation Bar Groupings

Explore WeldOffice® documents

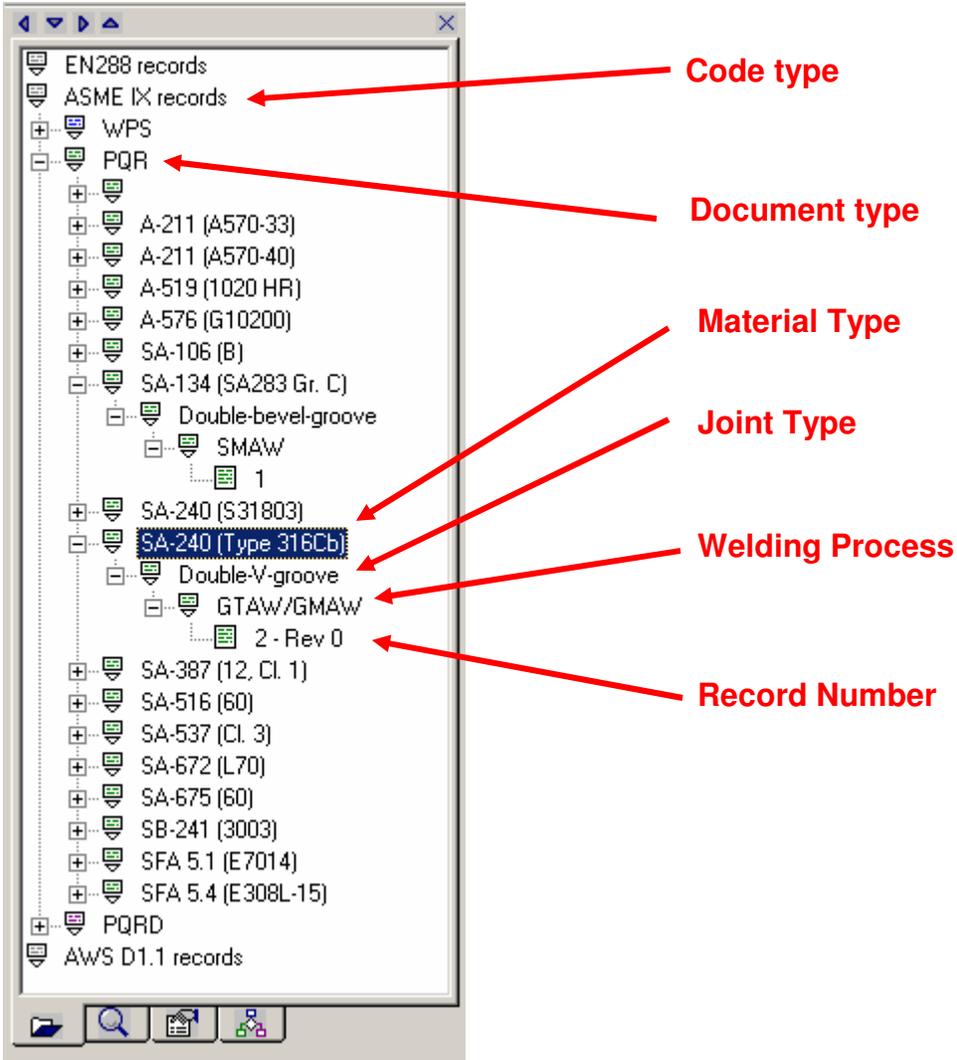
The Navigation bar in the WeldOffice® Software has been designed to work in a similar manner to Windows Explorer and has been designed to be a fast way of identifying documents.

Essentially, the software groups the records in the database on up to three variables. This is in addition to the code/standard and document type, which are the first two 'groupings'. WeldOffice®WPS has been supplied with a set of default groupings, but the user can change these using this option.



Double click on Navigation bar groupings. Then click on each of the groupings, selecting one variable for each grouping.

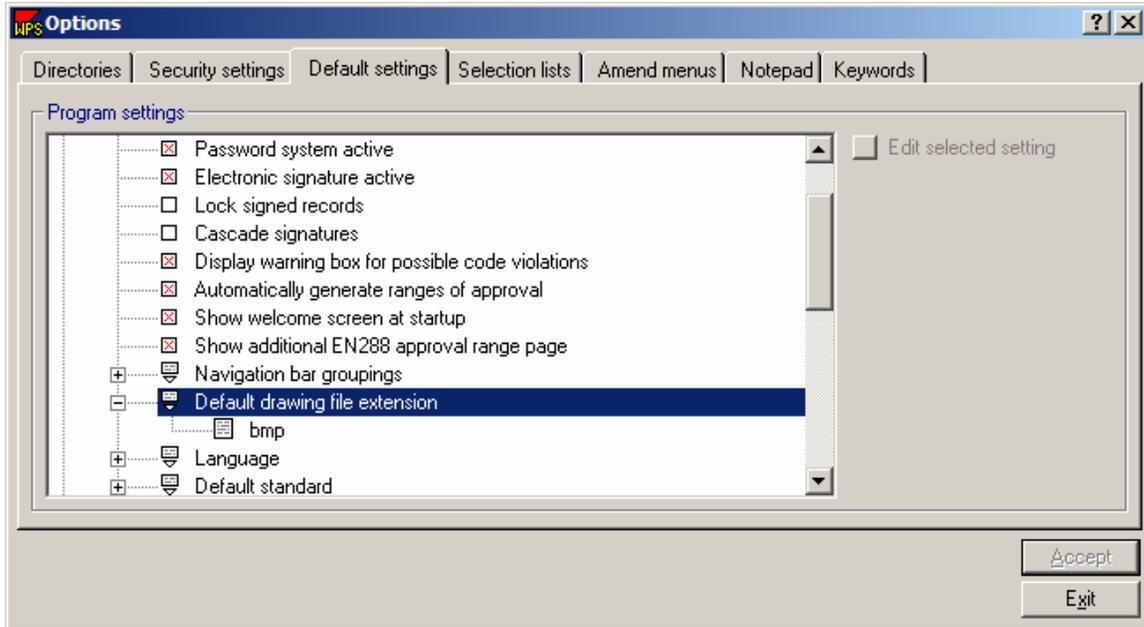
Note that 'No grouping' can be selected if the number of levels in the structure is not needed.



An example of the above settings shown on the actual navigation bar:

4.2.1.11 Default Drawing File Extension

WeldOffice® WPS allows the user to specify the file format for the images used on PQRs and WPSs.



To change the file extension, click on the extension that is currently listed. Then click on **Edit Selected Setting**, and then type in the new extension.

4.2.1.12 Language

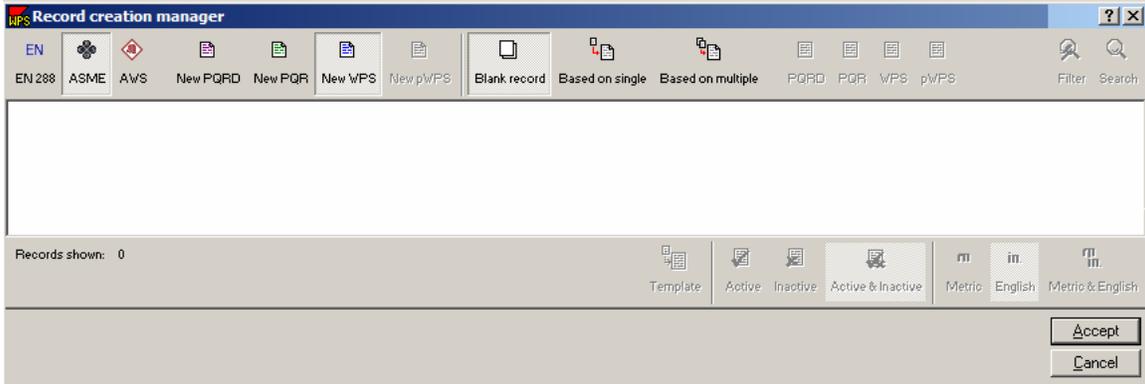
WeldOffice® WPS is designed to operate in English only. Other languages are under development.

4.2.1.13 Default Code/Standard

Choose the code/standard to be default

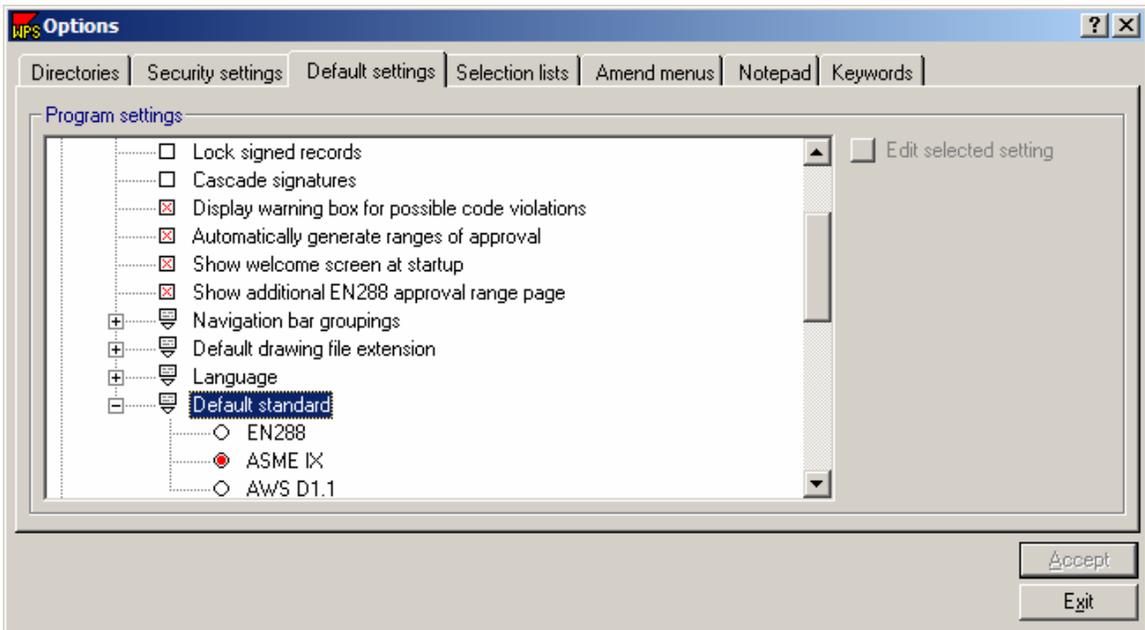
WeldOffice® WPS works with multiple codes/standards. If the user works primarily with one code/standard, this option allows that code/standard to be set as the default. In the managers, i.e. record creation manager, etc., the default

setting will be what is selected here. For instance, the figure below shows a record creation manager defaulting to the ASME records.



To change the default standard:

Double-click on **Default Standard** to expand this topic and view the options. Then select the code/standard required.

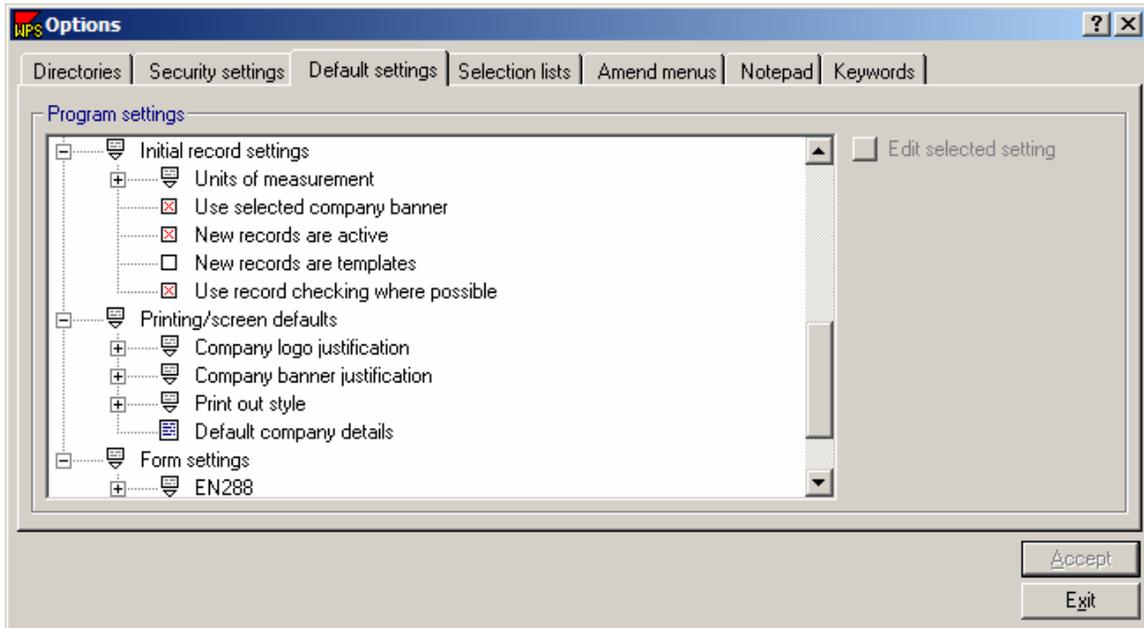


A red circle preceding the code/standard signifies that it is selected as the default. To switch codes/standards, click on the code or in the circle in front of the code.

4.2.2 Initial Record Settings

Default settings for new documents

This group of options is used to define the settings of newly created documents. Many of these settings can be overridden for individual documents (see Document properties on the navigation bar (4.7.3.5) for more information).



The topics that are listed under the Initial Record Settings heading are:

- Units of measure
- Use selected company banner
- New records are active
- New records are templates
- Use record checking where possible

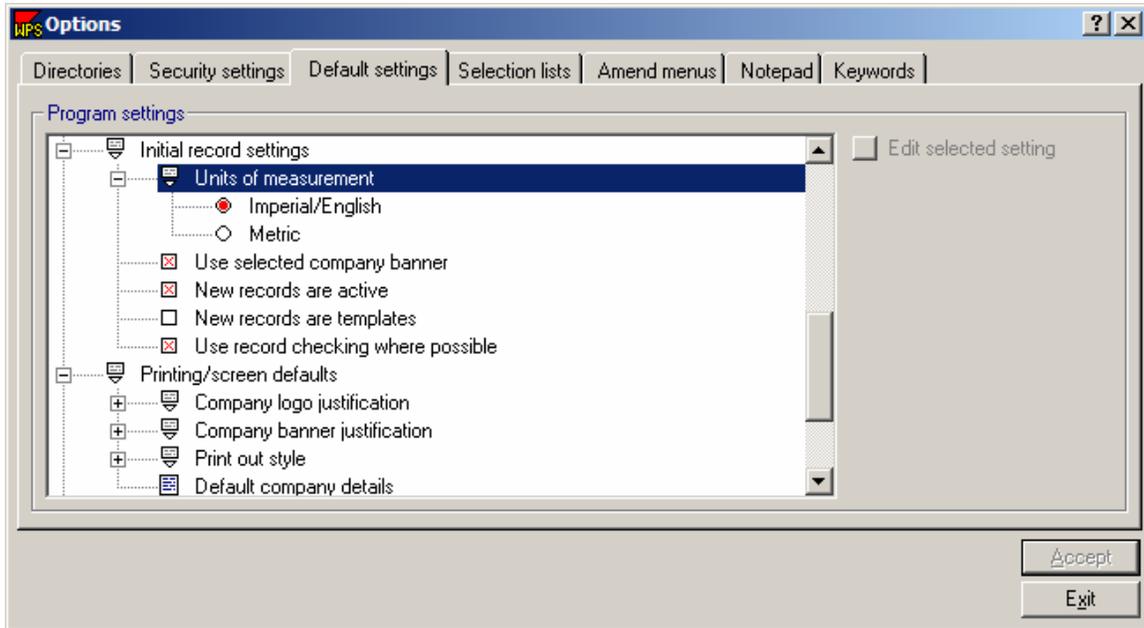
These topics are described below in further detail

4.2.2.1 Units of Measurement

WeldOffice® WPS can work with both metric and English/imperial units. It is possible to create some documents with metric units and some with English/imperial units if needed. This option allows the user to define the default unit for new documents, which can (if necessary) be overridden for individual documents using the Document Properties facility as described in the Navigation bar section (4.7.3.5).

How to select the units

Display the Imperial and Metric selections by clicking on the + plus sign in front of "Units of measurement". This will expand the selection to allow the user to view the choices.

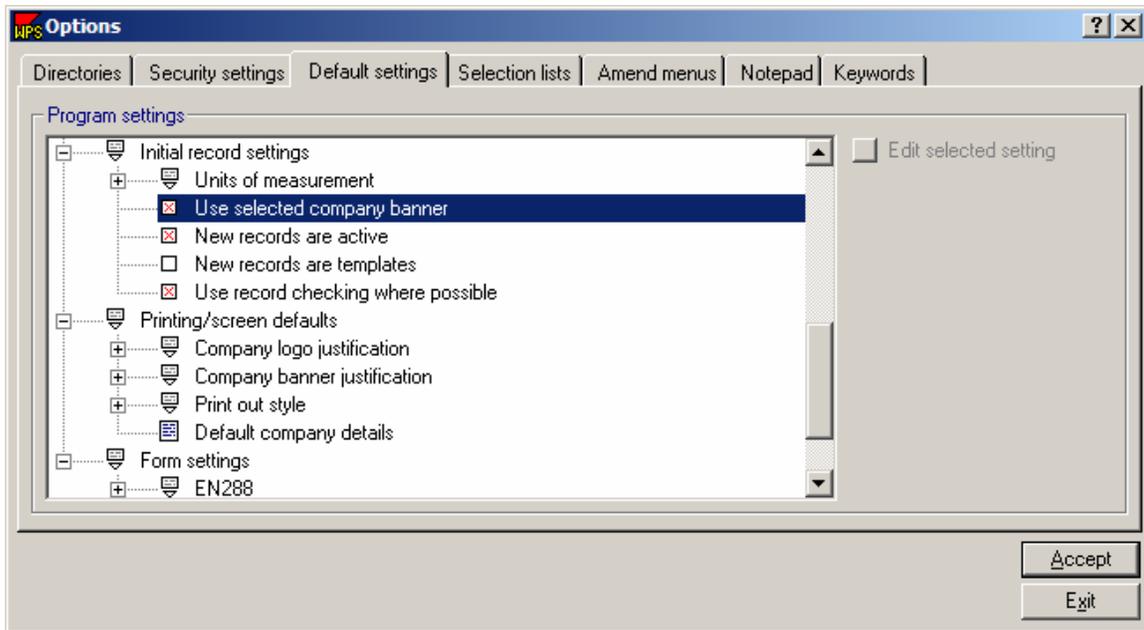


- Imperial/English
- Metric

The red circle in front of the unit means that it is selected as the unit for WeldOffice®WPS. Clicking on Metric would move the red circle in front of Metric, making Metric the default unit.

4.2.2.2 Use Selected Company Banner

WeldOffice®WPS allows the user to define the header or banner for documents (including company name, address and logo). The user can set up a number of banners, with one banner being set as default. This option allows the user to define whether new documents automatically have the default company banner or the banner of the company specified in the Company name field on the records.



Click on the text **Use selected company banner** to toggle this option on or off.

Use selected company banner

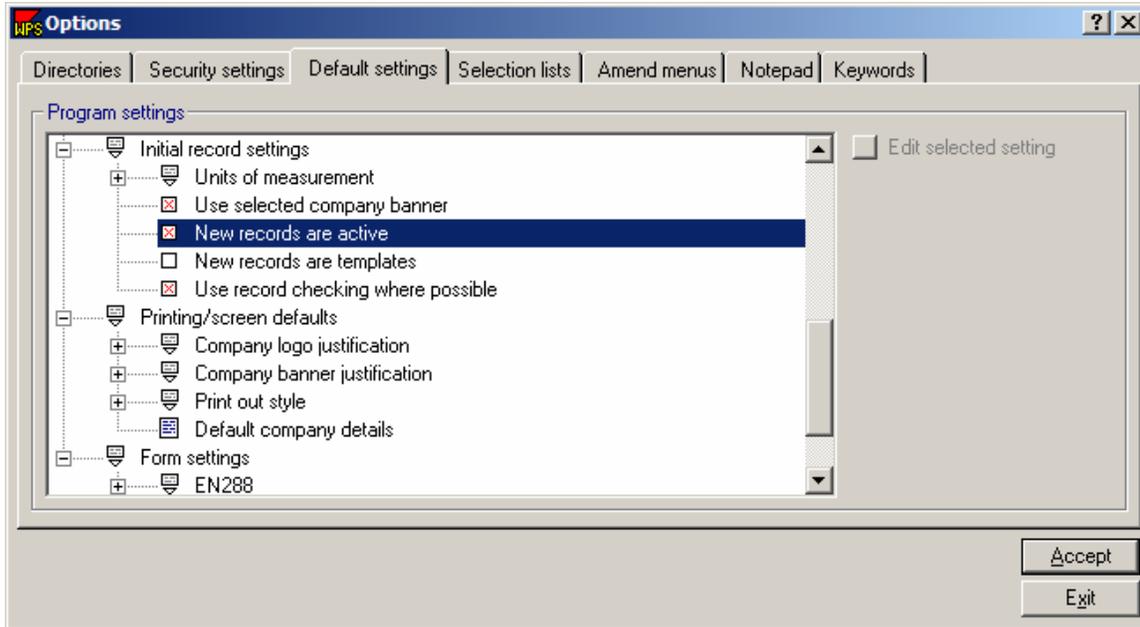
(A red 'X' signifies that the option is on and the default banner will be overridden by the banner of the company specified on the record.) For example, the default company is set to ABC Piping, but this procedure is for 123 Piping. If there is a banner set up for this company, 123 Piping, their banner will be displayed.

Use selected company banner

(No 'X' indicates that this option is off and the default company banner will be used. See Default Company Details 4.2.3.4 and Amending drop down menus 4.4 for more information)

4.2.2.3 New Records are Active

This option allows the user to define whether new documents are active or inactive. Inactive documents will not appear in any list of documents unless the user specifically requests them. It would be very unusual to define new documents as inactive.

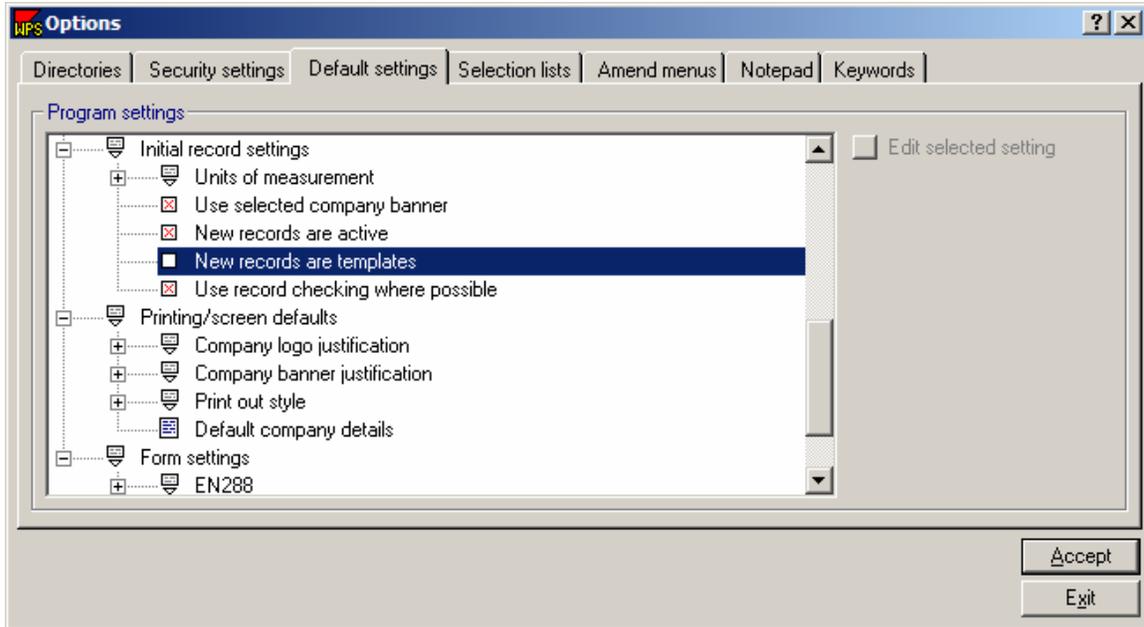


Click on **New records are active** to toggle this option on or off.

- New records are active (A red 'X' signifies that new records **are** active)
- New records are active (No red 'X' signifies that new records **are not** active)

4.2.2.4 New Records are Templates

WeldOffice® WPS allows the user to create documents which act only as templates. These do not normally appear in lists of documents, unless specifically requested by the user. Typically, the user would not have this option checked. If the user wanted to set up a template, they would change it from the Current Record Properties tab on the navigation bar (section 4.7.3.5).

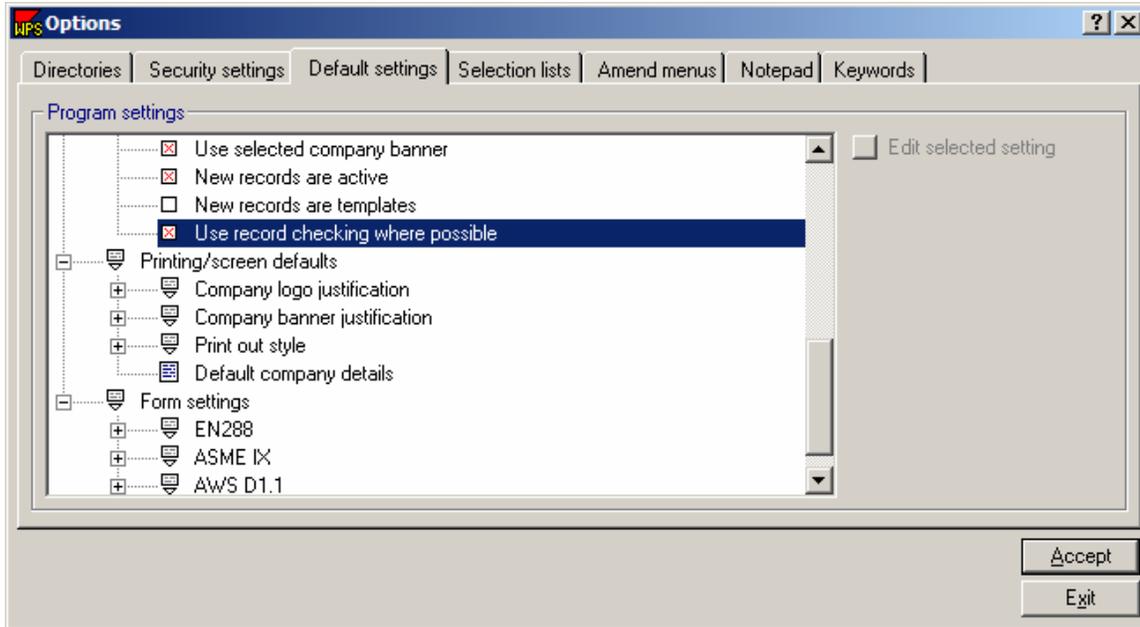


Click on **New records are templates** of this option to toggle this option on or off. A red cross signifies that new documents are templates.

- New records are templates (A red 'X' signifies that new records **are** templates)
- New records are templates (No red 'X' signifies that new records **are not** templates)

4.2.2.5 Use Record Checking Where Possible

This option is used to specify whether new documents will be automatically checked against the selected code/standard.



Click on the text **Use record checking where possible**, to toggle on or off.

Use record checking where possible (A red 'X' in the box indicates that code checking is **on** - the document **will** automatically be checked)

Use record checking where possible (An empty box indicates that code checking is **off** - the document **will not** be automatically checked)

4.2.3 Printing and Screen Defaults

The settings under this topic, which are described in sections below, are:

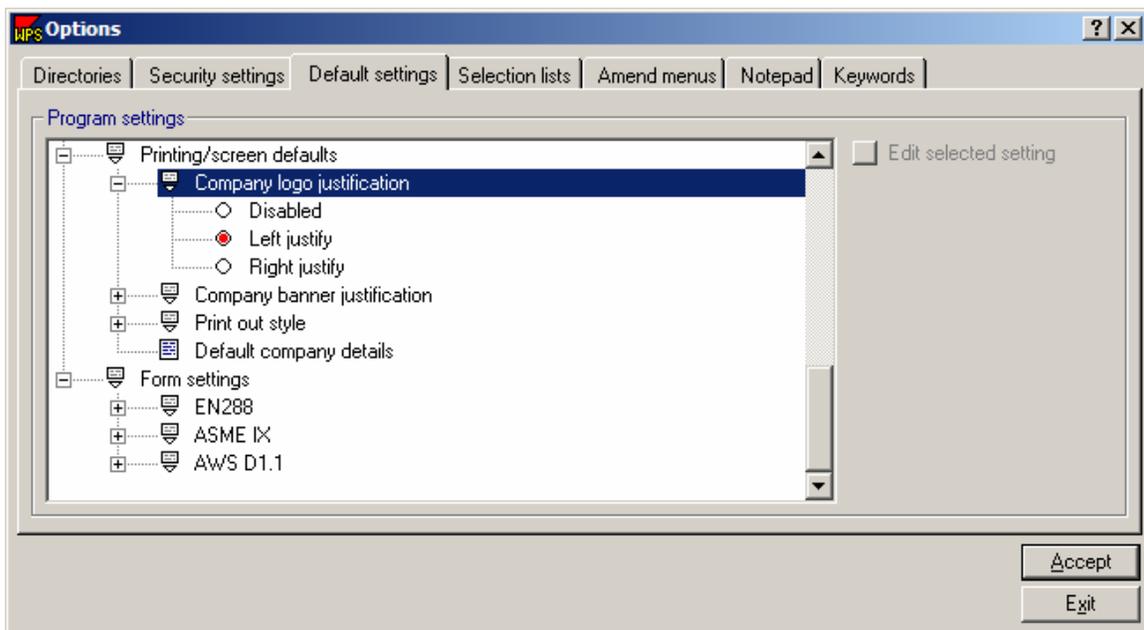
- Company logo justification
- Company banner justification
- Print out style
- Default company details

4.2.3.1 Company Logo Justification

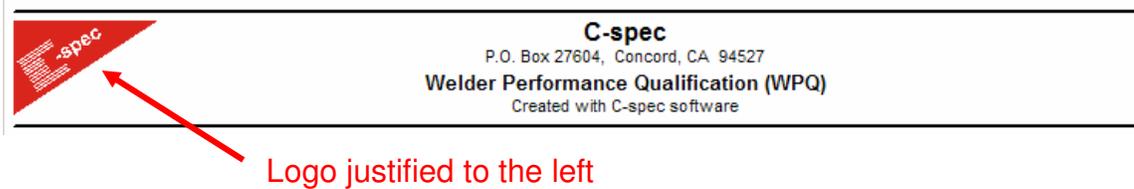
Specify position of the company logo

This option allows the user to specify whether the specified company logo is positioned on the left or right of the header.

Double-click on **Company Logo Justification** to view the options available. Select the position by clicking on the text (Disabled, Left justify, or right justify). This will move the red circle in front of the option selected. Note that the user can also **Disable** the company logo from any printout. For example, if using pre-printed paper with the company logo already present.



Example: In the figure above, the company logo justification selected is Left justify. Shown below is what that logo position will look like in the header.

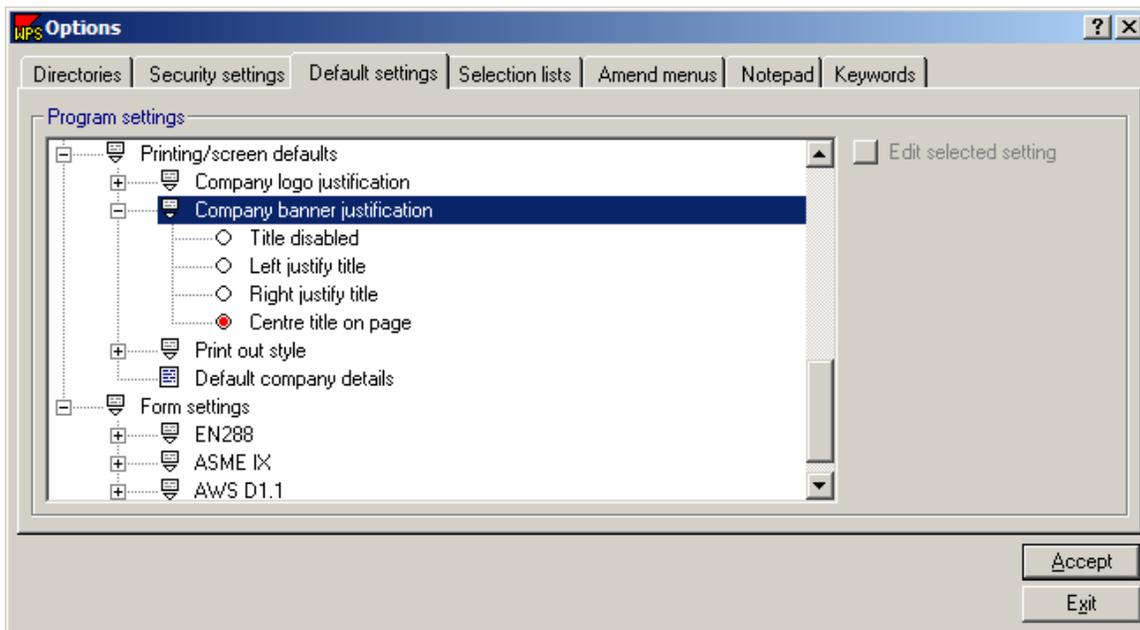


4.2.3.2 Company Banner Justification

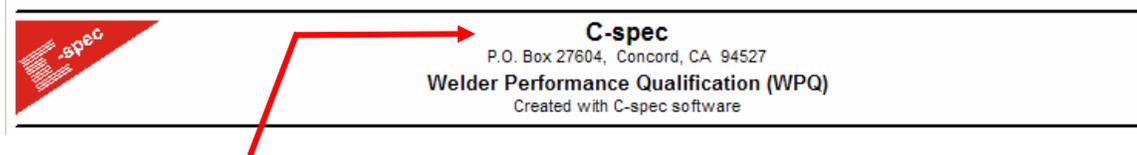
Specify position of the company name and address

This option allows the user to specify the position of the Company name and address. The user can center this information (the default position is centered) or justify it left or right. Note that if the position is on the same side as the logo, the logo will appear closer to the edge, with the rest of the header towards the center.

Double click on Company Banner Justification to see the options below the header. Select the logo position by clicking on one of the options. The red circle will appear in front of the option selected.



For instance: The option chosen in the example above for the company banner justification is **Center title on page**. An example of this heading is shown below.

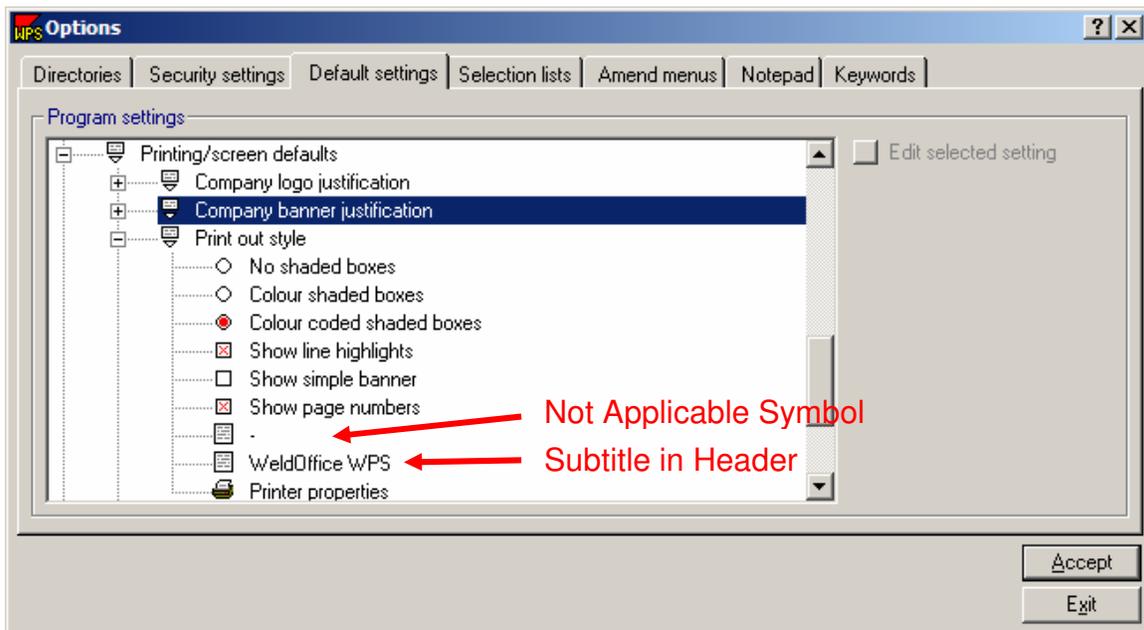


Company Banner justified to the center

4.2.3.3 Printout Style

WeldOffice® WPS allows the user to specify how the documents will print. Under the Printout Style of the Printing/Screen defaults, the user can set the options for new records. Each of the options are described below.

- No shaded boxes
- Color shaded boxes
- Color coded shaded boxes
- Show line highlights
- Show simple banner
- Show page numbers
- Not applicable designation
- Subtitle in header
- Printer properties



No shaded boxes/Color shaded boxes/Color-coded shaded boxes -

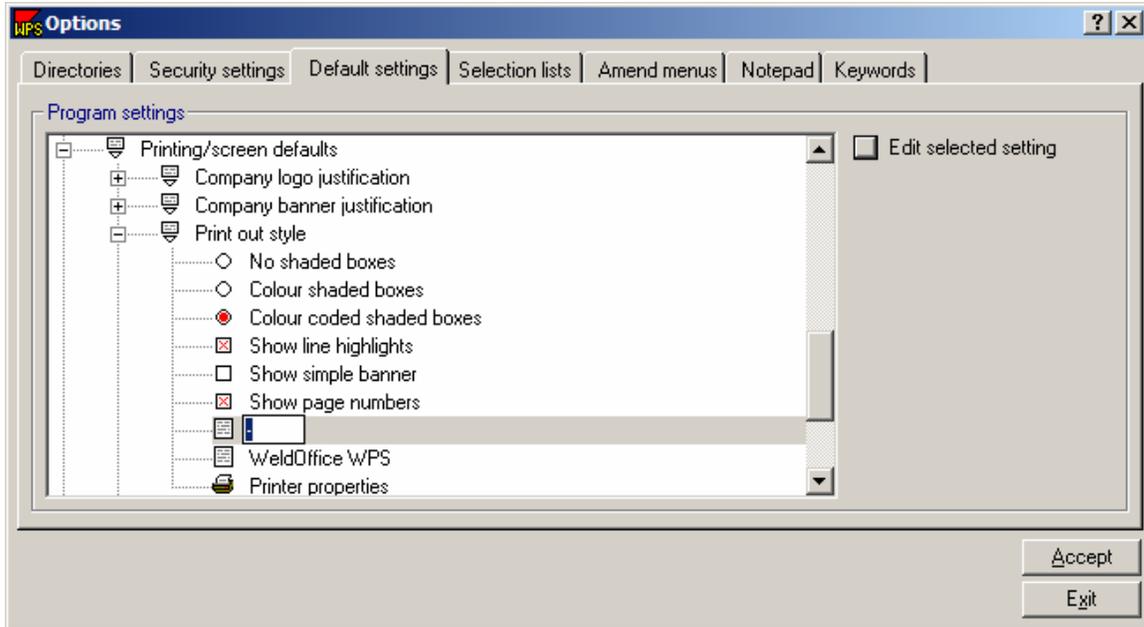
WeldOffice®WPS optionally uses shaded boxes to improve readability of printed documents. If no shading is selected, the shading does not appear at all. If Color shading is selected, every document will have shaded boxes of the same color (or shade of grey on a black/white printer). If Color coded shading is selected, different document types will use different color shading.

Show line highlights - To ensure the document retains readability, the software will optionally highlight alternative lines in the printout. Ensure this option is active to print the line highlights.

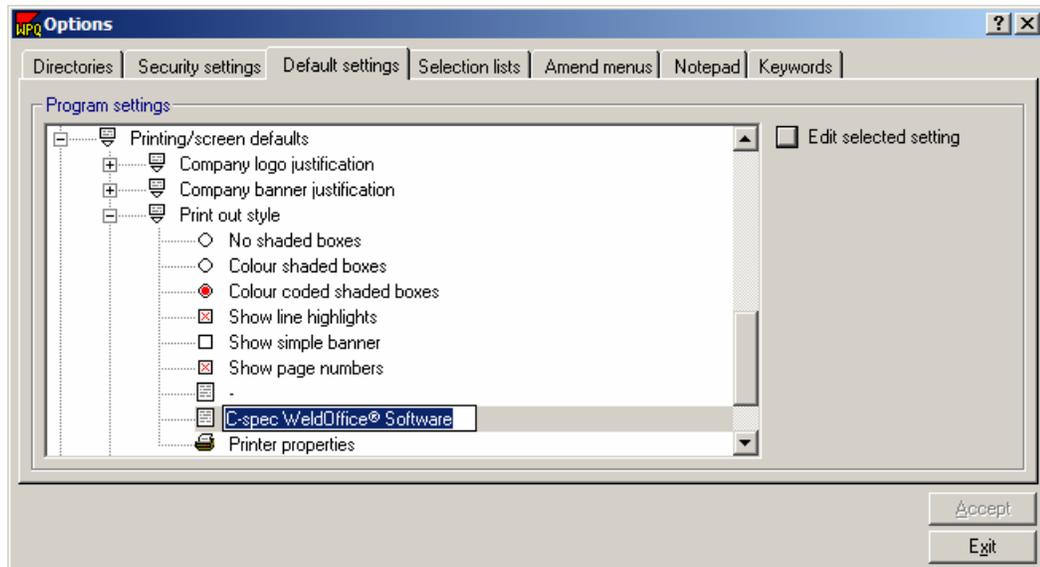
Show simple banner - Although WeldOffice®WPS allows the user to print their logo and company details at the top of the form, they can also use pre-printed paper with a pre-printed header and logo. To give the user maximum space at the top of the form for a pre-printed header, use the 'simple banner'. This removes the two horizontal black lines above and below the banner.

Show page numbers - This option allows the user to turn page numbering on or off.

Not applicable symbol - WeldOffice®WPS automatically generates certain types of data in certain documents. Although most documents are dynamic in that the layout of the document changes to match the procedure details, the system sometimes needs to generate the term 'not applicable'. This option allows the user to define the symbol or term they want to use for 'not applicable'. The user can use a dash (-), or 'na' or N/A' or the full 'Not applicable'. Click on the text of the option, then on **Edit selected setting** button. When the entry has been completed, press Enter and then **Accept**.



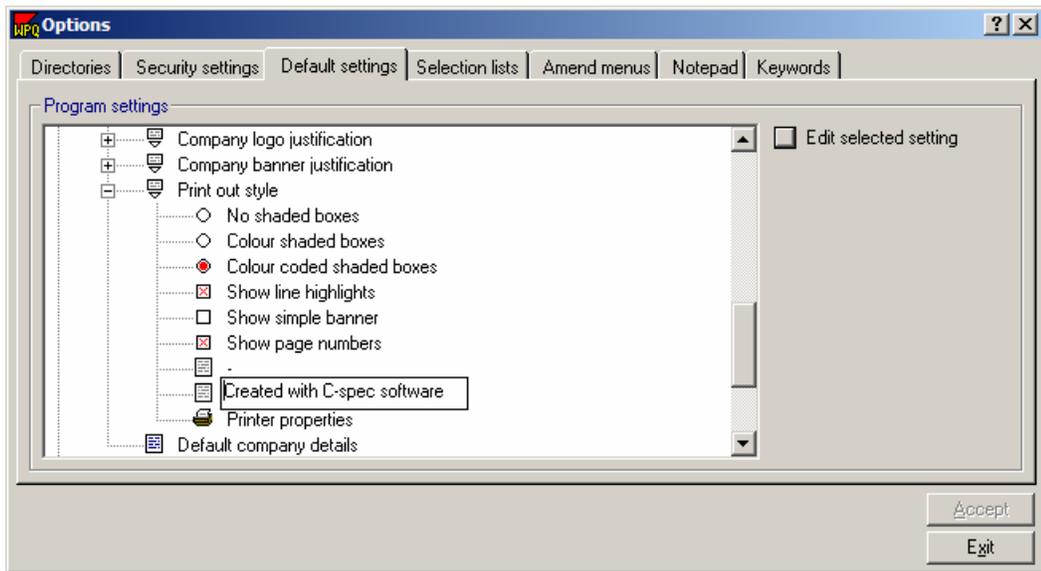
Document sub-title - The sub-title default is 'C-spec WeldOffice® Software', which is displayed and printed under the company banner in the document header. To change the sub-title, click on the text, then on the **Edit selected setting** button. Type the text necessary, then press Enter and **Accept**.



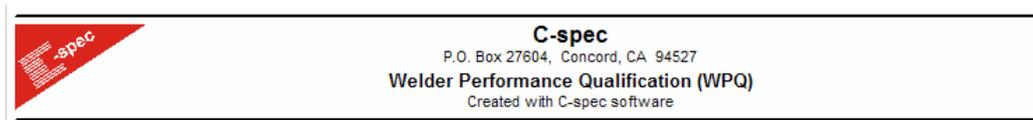
Example of the header:



If the subtitle was changed as shown below:



The header would look like this:



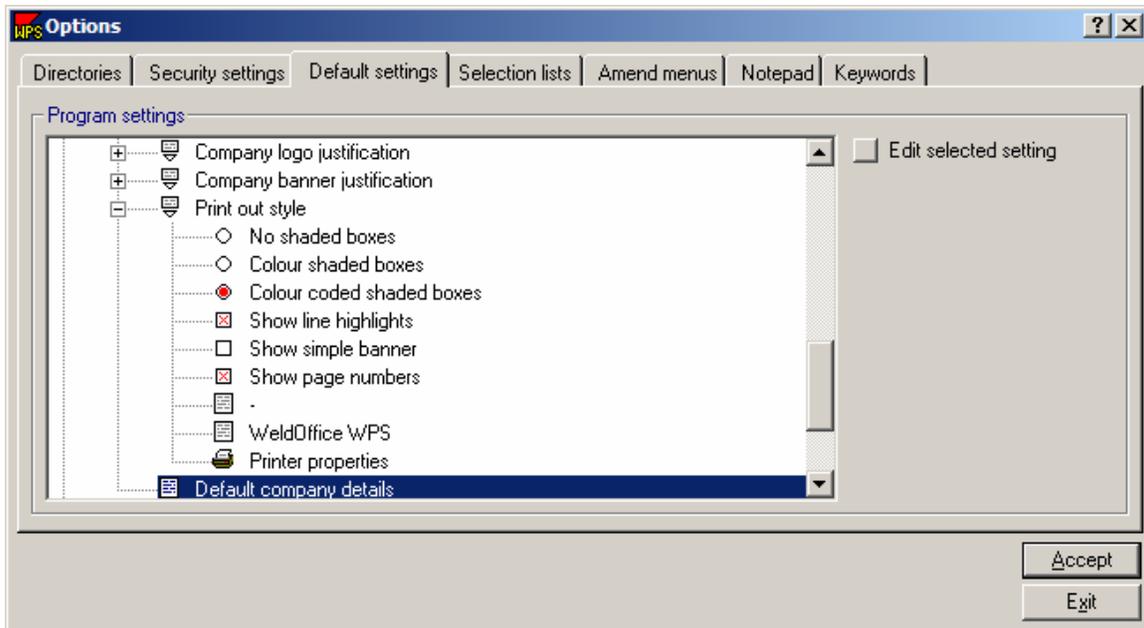
Printer properties - This option is used to access a standard Windows printer setup dialog box, which allows the user to choose which printer they want to use and how the printer should be set-up.

4.2.3.4 Default Company Details

Specify the company name and address

This option allows the user to specify a company and its details as 'default'. This will usually be the users own organization, although it doesn't need to be. It could, for example, be the main customer.

To set up the company details, click on **Default company details** and then on the **Edit selected setting** button.



This will take the user to a Company Details screen. Where the user can input, company name, division, address, contact number and notes. To specify any of these details, click in the appropriate box, and then type in the details.

Company details

Company: C-spec

Division:

Address: P.O. Box 27604
Concord, CA 94527

Contact number:

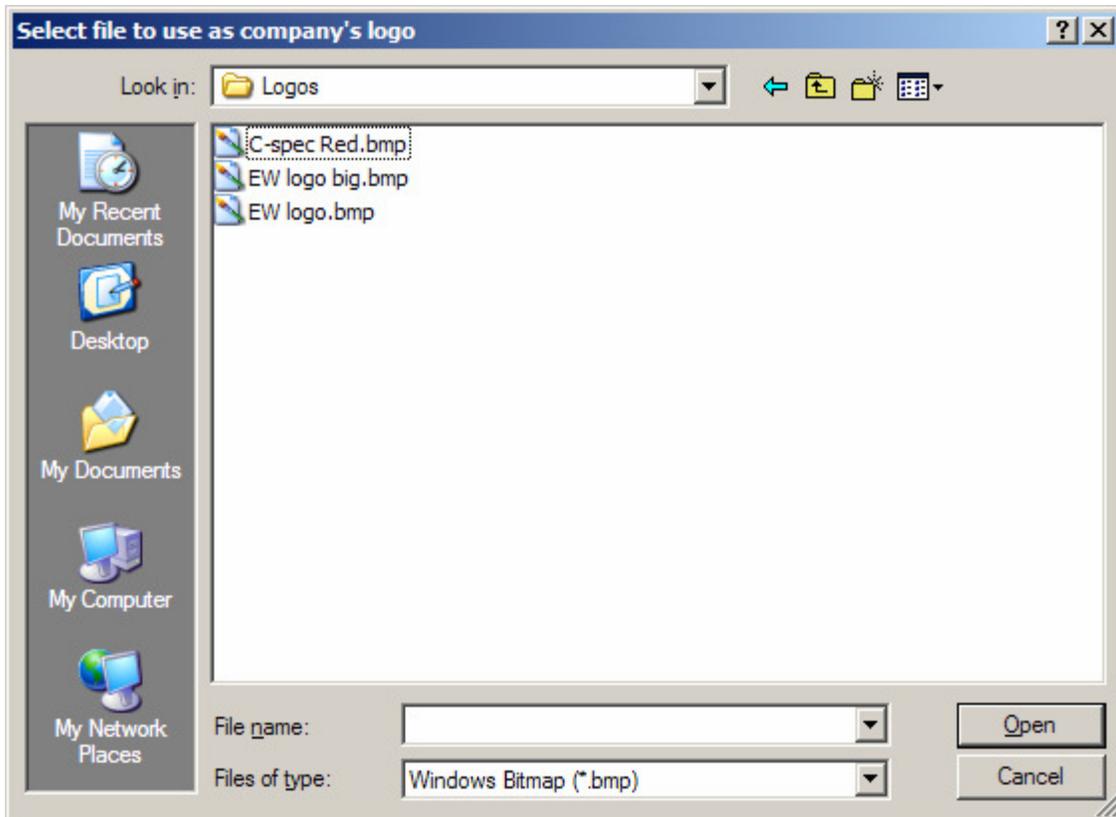
Company logo: 

Notes:

Accept

Cancel

To specify a company logo, click inside the logo box. This will take the user to a logo selection screen where the user can choose from any bmp, jpg or gif graphic files. Click on **Open** when finished. This will automatically bring up the logo in the company details screen.



4.2.4 Form Settings

Rename the titles of each page

This option allows the user to define the following for each form:

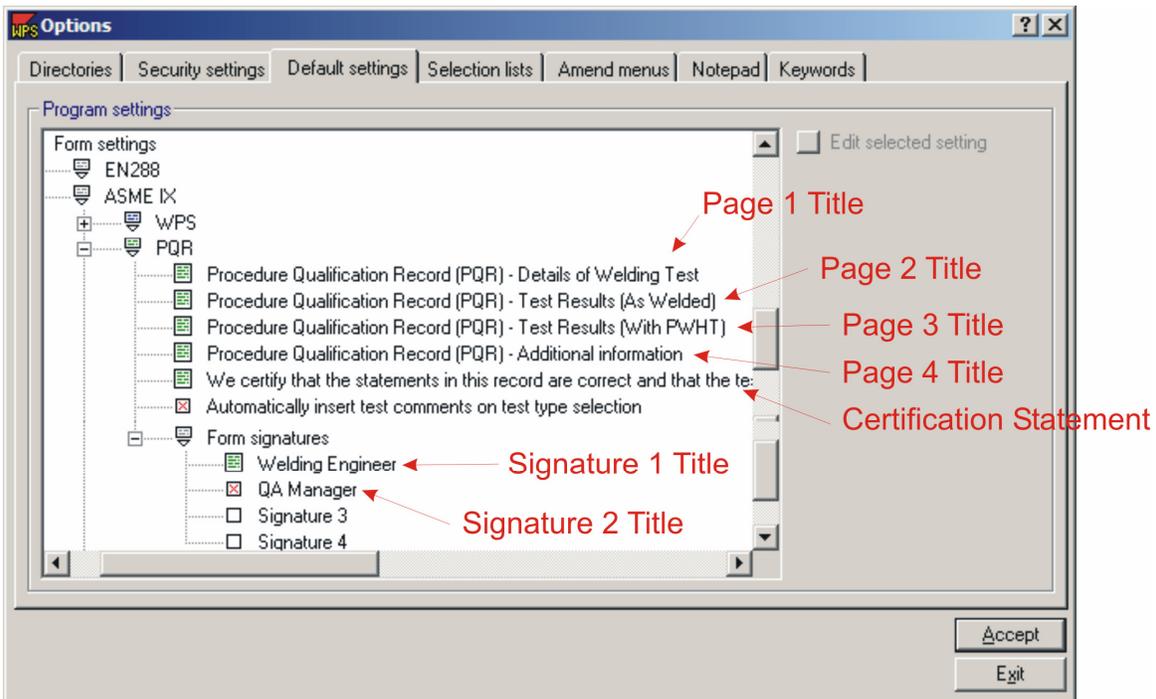
- Titles of each page in the record (which appears in the header of the documents)
- Certification statement
- Test comments
- Titles of each signature box on each document

1. The **document titles**, as supplied, simply reflect the document type and code/standard, but these can be changed if needed. Note that changing this option affects not only documents created after the change, but also all documents created prior to the change. To change the titles, click on the title and then on Edit selected setting. When the title has been entered, press Enter and then **Accept**.

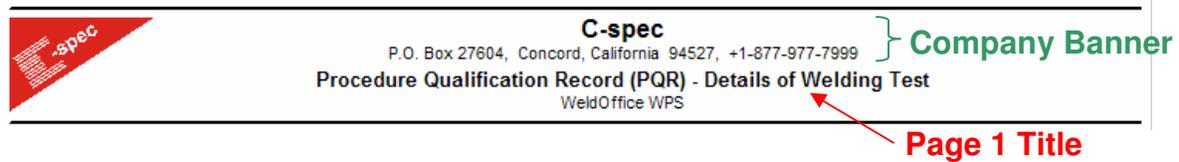
2. The **Certification statement** can be changed to reflect the users situation. To change the certification statement, click on the current certification statement and then on Edit selected setting. When the statement is completed, press Enter and then **Accept**.

3. The **Test Comments** field allows the user to turn on or off the automatic insertion of the test comments into the certification block on the WPQ. Click on the test comments to either turn it off (empty box) or on (red X in box)

4. **Applicable Signatures Titles:** It is mandatory to have at least one signature block on each document, even if the user doesn't use it. Form settings also allows the user to turn on or off up to three other signatures on each document type and to specify the text associated with each signature block. To edit the signature titles, click on one of the four fields under Form Signatures, then click on Edit selected setting. Type in the new signature title and then press Enter and then **Accept**. The signature field must be turned on (have an "X" in the box in front of it) to be able to edit the title.



Below is an example showing the page 1 title and where it is located.



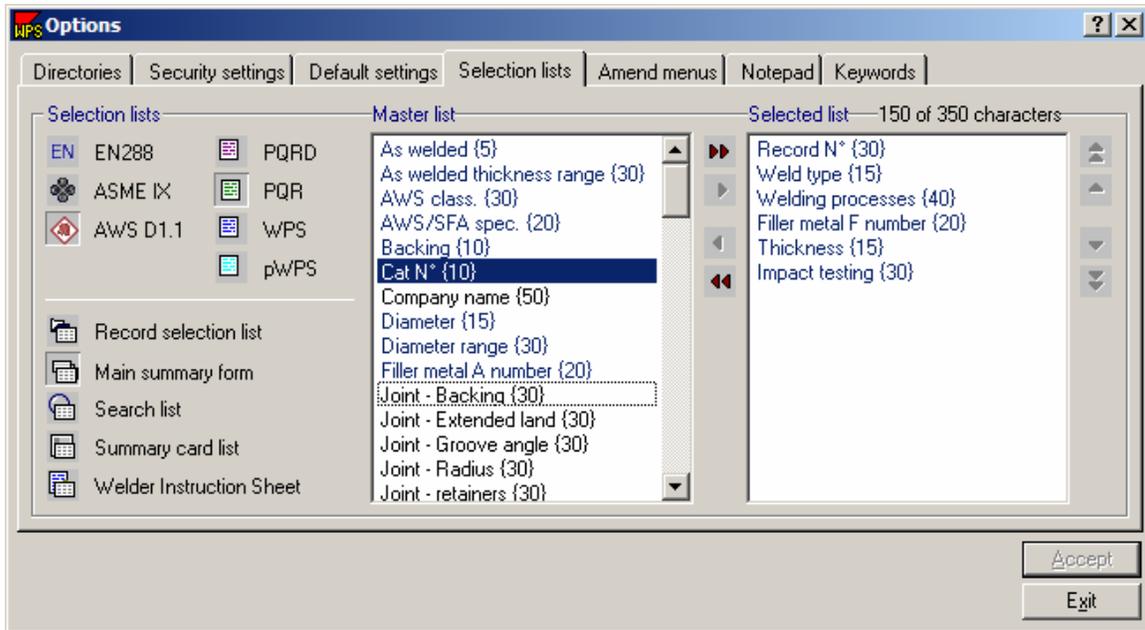
Note: Before clicking on another Tab in the Options Form or before clicking on Exit, click on **Accept** to activate any changes made.

4.3 Selection Lists

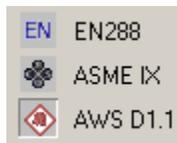
Specifying the fields listed in the reports and lists

The selection lists tab in the Options is used to specify which fields will appear on various reports and lists in the WeldOffice® software. These include:

- **Record Selection List:** The "manager" window that appears when selecting a record to open, delete, print, export, etc.
- **Main Summary Form:** The form that prints out when creating a summary of one or more records.
- **Search list:** The fields available to search upon when using the Record Search Manager.
- **Summary Card List:** The wallet-sized summary form that prints when creating a Summary Card.
- **Welder Instruction Sheet:** The printout of basic WPS details that can be provided to the welder



1. To make changes to one of the Reports/Lists, first select the applicable code (EN288, ASME IX, AWS D1.1).



2. Then select the applicable record (PQRD, PQR, WPS, pWPS).



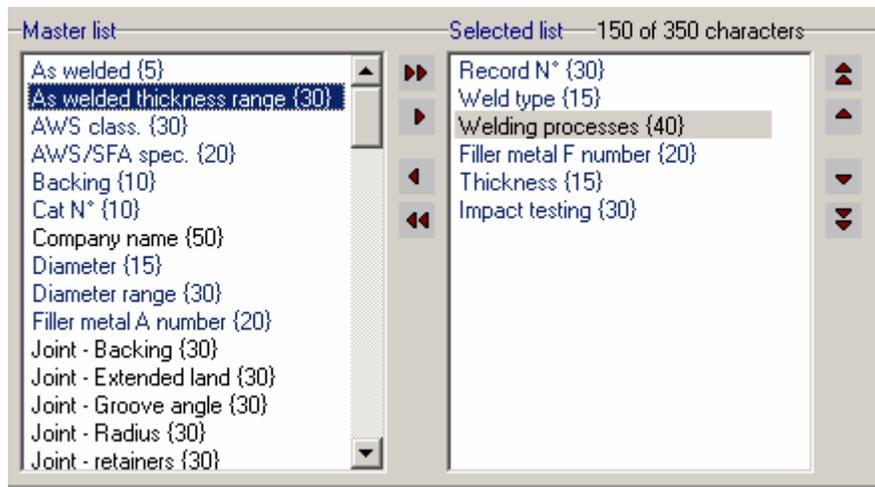
3. Then select the desired Report or List to be edited.



With these selections made, two lists of fields will appear:

Master List: This is the list (on the left) of all available fields which could be placed on the reports.

Selected List: This is the list (on the right) of fields that are already included on the reports.



4. To add a field to the selected list, click on the desired field under the Master list.

5. Press the red arrow pointing to the right  to move it to the selected list.

To remove a field from the Selected list, click on the field to select it and then click the single arrow going to the left  to return it to the Master list.

Use the double arrows to return all selected items to the master list  or to move all the Master list to the Selected list  .

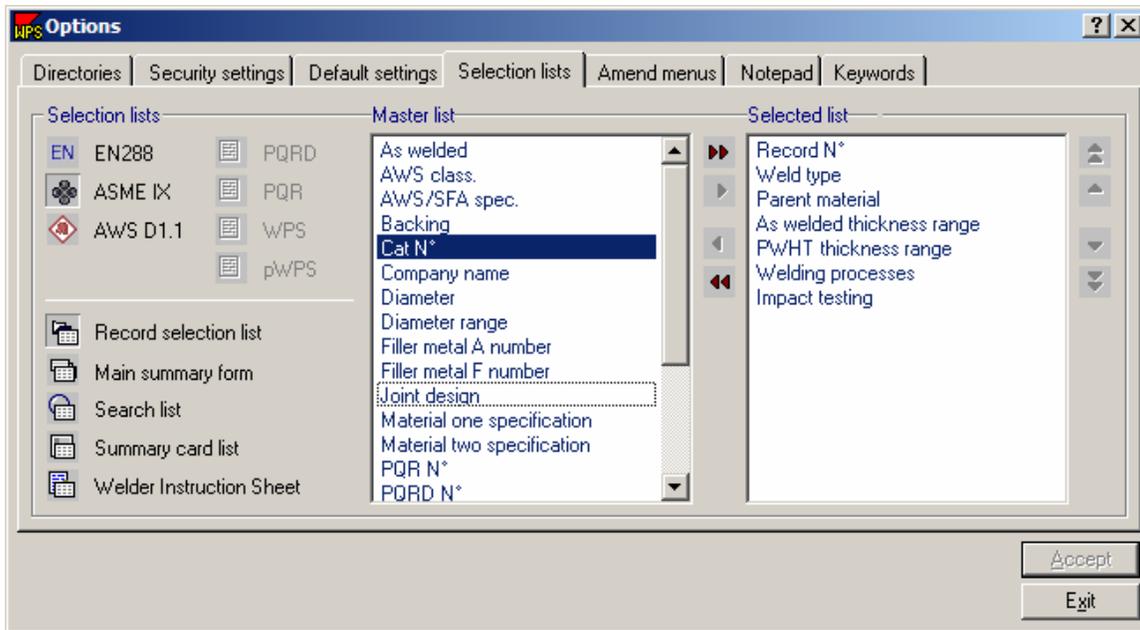
For all the reports that are to be printed, the number of available characters on one page width needs to be considered. The amount of used space is listed just above the Selected List. In the example shown above, 150 of the 350 available characters have been used. The {} indicate the number of characters in the item.

4.3.1 Record selection lists

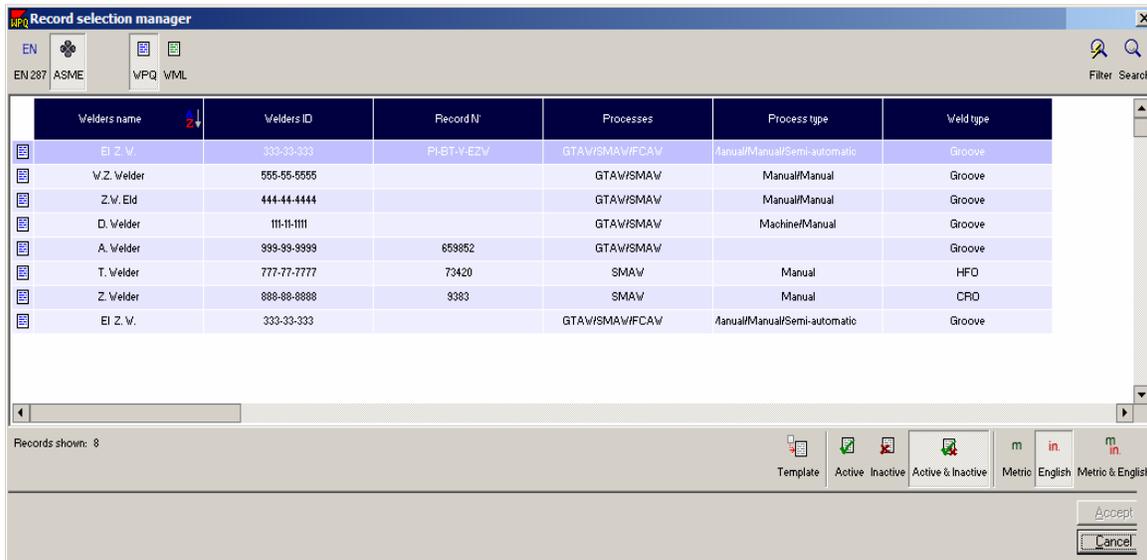
*Set the criteria for the **Record Selection Manager***

When the user uses the *Record manager* to open, print, delete, and export documents, the system displays a summary of documents comprising of one line for each document. This option allows the user to select which welding variables are listed in the Managers and their position across the screen. Clicking on the column headers on the Record selection form resorts the list of documents in alphanumeric order for that column, so the user can identify and select one or more items very quickly.

Each code/standard has a different Record selection list. See Setting the Selection lists (4.3) to set up the list of details to be viewed by the record selection list.



To view the Record Selection Manager, click on **File** and then **Open**. The Manager will appear. Notice that the columns of data are the same as what was selected above under the selected list. To change the order, of the columns, change the order in the selected list above, by using the arrows on the right hand side.



The above figure shows the *Record Selection manager* with the selected field columns shown.

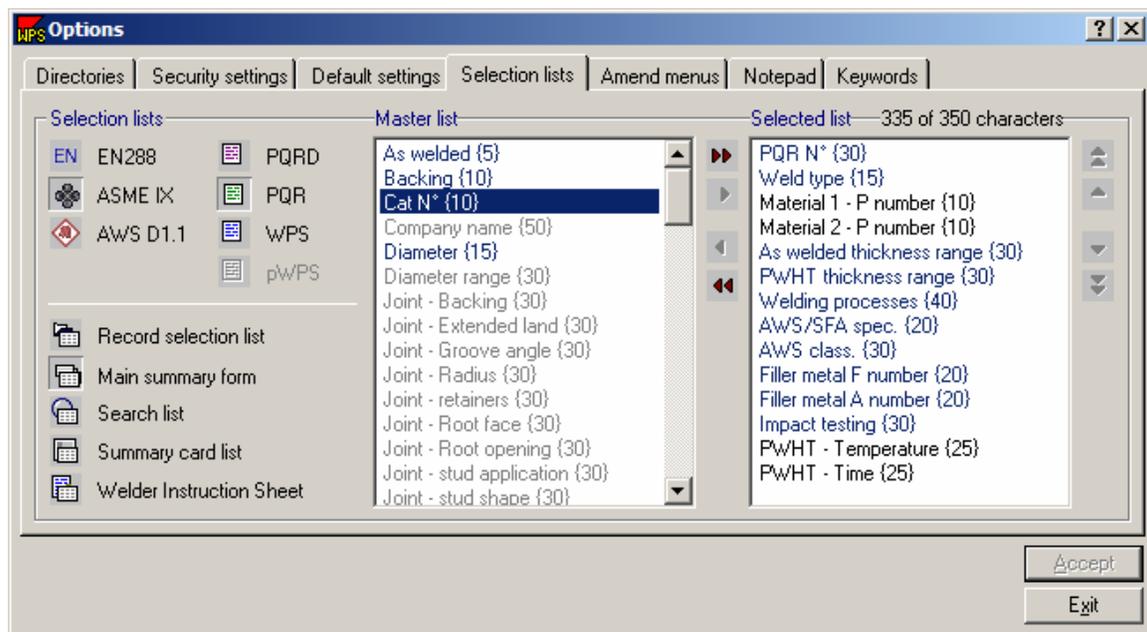
The fields are the same for the *Record Deletion Manager*, *Record Printout Manager*, and the *Record Export Manager*.

4.3.2 Main Summary Form

Develop personalized summary form

Users can develop their own report summary of records using the Main Summary Form. Select the items to be listed in the summary report using the Main Summary form selection list. This option allows the user to select which variables should be listed and their position across the screen. Clicking on the column headers on the Main Summary form resorts the list of documents in alphanumeric order for that column, so the user can identify and select one or more items very quickly.

Open the Selection list by clicking on **Tools, Options, Selection Lists** and then **Main Summary form**. Each code/standard has a different Main summary form selection list. See Setting up the Selection lists, section 4.3, to set up the list of details to be viewed in the Main Summary form.



To view the *Main Summary form*, click on **View** and then **Summary**. From the *Record Selection Manager*, choose the records to view in the Summary form. If selecting several records, hold down the shift key to selected consecutive records or hold down the ctrl key and click on the records to be included. Click **Accept**. The Summary display form will appear. Notice that the columns of data are the same as what was selected above under the selected list. To change the order of the columns, change the order in the selected list above, by using the arrows on the right hand side.

WPS Record summary manager

EN 288 ASME AWS PQRD PQR WPS pWPS Filter Search

Record N°	Weld type	Parent material	As welded thickness range	PWHT thickness range	Welding processes	Impact testing
	Groove	S1SG1 to S1SG1	n/a	0.063 to 0.75	GTAW/SAW	Yes
	Groove	to	n/a	n/a		No
3 - Rev 1	Groove	3 to 3	n/a	0.06 to 0.75	GTAW/SAW	No
4 - Rev 2	Stud	1 to 1	n/a	n/a	STUD	No
5 - Rev 0	HFSF	A8 to 8	n/a	0.25 to 1.0	PAW	No
6 - Rev 0	Groove	21 to 21	0.06 to 0.14	n/a	GTAW	No
7 - Rev 0	Groove	4 to 4	0.19 to 4.0	n/a	GMAW/SAW	No
8 - Rev 0	Groove	10H to 10H	0.19 to 2.0	n/a	GTAW/SAW	No
9 - Rev 0	Groove	21 to 21	0.06 to 0.47	n/a	GTAW/GMAW	No
10 - Rev 0	HFO	A1 to 1	0.25 to 1.0	n/a	PAW	No
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SAW	Yes
11 - Rev 1	HFSF	A1 to 1	0.25 to 1.0	n/a	OFW	No
20	Fillet	1 to 1	to	n/a	GMAW	No
13 - Rev 1	Groove	S1 to S1	0.19 to 8.0	n/a	GTAW/GMAW	No
15 - Rev 1	Stud	S1SG1 to S1SG1	n/a	n/a	STUD	Yes
	Groove	to	n/a	n/a		No
11 - Rev 0	Groove	1G3 to 1G3	0.19 to 8.0	0.19 to 8.0	GTAW/GMAW/SAW	Yes
	Groove	G to G	to	to		Yes
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a	GMAW	No
10 - Rev 0	HFO	A1 to 1	0.25 to 1.0	n/a	PAW	No
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SAW	Yes

Records shown: 100

Template Active Inactive Active & Inactive Metric English Metric & English

Accept Cancel

Record selection manager showing selected records

WPS Summary Display Form

PQR N°	Weld type	As welded thickness range	PWHT thickness range	Welding processes	AWS/SFA spec.	Filler meta number
3 - Rev 1	Groove	n/a	0.06 to 0.75	GTAW/SAW	5.18/5.17	6/6
4 - Rev 2	Stud	n/a	n/a	STUD	-	-
5 - Rev 0	HFSF	n/a	0.25 to 1.0	PAW	5.4	5
6 - Rev 0	Groove	0.06 to 0.14	n/a	GTAW	-	-
7 - Rev 0	Groove	0.19 to 4.0	n/a	GMAW/SAW	-	-
8 - Rev 0	Groove	0.19 to 2.0	n/a	GTAW/SAW	-	-
9 - Rev 0	Groove	0.06 to 0.47	n/a	GTAW/GMAW	-	-
10 - Rev 0	HFO	0.25 to 1.0	n/a	PAW	5.1	2
12 - Rev 0	Groove	n/a	0.06 to 0.75	GTAW/SAW	-	-
11 - Rev 1	HFSF	0.25 to 1.0	n/a	OFW	5.1	2
20	Fillet	to	n/a	GMAW	5.9	6
13 - Rev 1	Groove	0.19 to 8.0	n/a	GTAW/GMAW	5.18	6
15 - Rev 1	Stud	n/a	n/a	STUD	-	-

Records listed: 13

Record type PQRD PQR WPS pWPS Print summary report

Cancel

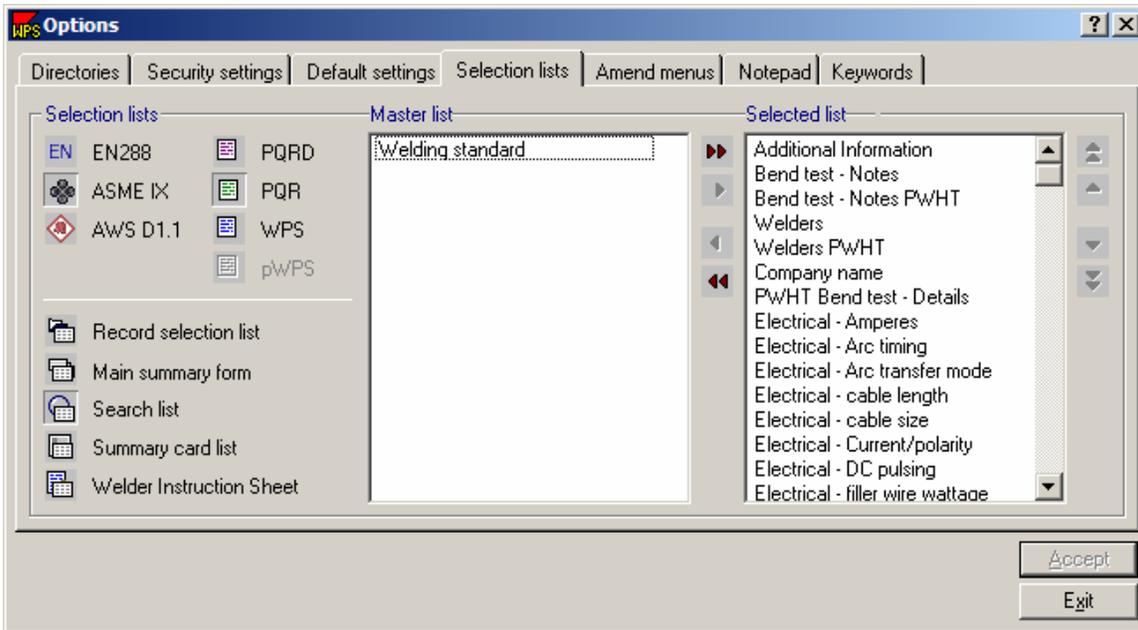
Summary display form for selected records

4.3.3 Search list

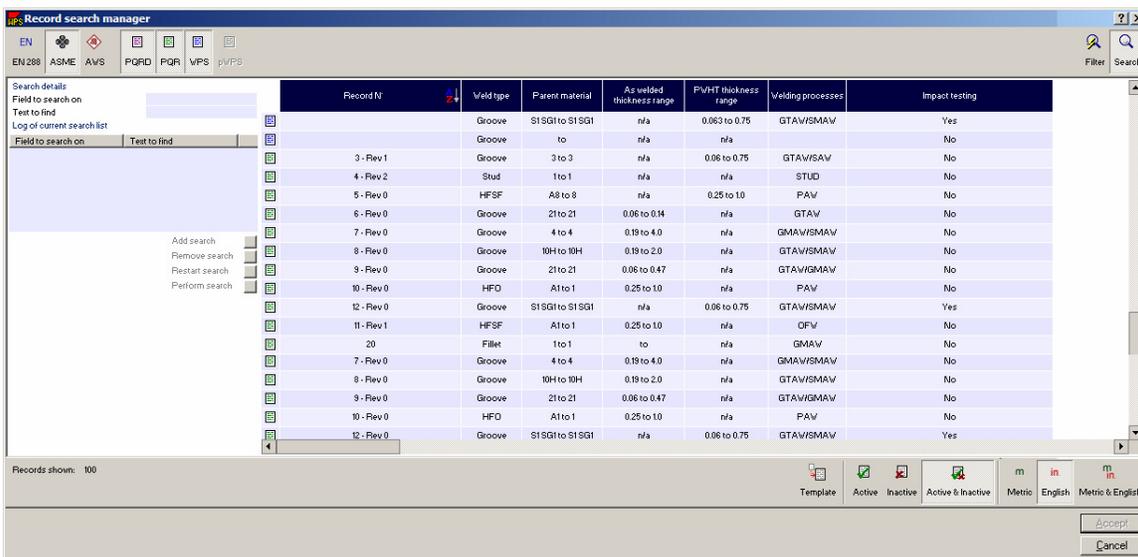
Set the criteria for the **Search List**

When the Record Search manager is used to find documents, the system displays all records in a summary format until a search criteria is entered.

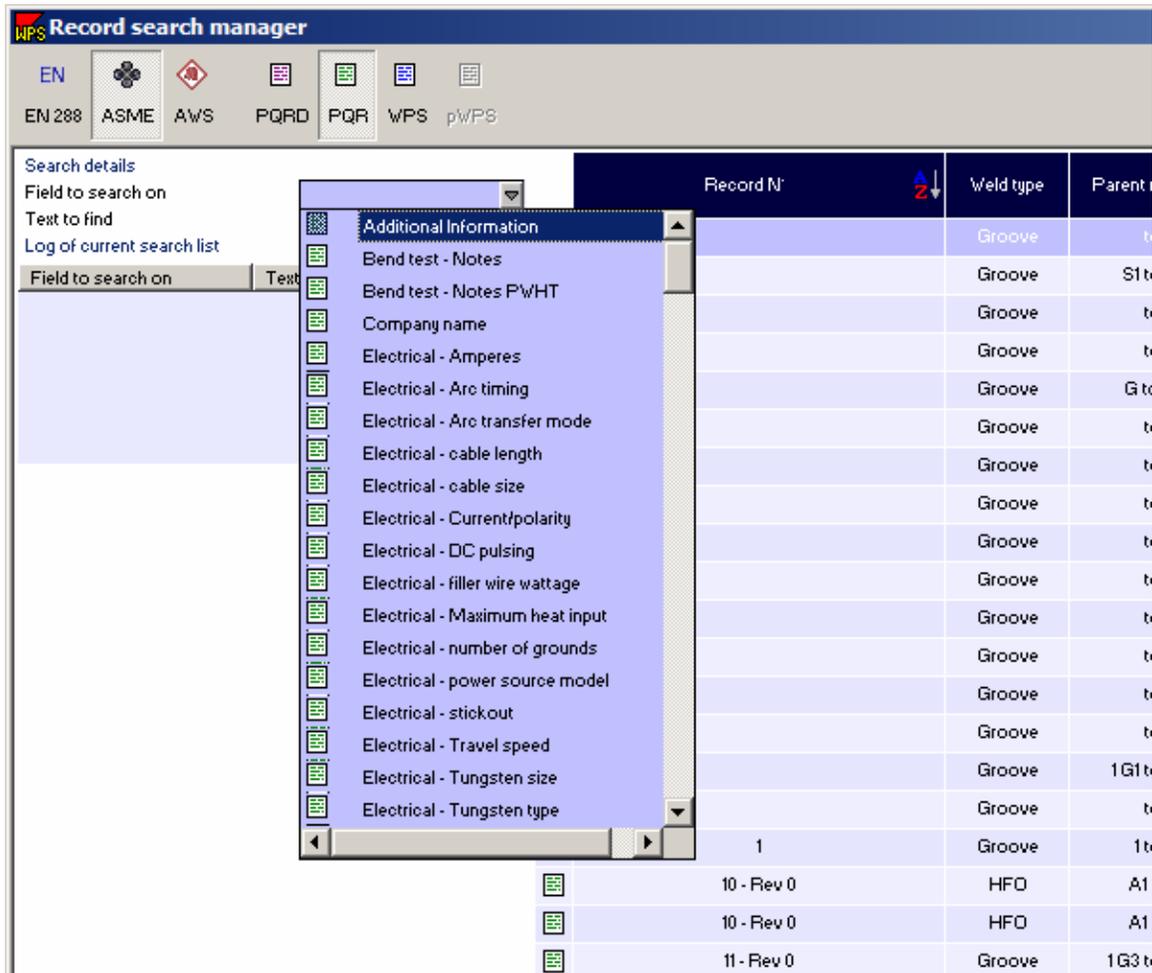
Each code/standard has different Search criterion to choose from. See Setting the Selection lists, section 4.3, to set up the list of details to search upon.



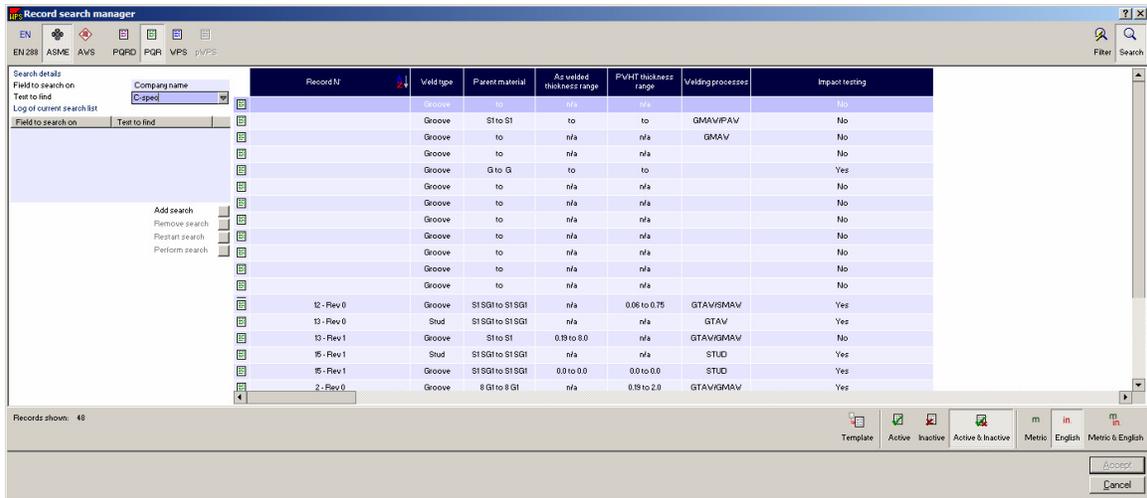
To get to the search fields, click on **View** and then **Find** or **Replace**.



Click in the box for the **'field to search on'**. The fields that were selected in the Selection list, are now listed under the **'field to search on'** and the user can choose from the drop down list that appears.



After selecting a field to search on, click on **find text**, to enter the text to search for. If information had been entered into a drop down menu, a drop down menu for that field will appear, otherwise, just type in the information to find.



Now that the search criteria has been determined, click on **Add search**. Then click on **Perform search**.



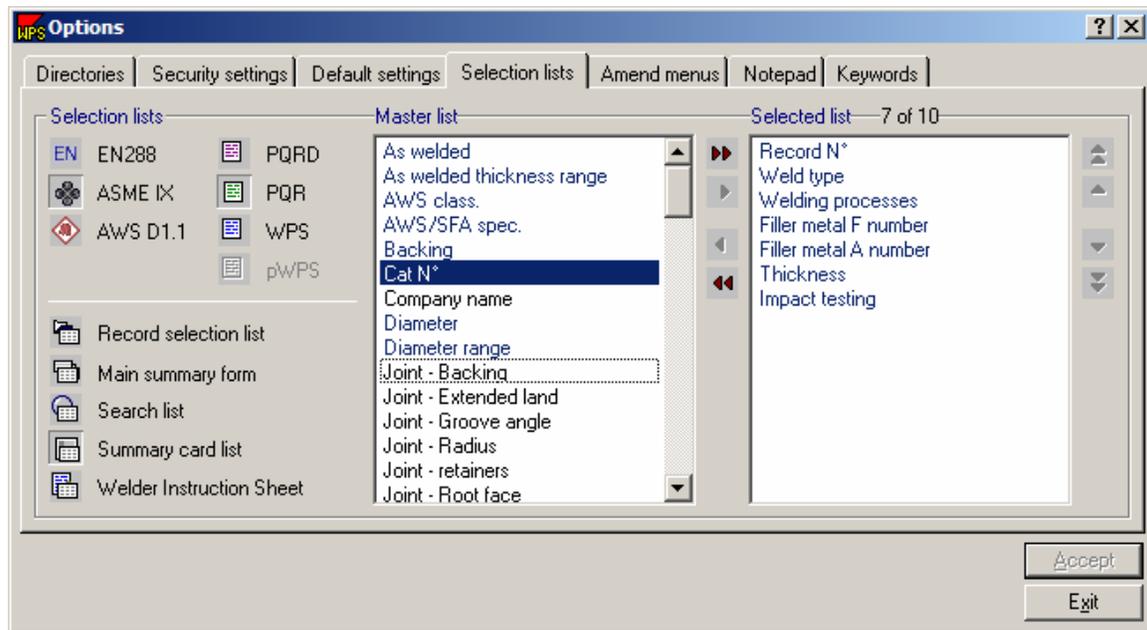
The program will give a list of records that meet the required criteria. Click on any record to open it or to select multiple, hold down the shift key while selecting.

4.3.4 Summary Card list

Set the criteria to be listed on the **Summary Card List**

The Summary Card list shows the selected records in a summary format. The format of these cards is determined here.

Each code/standard has different fields to choose from. See Setting the Selection lists, section 4.3, to set up the list of details to show in a summary card list.



Once the list of fields has been selected, view the Summary Card list by clicking on **View** and then **Weld Reference Card**. This will open a Summary Card manager window where the user can select the record to show in Summary format.

Summary card manager

EN 288 ASME AWS PQR PQR WPS pWPS

Filter Search

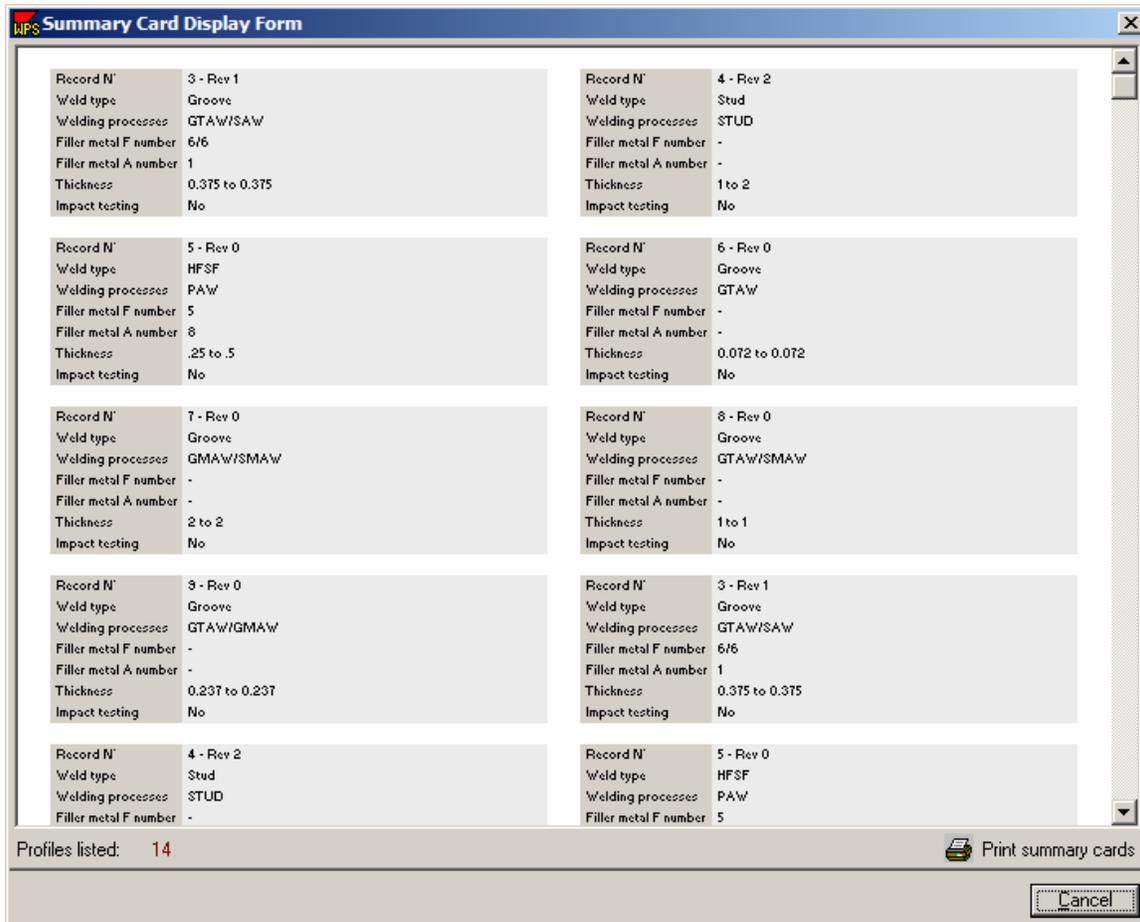
Record N°	Weld type	Parent material	As welded thickness range	PWHT thickness range	Welding processes	Impact testing
11 - Rev 0	Groove	1G3 to 1G3	0.19 to 8.0	0.19 to 8.0	3TAW/GMAW/SAV	Yes
11 - Rev 0	Groove	1G3 to 1G3	0.19 to 8.0	0.19 to 8.0	3TAW/GMAW/SAV	Yes
11 - Rev 1	HFSF	A1 to 1	0.25 to 1.0	n/a	OFW	No
11 - Rev 1	HFSF	A1 to 1	0.25 to 1.0	n/a	OFW	No
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SMMAV	Yes
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SMMAV	Yes
13 - Rev 0	Stud	S1SG1 to S1SG1	n/a	n/a	GTAW	Yes
13 - Rev 1	Groove	S1 to S1	0.19 to 8.0	n/a	GTAW/GMAW	No
15 - Rev 1	Stud	S1SG1 to S1SG1	n/a	n/a	STUD	Yes
15 - Rev 1	Groove	S1SG1 to S1SG1	0.0 to 0.0	0.0 to 0.0	STUD	Yes
2 - Rev 0	Groove	8 G1 to 8 G1	n/a	0.19 to 2.0	GTAW/GMAW	Yes
20	Fillet	1 to 1	to	n/a	GMAW	No
20	Fillet	1 to 1	to	n/a	GMAW	No
3 - Rev 1	Groove	3 to 3	n/a	0.06 to 0.75	GTAW/SAV	No
3 - Rev 1	Groove	3 to 3	n/a	0.06 to 0.75	GTAW/SAV	No
4 - Rev 2	Stud	1 to 1	n/a	n/a	STUD	No
4 - Rev 2	Stud	1 to 1	n/a	n/a	STUD	No
5 - Rev 0	HFSF	A8 to 8	n/a	0.25 to 1.0	PAW	No
5 - Rev 0	HFSF	A8 to 8	n/a	0.25 to 1.0	PAW	No
6 - Rev 0	Groove	21 to 21	0.06 to 0.14	n/a	GTAV	No
6 - Rev 0	Groove	21 to 21	0.06 to 0.14	n/a	GTAV	No
7 - Rev 0	Groove	4 to 4	0.19 to 4.0	n/a	GMAW/SMMAV	No
7 - Rev 0	Groove	4 to 4	0.19 to 4.0	n/a	GMAW/SMMAV	No
8 - Rev 0	Groove	10H to 10H	0.19 to 2.0	n/a	GTAW/SMMAV	No
8 - Rev 0	Groove	10H to 10H	0.19 to 2.0	n/a	GTAW/SMMAV	No
9 - Rev 0	Groove	21 to 21	0.06 to 0.47	n/a	GTAW/GMAW	No
9 - Rev 0	Groove	21 to 21	0.06 to 0.47	n/a	GTAW/GMAW	No
PQR 101 - Rev 0	Groove	1 to 1	0.19 to 0.86	n/a	TAW/SMMAW/FCA	No
PQR 100 - Rev 0	Groove	1G1 to 1G1	0.19 to 8.0	0.19 to 8.0	GTAW/SMMAV	Yes

Records shown: 48

Template Active Inactive Active & Inactive Metric English Metric & English

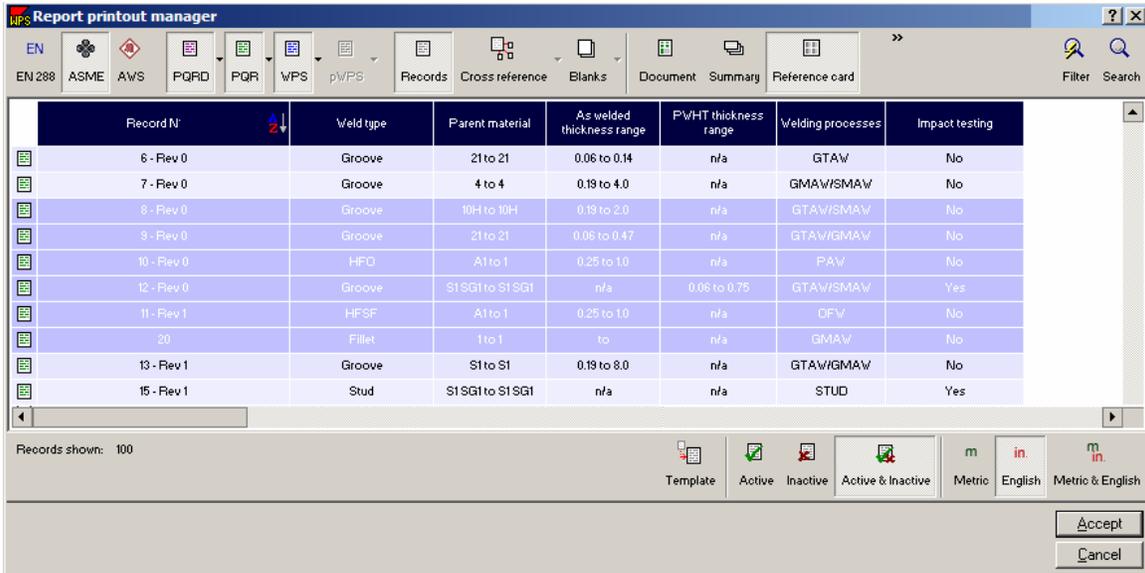
Accept Cancel

Select the records to show in the summary format. To select multiple hold down the shift or ctrl key while selecting. Then click **Accept**. The summary card window will open.



The fields that were chosen under the Selection list, are listed here. The user can then click on the Print icon in the lower right hand corner to print a hard copy of the Summary/Weld Reference Card.

Another way the user can access the Summary/Weld Reference Cards is to click on **File** and then **Print**. The Print record manager will open as shown below. Select the code type, the document type, select records, and then select Reference Card. Then select the documents from the list shown to be viewed in a Weld Reference card format. Click **Accept**. After clicking Accept, the document is automatically spooled to the default printer.



The actual printout of the reference card is shown below.

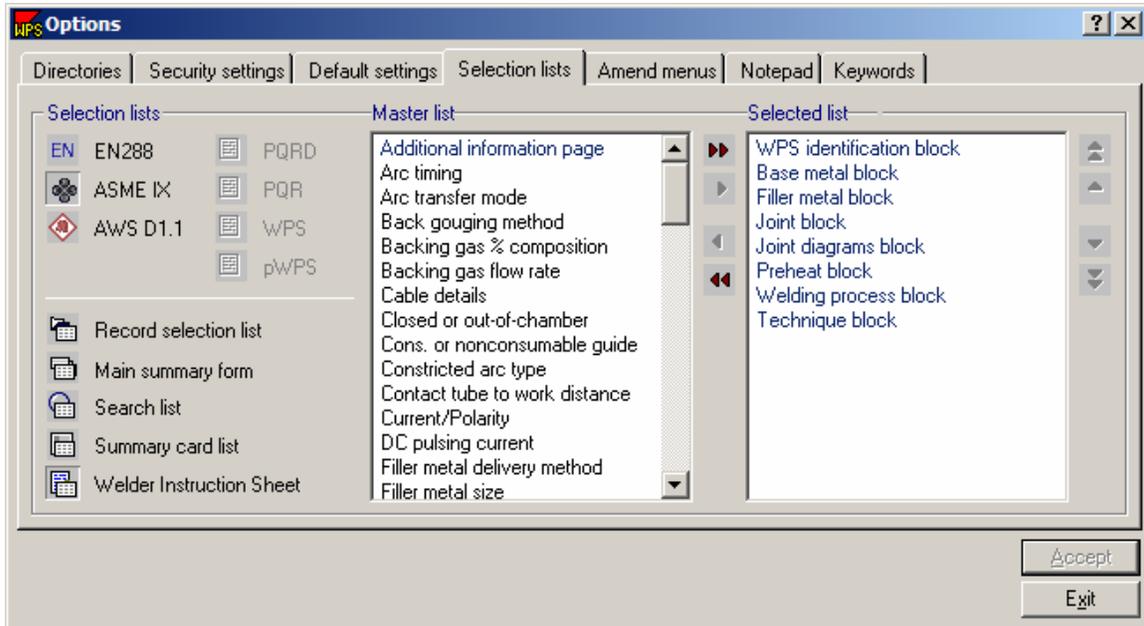
 C-spec P.O. Box 27604, Concord, California 94527, +1-877-977-7999 Weld reference card report WeldOffice WPS			
Record N*	8 - Rev 0	Record N*	9 - Rev 0
Weld type	Groove	Weld type	Groove
Welding processes	GTAW/SMAW	Welding processes	GTAW/GMAW
Filler metal F number	-	Filler metal F number	-
Filler metal A number	-	Filler metal A number	-
Thickness	1 to 1	Thickness	0.237 to 0.237
Impact testing	No	Impact testing	No
Record N*	10 - Rev 0	Record N*	12 - Rev 0
Weld type	HFO	Weld type	Groove
Welding processes	PAW	Welding processes	GTAW/SMAW
Filler metal F number	2	Filler metal F number	-
Filler metal A number	1	Filler metal A number	-
Thickness	.25 to 2	Thickness	0.375 to 0.375
Impact testing	No	Impact testing	Yes
Record N*	11 - Rev 1	Record N*	20
Weld type	HFSF	Weld type	Fillet
Welding processes	OFW	Welding processes	GMAW
Filler metal F number	2	Filler metal F number	6
Filler metal A number	1	Filler metal A number	NA
Thickness	.25 to 2	Thickness	1 to 1
Impact testing	No	Impact testing	No

4.3.5 Welder Instruction Sheet

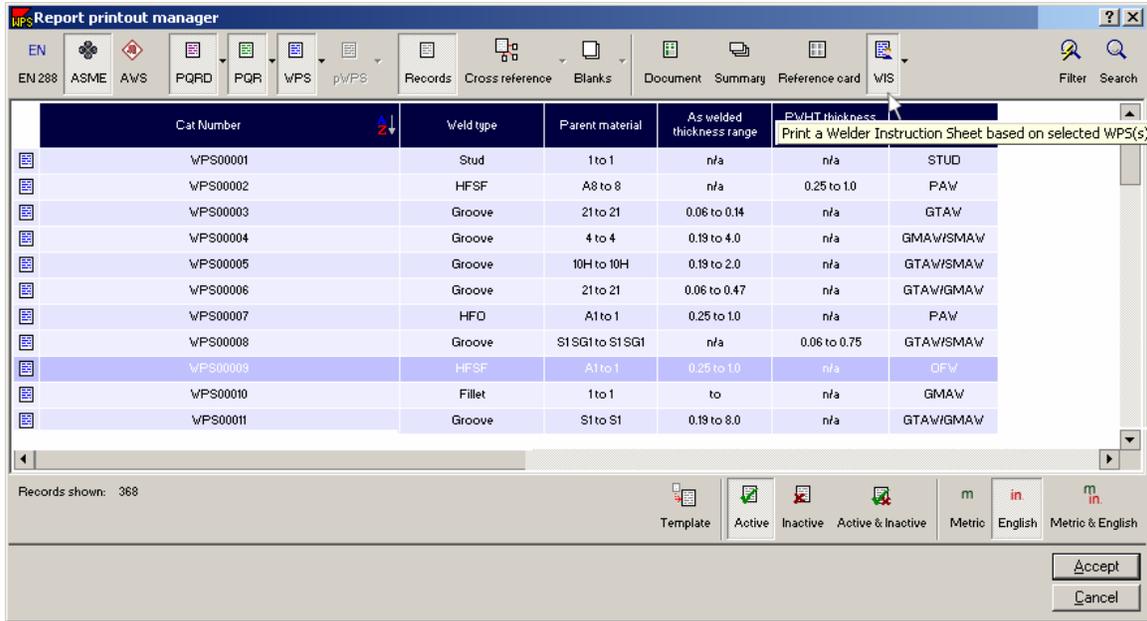
Set the criteria to be listed on the **Welder Instruction Sheet**

The Welder Instruction Sheet shows only the details needed for the welders as selected in the Selection list.

Each code/standard has different fields to choose from. See Setting the Selection lists, section 4.3, to set up the list of details to show in a Welder Instruction Sheet.



To view the Welder Instruction Sheet, click **File** and then **Print**. The Print record manager will open as shown below. The only type of record to create a Welder Instruction sheet (WIS) from is a WPS. Unless WPS is selected, the WIS selection will be grayed out.



Click **Accept** after the records have been selected. The Welder Instruction Sheet will automatically spool to the **Default Printer**.

The items that were chosen in the Selection List to be viewed on the Welder Instruction sheet will determine what is shown. An example is shown below.

C-spec P.O. Box 27604, Concord, California 94527, 1-877-977-7999 ASME - Welder Instruction Sheet (Based on WPS) WeldOffice WPS									
WPS record number	105	Revision	0		Qualified to	ASME Section IX			
Date	7/27/2005	Company name	C-spec						
FILLER METALS (QW-404)					THICKNESS RANGE QUALIFIED (in.)				
	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded		With PWHT	
						Min.	Max.	Min.	Max.
SMAW	5.1		3	1		no min.	0.25	-	-
WELDING PROCEDURE									
Welding process					SMAW				
Type					Manual				
NOTES									
1 - The following AWS/SFA classifications can be used with this procedure: (smaw note) E7018, E7018-1 (smaw note) E6010, E7010-A1 When the tensile strength of both base metals is > than 70ksi, E7010-A1 electrodes shall be used.									

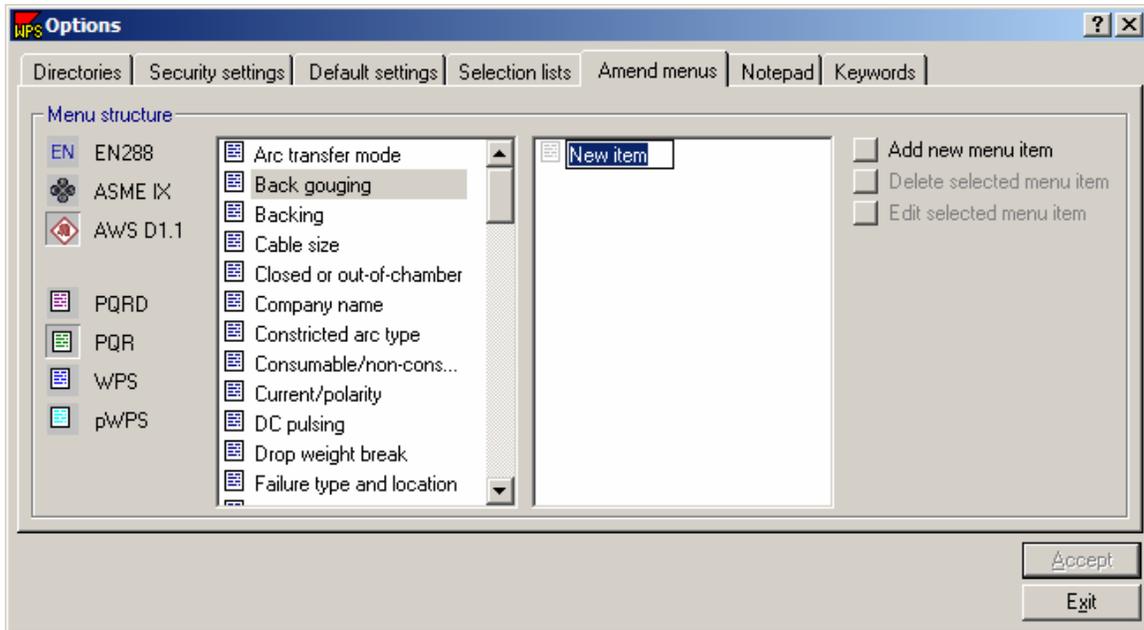
Signature 1		Signature 2	
Name	Signature	Name	Signature
Date		Date	

4.4 Amend Drop Down Menus

Changing the content of the drop-down menus

The Amend Menu tab allows modification of the content to any drop down menu available on all WeldOffice® forms.

1. Click on **Tools** and then **Options** to open the Options window. Click on the fifth tab called **Amend Menu**.



2. For each available report, a specific list of menu fields will appear. First select the applicable code.



3. Then select the applicable record type.



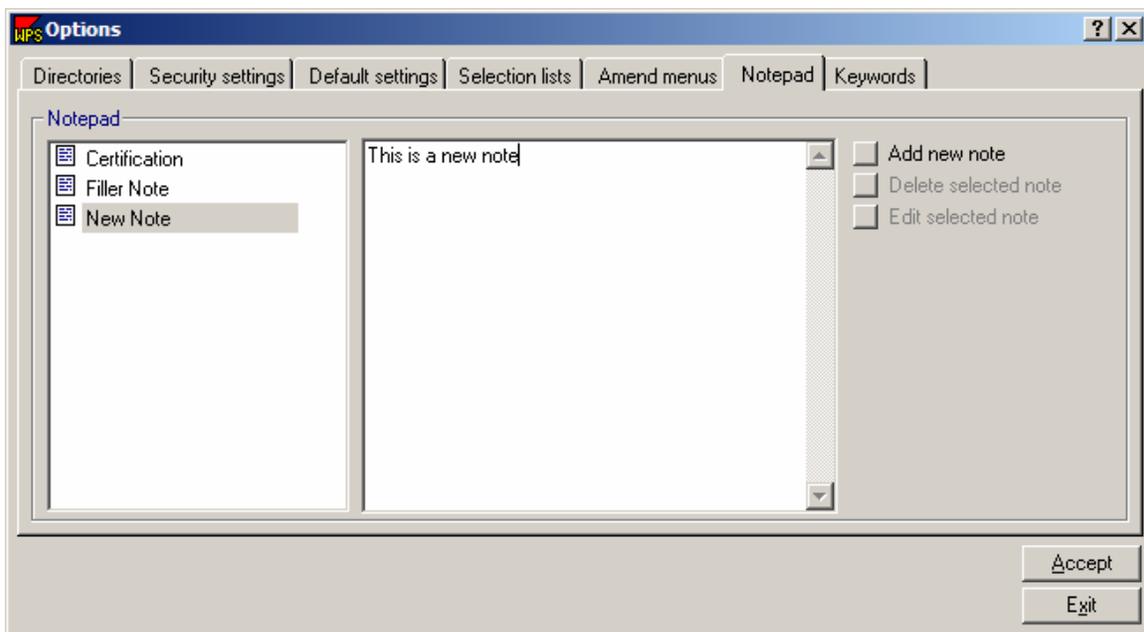
4. With a specific record type selected, all fields will appear that have user definable drop down menus. Select one of the fields to make changes to its menu content. For instance Back Gouging.
5. If there are any contents of that field that have been defined by the user, they will appear in the right hand window. To edit or delete an item click on that item and then select **Edit selected item** or **Delete selected item**. There are certain items that the software doesn't allow the user to modify. For instance, on a PQR, the drop down field for Back Gouge has several listings (Air Carbon arc, Air -Arc, grinding, etc) but when the user clicks on Back gouge to amend the drop down menu, these items will not show up, because they are hard coded into the software and not changeable by the user.
6. To add an item click on **Add new item**.
7. This opens a New Item text in the right hand window. Type in the item that should appear in the drop down menu. For instance: Mill out
8. Click **Accept** and then **Exit** when finished.

4.5 Notepad

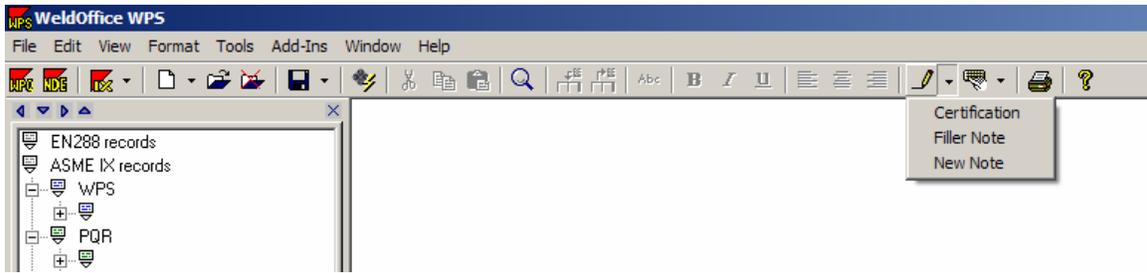
Specifying the content of the Notepad database

The WeldOffice® software allows the user to store typical notes eliminating the need to produce these items more than once. A typical note may be instructions for cleaning strategies for different metals or standard statements on welder approval requirements.

1. To access the Notepad database, click on **Tools** and then **Options** to open the options window. Click on the sixth tab called **Notepad**. (Another way to access the notepad is to click on the pencil icon  on the toolbar)



2. To add a new note, click on **Add new note**.
3. Type in the name of the note.
4. Then click over to the right hand side window and type the contents of the note. Then click **Accept**.
5. To edit or delete a note, select the note and then click **Delete selected note** or **Edit selected note**.
6. When all of the desired changes have been made, click the **Accept** button.
7. To access the notepad, click on the drop down arrow next to the pencil icon  and then click on the note to be inserted.

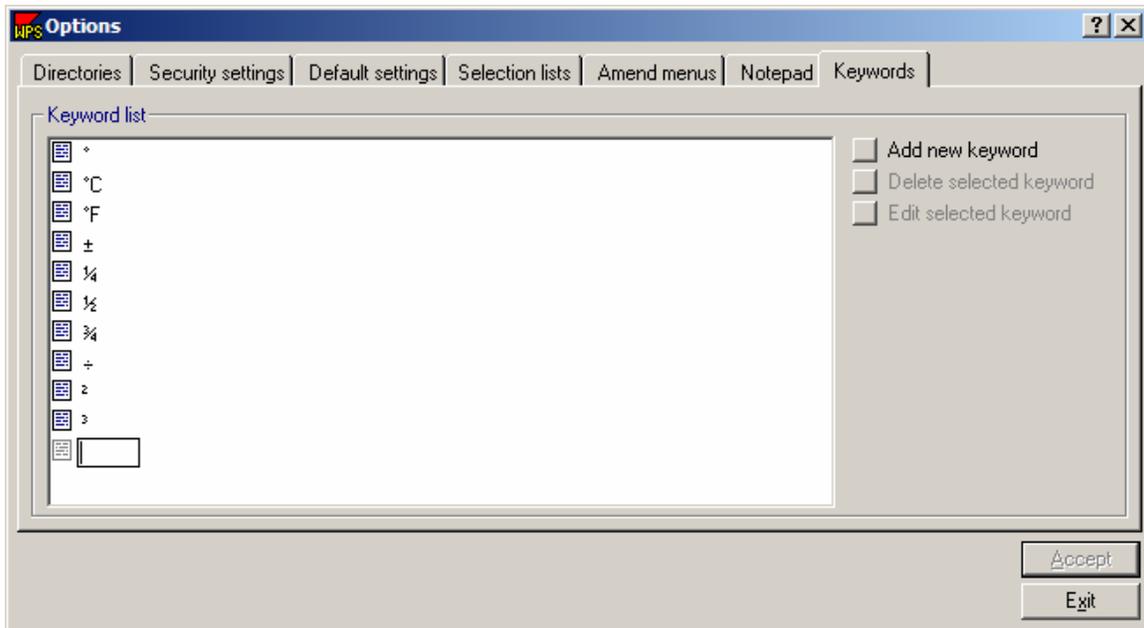


4.6 Keywords

Specifying the content of the Keywords database

The WeldOffice® software allows the user to store hard to find characters eliminating the need to produce these items more than once.

1. To access the Keywords database, click on **Tools** and then **Options** to open the options window. Click on the seventh tab called **Keywords**. (Another way to access the notepad is to click on the keyboard icon  on the toolbar)



2. To add a new keyword, click on the **Add new keyword** icon.

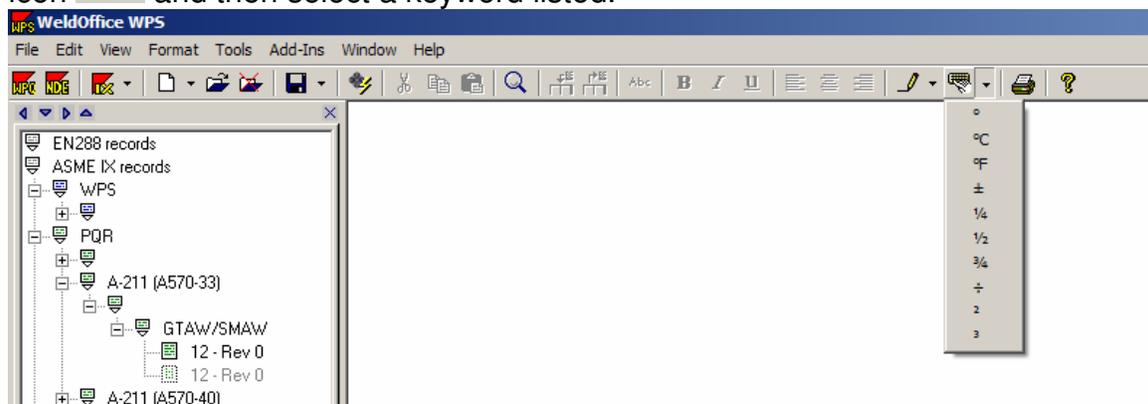
3. Enter the new keyword or character by using the Windows paste feature or by pressing the appropriate ASCII character code.

For more information on ASCII Characters, look up **Character Map** in the Windows help system.

4. To edit or delete a keyword, select the keyword by clicking on it and then click **Delete selected keyword** or **Edit selected keyword**.

5. When all of the desired changes have been made, press the **Accept** button.

6. To access the keyword list, click on the drop down arrow next to the keyword icon  and then select a keyword listed.



Showing how the user can access the keywords from the toolbar.

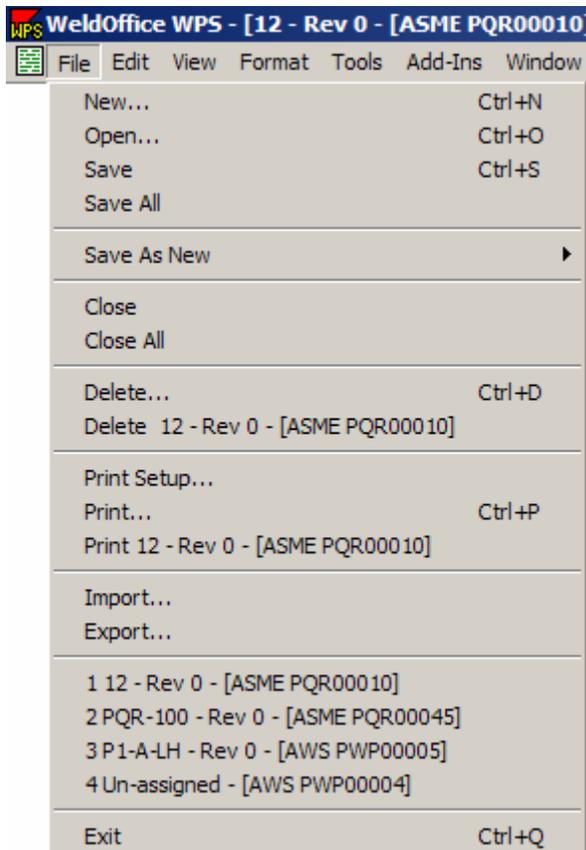
4.7 Toolbar Topics

The topics listed on the toolbar will be described in the sections to follow. The topics are functions under the headings of:

- File
- Edit
- View
- Format
- Tools
- Add-Ins
- Window

4.7.1 Subjects under the heading File

Each subject under File will be described briefly below and the further descriptions will be listed in sections below.



New: Clicking on this will open the Record Creation Manager where the type of document that is to be created can be picked. Click on the enter key and the blank document will open.

Open: Click on this to open the Record Selection Manager and then double click a record to open it.

Save: Click on this to save the current records changes.

Save All: Click on this to save all open records.

Save As New: Click on this to save an existing record as another type of record. For instance if the current open record is a PQR, click on **Save As New** to save it as a WPS. This creates a new record with the same applicable information.

Close: Click on this to close the current record.

Close All: Click on this to close all the records that are open.

Delete: Click on this to be taken to the Records Deletion Manager where the user can select the records to be deleted.

Delete XXXXXXXX: Deletes the current record.

Print Setup: Clicking on this brings up the Print Setup screen which the user can choose what printer, paper size and orientation.

Print: Brings up a report print manager, which the user can select the records to be printed.

Print XXXXXXXX: Prints the current record.

Import: This will bring up an import from window which will allow the user to select the files that will be imported.

Export: Brings up the records export manager, where the user can select the records to be exported.

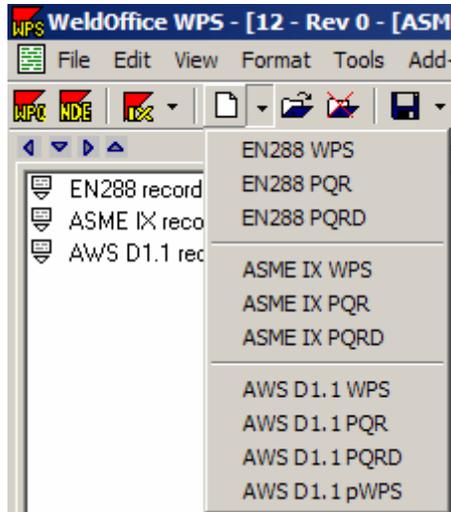
4.7.1.1 Create a New File

Create a new record from the toolbars or File option

There are three ways to create a new record:

1. Drop Down Arrow

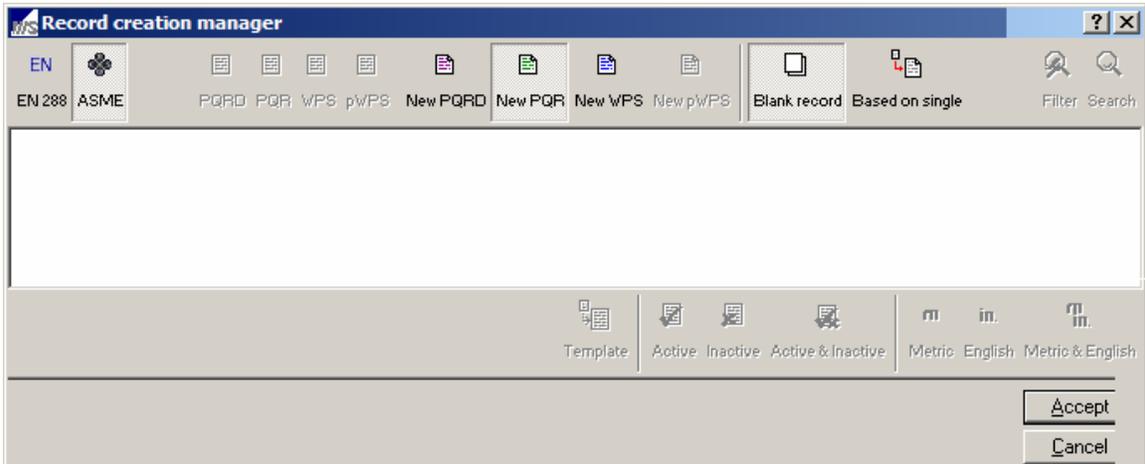
- Click on the drop down arrow next to the **New** icon .



- From the drop down menu, select the record to create.
- The New record will open.

2. New Icon

- Another way to open a new document is by clicking on the New icon . This will open the **Records Creation Manager**.



- From the **Records Creation Manager**, select the type of record to create.
- Select a blank report or a report based on other existing records.

(If the report is based on existing results, the manager will list all the applicable reports to choose from, click on one of these reports.)

- Press the **Accept** button when finished.

3. File - New

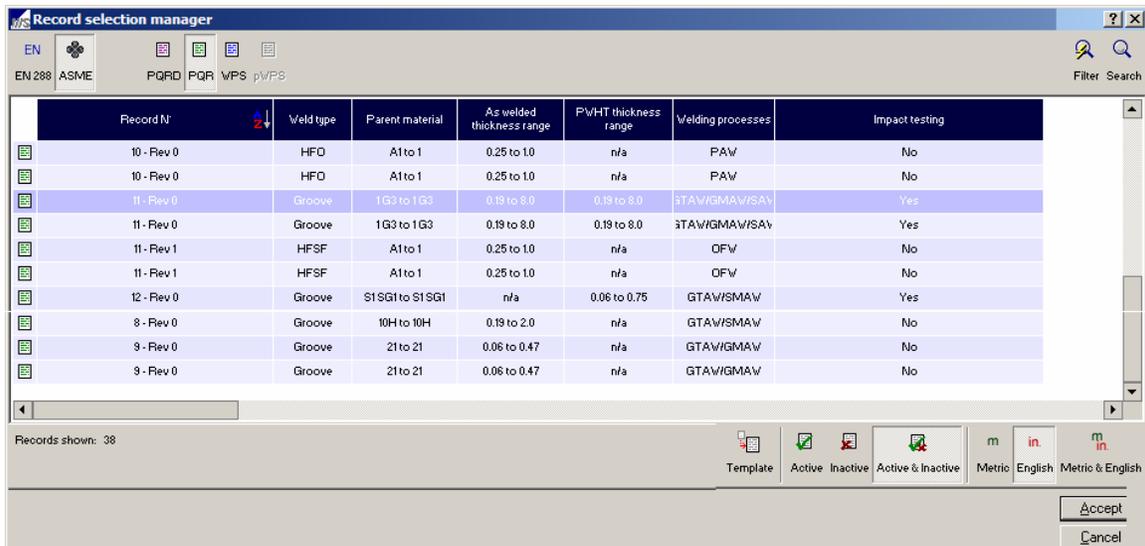
- Another way to open a new document is by clicking **File** and then **New**. This will open the **Records Creation Manager** (as shown above).
- From the **Records Creation Manager**, select the type of records.
- Select a blank report or a report based on other existing records.

If the report is based on existing results, the manager will list all the applicable reports to choose from, click on one of these reports.

- Press the **Accept** button when finished.

4.7.1.2 Open a File

1. Click on **File** and then **Open**. This will open the **Records Selection Manager**.



2. Select the code and record type to be opened.
3. Click on the record to be opened. If there are multiple records to open, hold down the **ctrl** key and select the other records.
4. Click the **Accept** button when finished.

4.7.1.3 Save Current Record

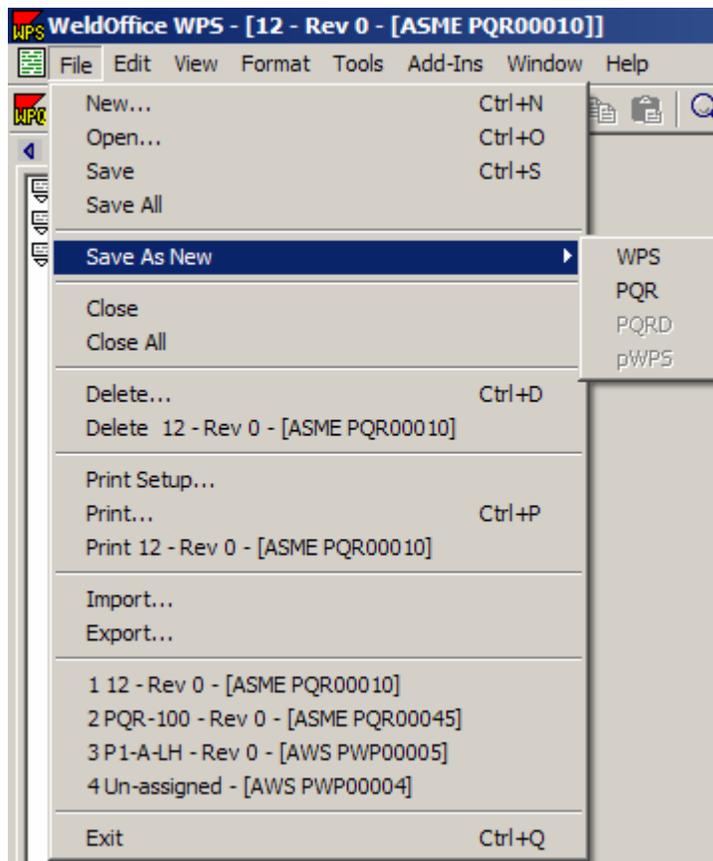
1. Click on **File** and then **Save**.
2. *WeldOffice*[®] *WPS* will save the current record. (There will not be any windows that open during the saving process)

4.7.1.4 Save All Open Records

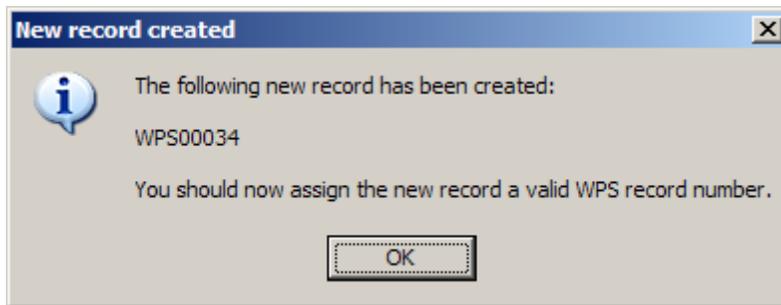
1. Click on **File** and then **Save All**.
2. *WeldOffice®WPS* will automatically save all the records that are open. (There will not be any windows that open during the saving process)

4.7.1.5 Save as New Record

1. Click on **File** and then **Save as New**.



2. Click on a record type. This will automatically copy pertinent information from the old record to the new record.
3. The **New Record Created** screen will pop up showing the user what the file name is and that it should be changed.



4. Click on the **Ok** button.

4.7.1.6 Close Report

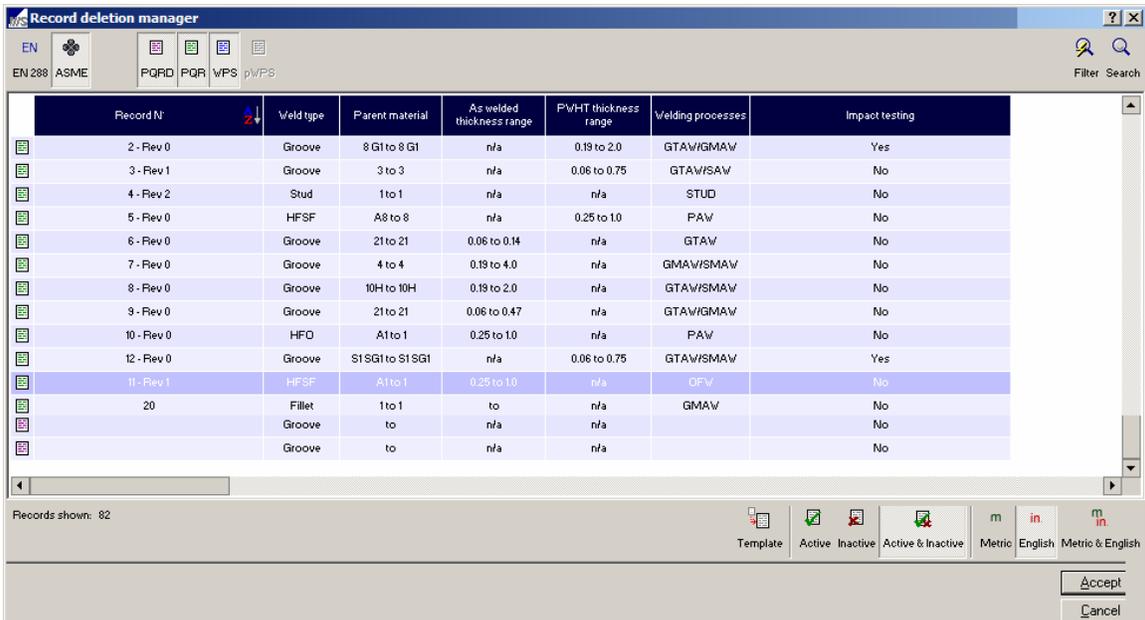
1. Click on **File** and then **Close**.
2. The program will close the current report only.

4.7.1.7 Close All

1. Click on **File** and then **Close All**.
2. The program will close all reports that are open.

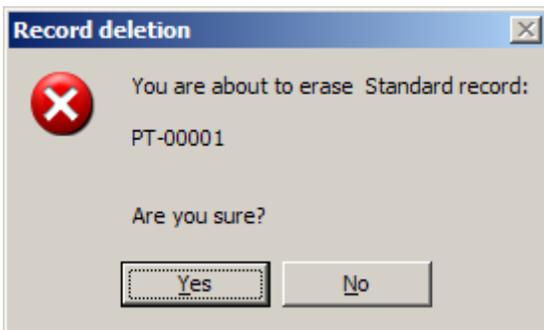
4.7.1.8 Delete a Report

1. Click on **File** and then **Delete**.
2. The **Report Deletion Manager** will open.



3. Click on the record to be deleted. If there are several to be deleted, hold down the **ctrl** key and select the other records. Click **Accept**.

4. The user will be prompted by a **Record Deletion** Screen.



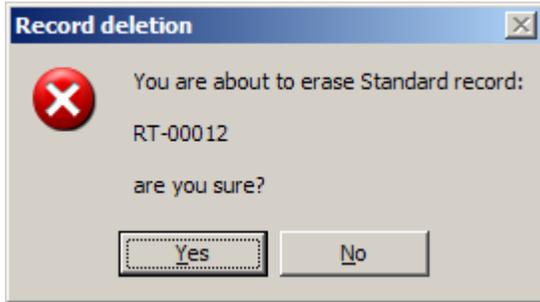
5. Click **Yes** to proceed with the deletion.

6. Close the **Record Deletion Manager** screen when finished deleting reports.

4.7.1.9 Delete Current Report

1. Click on **File** and then **DeleteXXXXX**. The current file name will be next to the delete, for instance Delete AWS-00012.

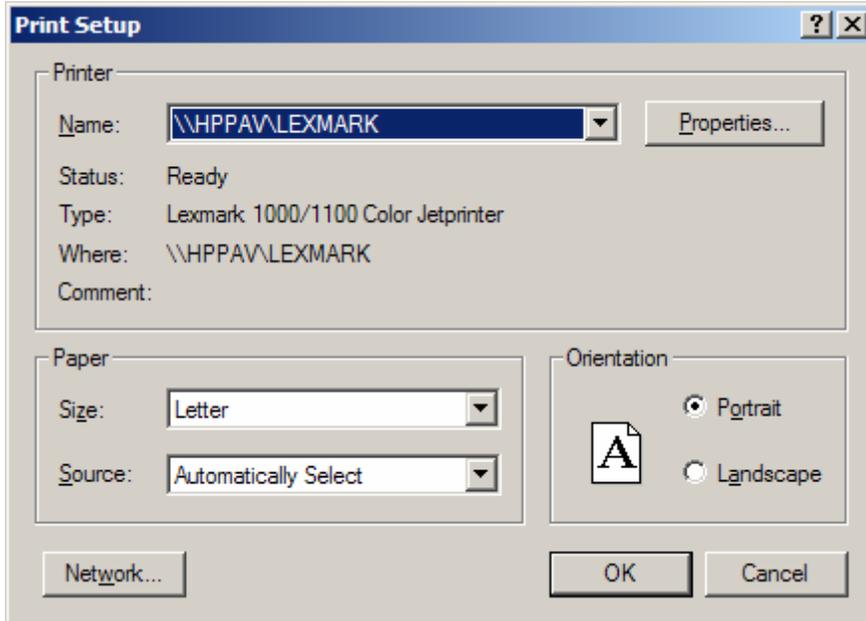
2. The user will be prompted by the **Record Deletion** screen.



3. Click **Yes** to proceed with the deletion.

4.7.1.10 Print Setup

1. Click on **File** and then **Print Setup**.

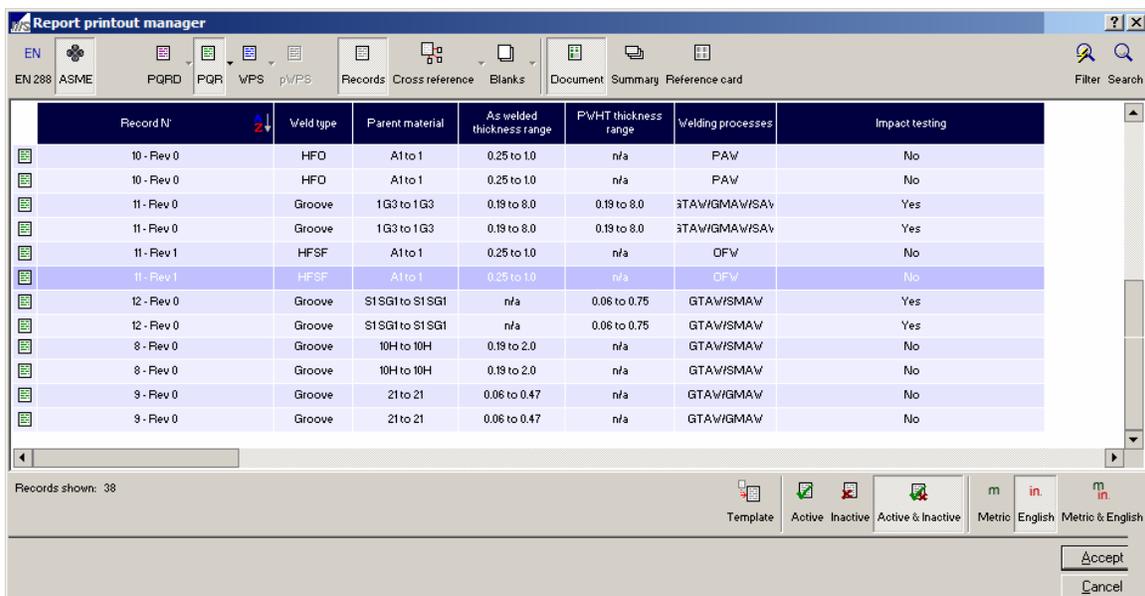


2. The **Print Setup** Screen will appear.
3. Click on the drop down arrow next the **Name** of the printer to select a different printer. (The printers need to be installed before attempting to go through this setup.)

4. Click on the **Properties** button to see the properties of the printer selected.
5. Choose the size of the paper. Click on the drop down arrow next to the paper size box to see the other options available.
6. Choose the source of the paper. If the printer selected has more than one tray, select which tray or let it be automatically selected. Click on the drop down arrow next to the paper source box to see the other options available.
7. Determine if the orientation of the paper should be portrait or landscape. Click on the word **Portrait** or **Landscape** to select either one.
8. If the user is on a network, click on **Network** which will open a **Connect to Printer** screen which will allow the user to connect to a network printer.
9. Click the **OK** button when finished.

4.7.1.11 Print a Record

1. Click on **File** and then **Print**.
2. This will open the **Report Printout Manager** screen.



3. Click on the record to be printed. (If there are multiple records to be printed, hold down the **ctrl** key and select the other records). Click on **Accept** when finished and the record(s) will be sent to print at the default printer.

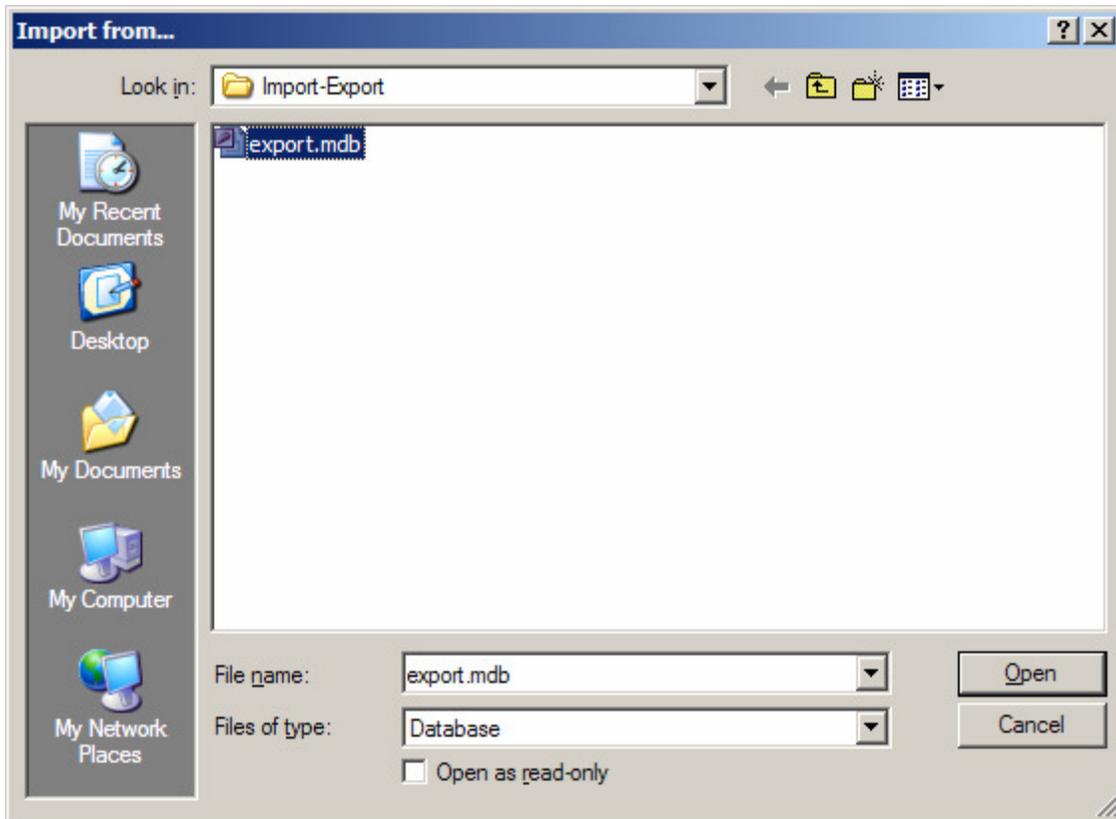
4.7.1.12 Print Current Record

1. Click on **File** and then **Print xxxx**.
2. This will print the current record to the default printer.

4.7.1.13 Import a Report

Importing and exporting in the WeldOffice® software is used to share records between computers that are not utilizing the networking capabilities.

1. Click on **File** and then **Import**.
2. The **Import** screen will appear. Select the location of another database to import. Importing may only be done with Access database files exported from other WeldOffice® software installations.

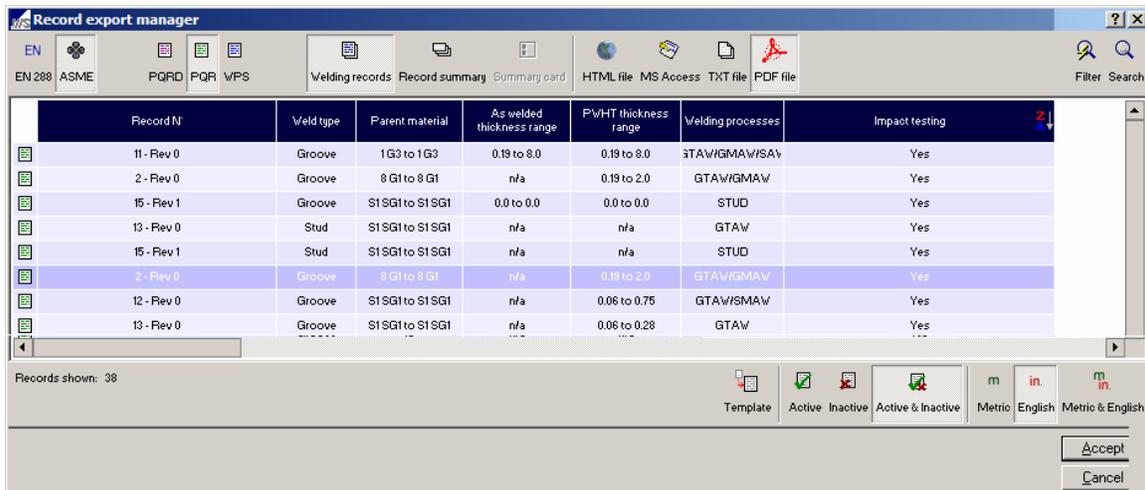


3. Click **Open** in the **Import from** box after the file has been selected.
4. Importing bars will appear showing the user the progress of the import.
5. When the import progress bars disappear, the import will be complete. To open the imported files, click on **File** and then **Open** and double-click on the new record(s).

4.7.1.14 Export a Report

Importing and exporting in the WeldOffice® software is used to share records between computers that are not utilizing the networking capabilities. Additionally, the export feature is also used to publish the records to an HTML format for web display, ASCII Text format for a simple data display, or PDF.

1. Click on **File** and then **Export**.
2. The **Report Export Manager** will open.



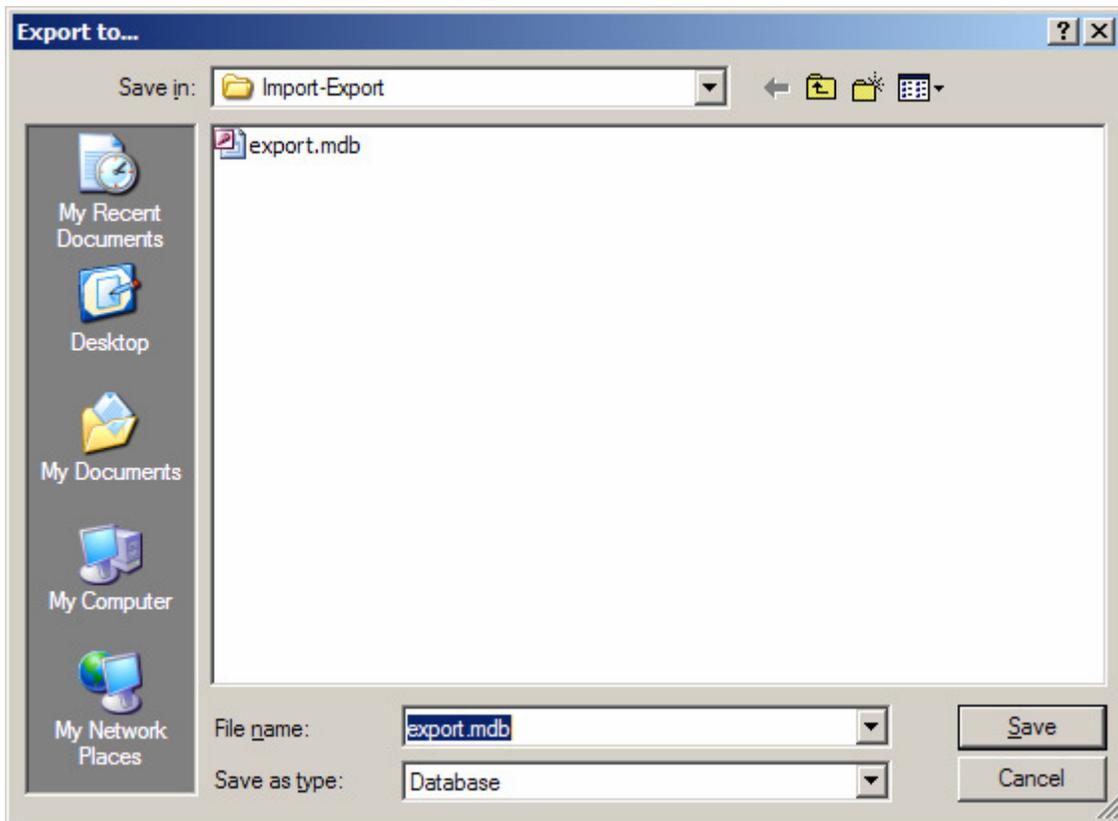
3. Select the type of file to export the report as: HTML file, MS Access, TXT file, or PDF file.

Note: PDF exporting is only available if the software detects a printer on the system called Acrobat PDF Writer

4. Select the report to export by double clicking on it or click on it and then click on **Accept**. (To select several reports, hold down the **ctrl** key and select the other reports. Click on **Accept** when finished.)

5. The user will be prompted to give the file a name and a location.

It is suggested that the user make an Import-Export folder under the WeldOffice WPS directory and then use "export" as the filename of the database to export. This way there is no confusion on what database to import later. Problems can occur when the master database is accidentally imported on to itself.

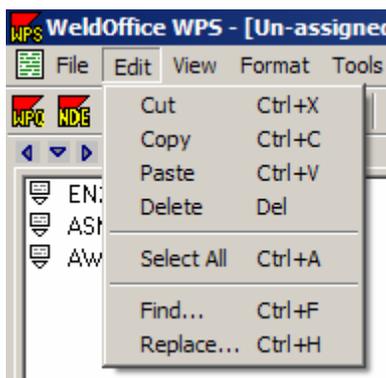


6. Click **Save** after choosing a name and location.

7. Bars will appear showing the progress of the export. When these bars disappear, the export was completed.

4.7.2 Subjects under Edit

The edit menu allows the user to easily work with the text entered into the documents. Each subject under Edit will be described briefly below.



Cut: Removes the selected text and puts it on the clipboard for use at a later time.

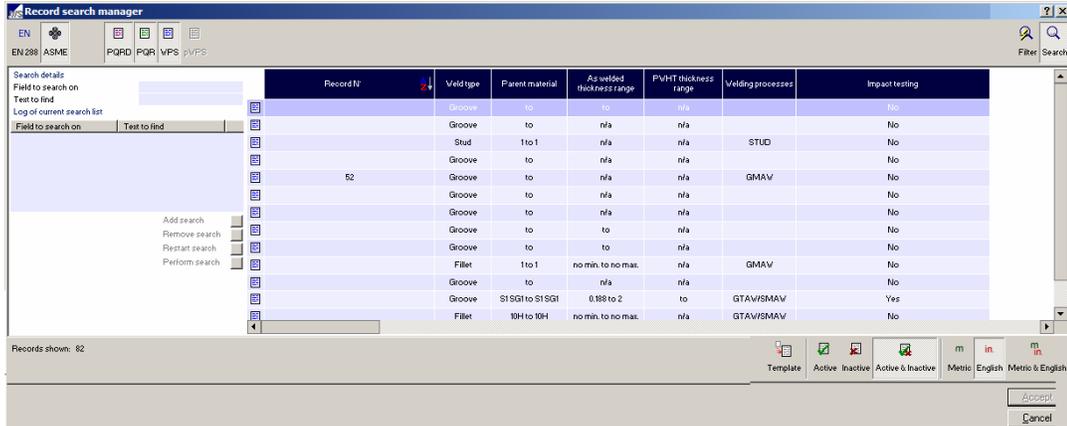
Copy: Copies the selected text and puts the copy on the clipboard for use at a later time.

Paste: Click on this to paste the last item that was cut or copied to the clipboard.

Delete: Erases the selected text.

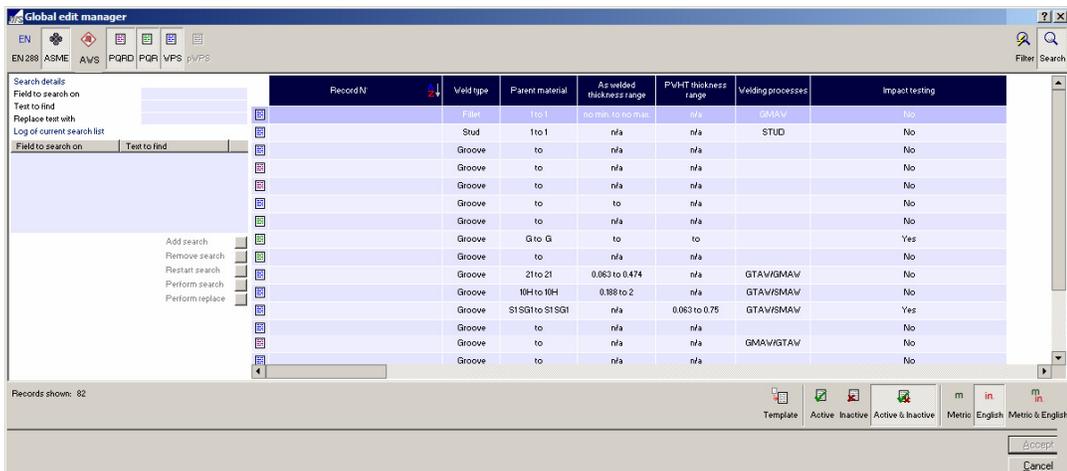
Select All: This feature is only applicable on the additional information page. Select a small quantity of text and then click the **Select All** to select all the text on that page.

Find: This opens the **Record Search Manager** which allows the user to type in the words, letters, or numbers that they would like to find.



- Click in the **Field to search on** and select the field from the drop down menu.
- Then, click on **Text to find** and type in the text to search for.
- Click on **Add search** to add the search parameters to the description field. This will add a line in the description field.
- Click on **Perform search** to run the search.
- The applicable documents will be brought up.

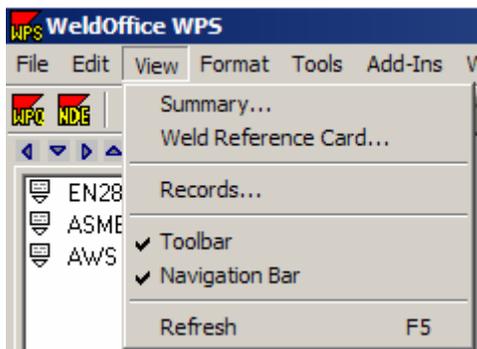
Replace: This opens the **Global Edit Manager** screen which allows the user to type in the word to search for and then replaces it with the specifications provided. **This will replace ALL of the text found with the replacement text. It is NOT RECOMMENDED that this feature is used.**



- Click in the **Field to search on** and select the field from the drop down menu.
- Then, click on **Text to find** and type in the text to search for.
- Click on **Replace text with** and type in the replacement text.
- Click on **Add search** to add the search parameters to the description field. This will add a line in the description field.
- Click on **Perform replace** to replace all the text matches with the new text.

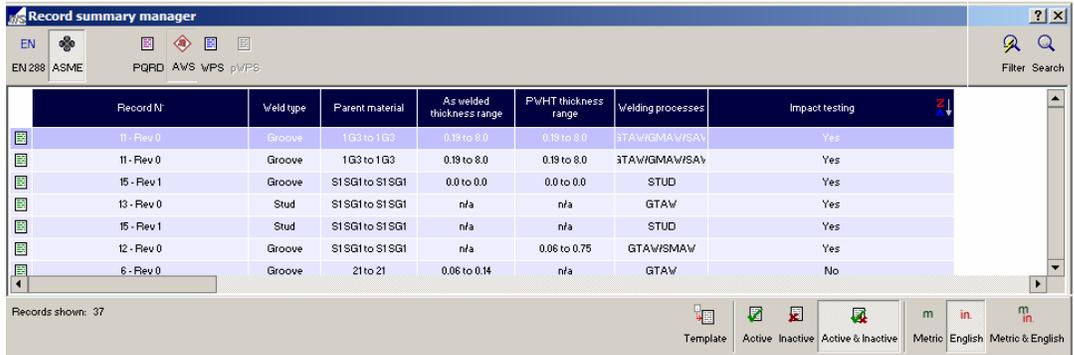
4.7.3 Subjects under View

Each subject under View will be described in sections below.

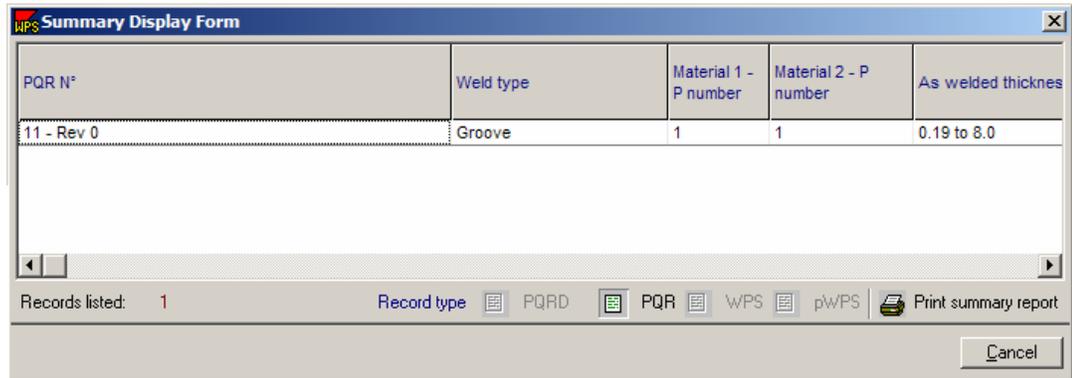


4.7.3.1 Summary

Opens the *Record Summary Manager* and the user can click on any of the reports to open them. (To select several, hold the ctrl button down and select the others.) Click Accept when finished.

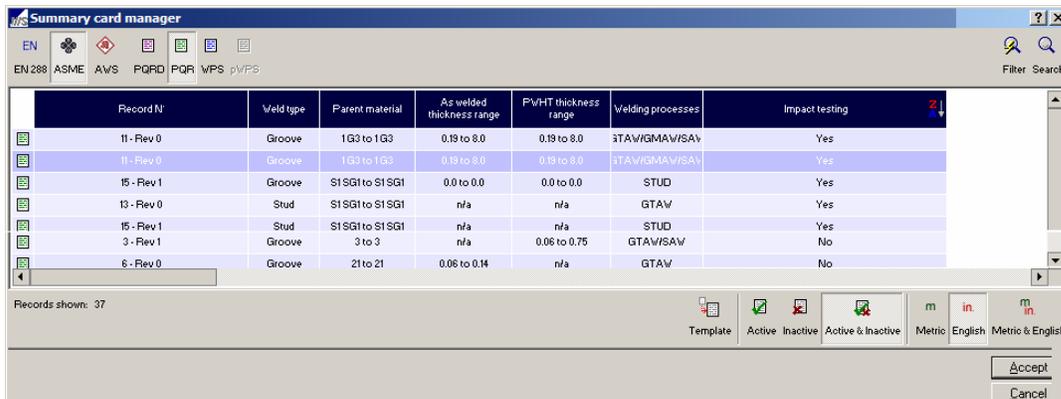


A Summary Display Form will open showing all of the chosen records and a brief summary of weld type, material type, thicknesses, etc.

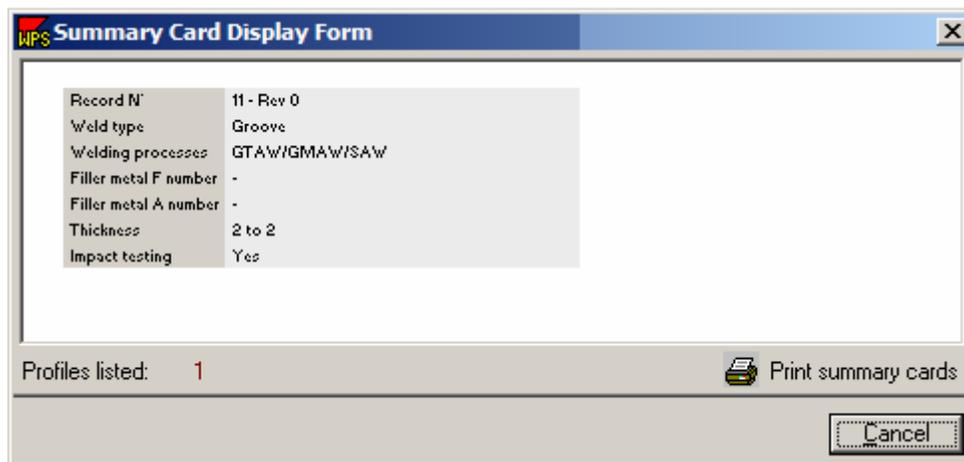


4.7.3.2 Weld Reference Card

Opens the Summary Card Manager and the user can click on any of the reports to open them. (To select several, hold the ctrl button down and select the others.) Click Accept when finished.



The Summary Card Display Form will open.



4.7.3.3 Records

Opens the Records Selection Manager and the user can double click on any of the reports to open them.

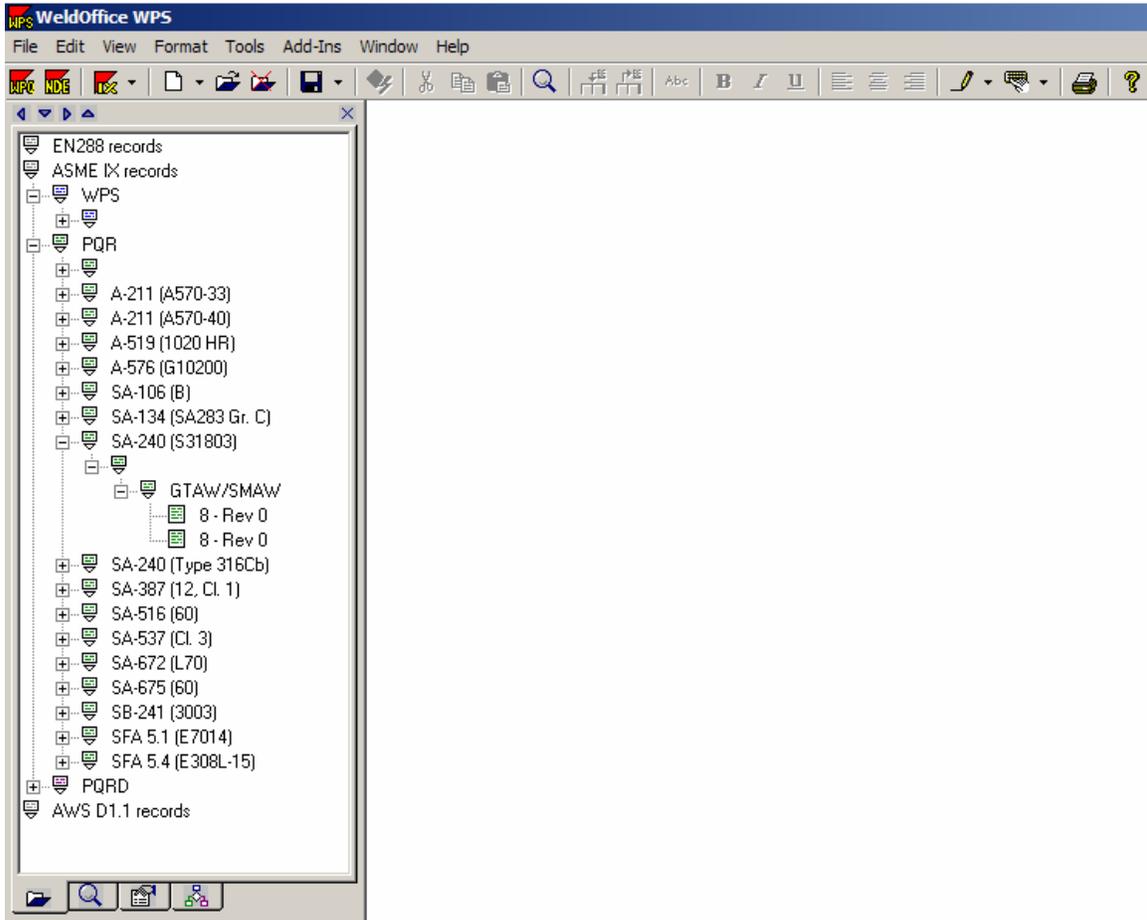
4.7.3.4 Toolbar

Toggle this switch on to off to show/hide the tool bar along the top.

4.7.3.5 Navigation Bar

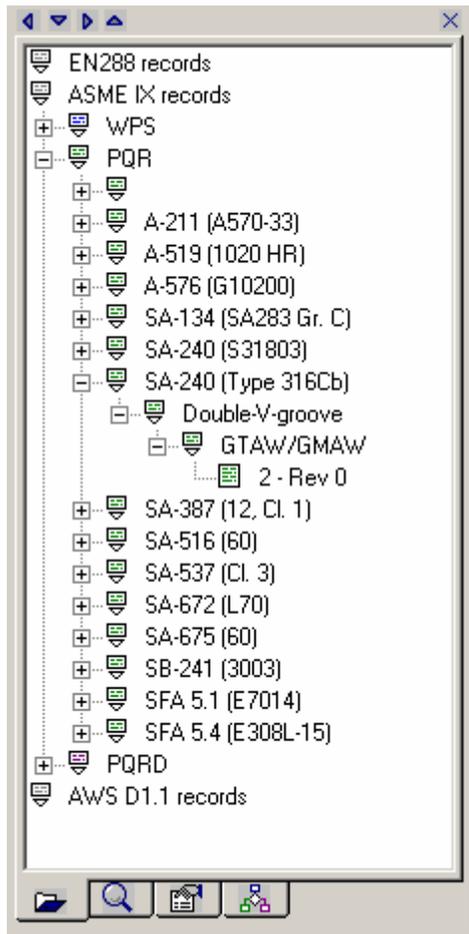
Toggle this switch on and off to show/hide the navigation bar.

1. To view the Navigation Bar, click on View then Navigation Bar. (*WeldOffice® WPS* should default to starting with the Navigation Bar open and on the left hand side of the screen, depending on the operating system being used.)



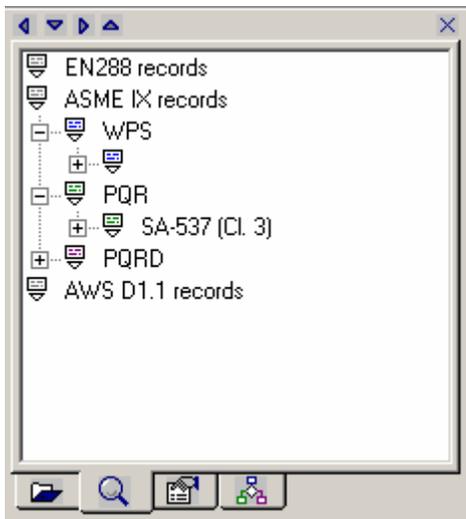
2. To move this bar to another location, use the *arrow* buttons on top of the bar to move it to the bottom ▾, top ▲, or right ► hand side.

3. At the bottom of the bar, click on the first tab  to show the Record Selection List. This provides a quick list of the records in the system. If a grouping sequence other than the one provided is desired, the Navigation Bar grouping may be changed in the Options - Default Settings (4.2.1.10). The grouping in the example below is by 1- Material type, 2-Joint type, 3-process(es), and 4-record number.



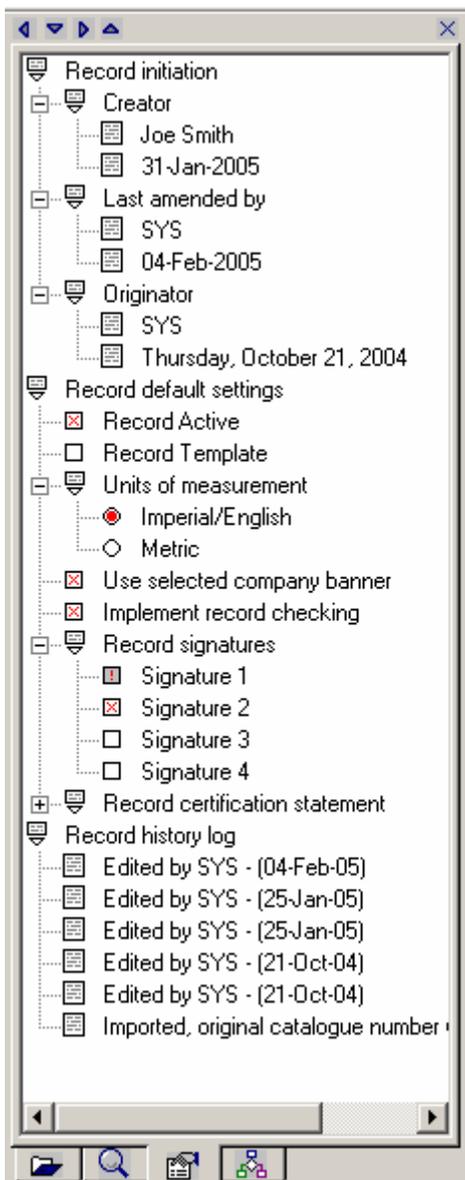
Record Selection List

4. Click on the second tab  to show the **Record Search Results Selection List**. The list of records that will be displayed are the records meeting the criteria of the last search performed.



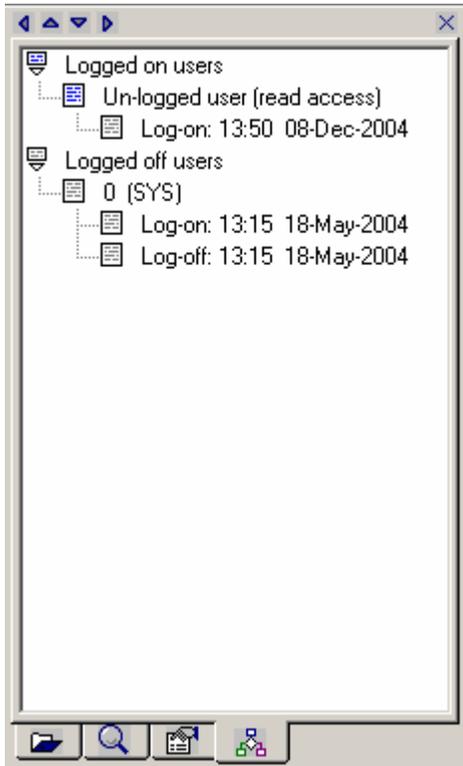
Record Search Results

5. Click on the third tab  to show the **Current Record Properties**. This tab displays several settings and properties of the record that is currently in view. Changes to these settings may be necessary in certain circumstances and only apply to the displayed document. For example: Record Template may need to be checked in order to turn a new record into a template. Implement record checking allows control over the code checking feature. Turn this setting off if it is desired to keep the software from automatically entering code information into the records.



Current Record Properties

6. Click on the fourth tab  to display the **Network Settings**. This will show all the users that are currently logged on and all of those that are currently logged off of the network.



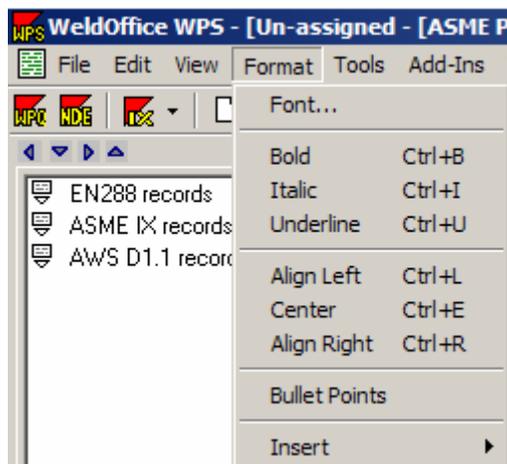
Network Properties

4.7.3.6 Refresh

This rebuilds the navigation bar to the current reports.

4.7.4 Subjects under Format

Each subject under Format will be described below.



The subjects under Format only apply to text added to the Additional Field page on any record.

Font: Opens the Font screen where the user can change the selected text font, size, style, effects and script.

Bold: Changes the selected text or the location of the cursor bold formatting.

Italic: Changes the selected text or the location of the cursor to Italic formatting.

Underline: Changes the selected text or the location of the cursor to underline formatting.

Align Left: Aligns the paragraph (or line of text) to the left of the page.

Center: Aligns the paragraph (or line of text) to the center of the page.

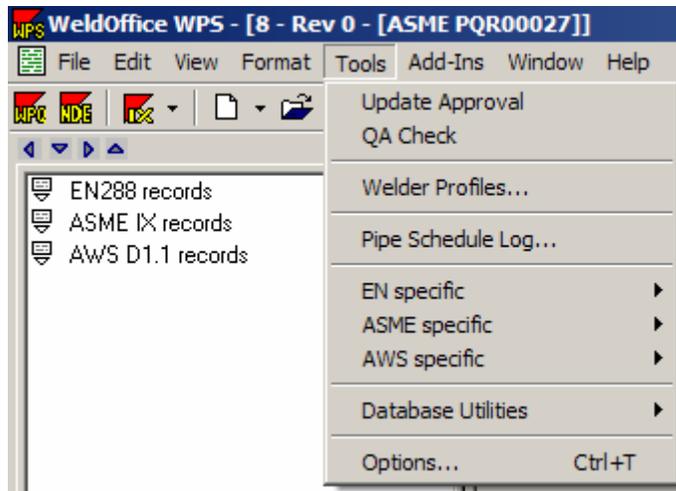
Align Right: Aligns the paragraph (or line of text) to the right of the page.

Bullet Points: Inserts a bullet point at the beginning of the line.

Insert: Allows the user to insert RTF or text files.

4.7.5 Subjects under Tools

Each subject under Tools will be described below.



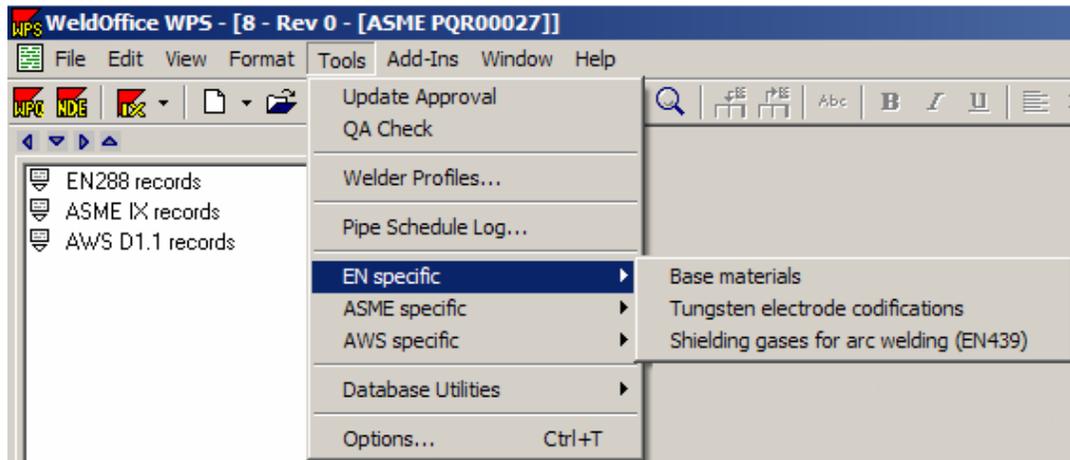
Update Approval: This feature checks the code to make sure that all of the qualified ranges are correct and makes necessary changes if needed.

QA Check: For those users who do not utilize the automatic code checking, this button will allow them to code check a document.

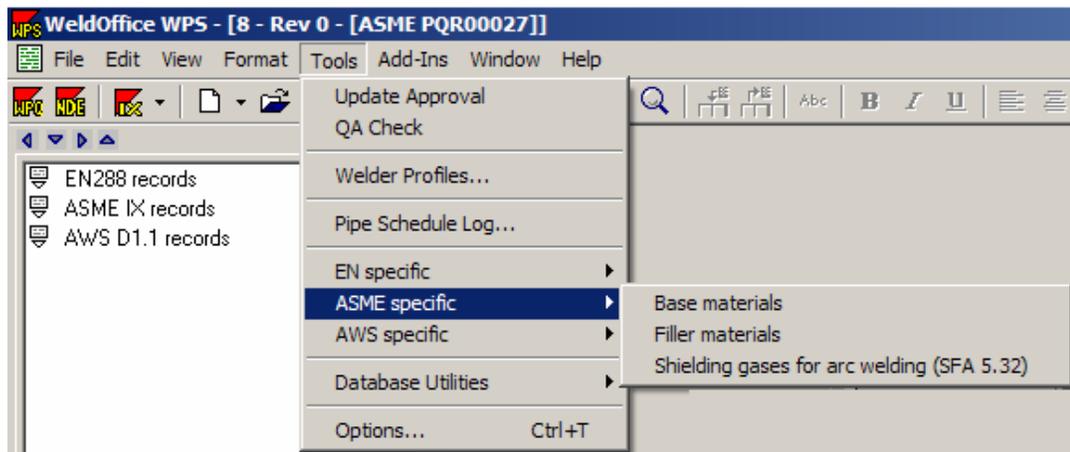
Welder Profiles: Allows the user to view the welders in the database. From here the user can add welder profiles or pull expiration reports.

Pipe Schedule Log: Opens the Pipe Schedule Log database.

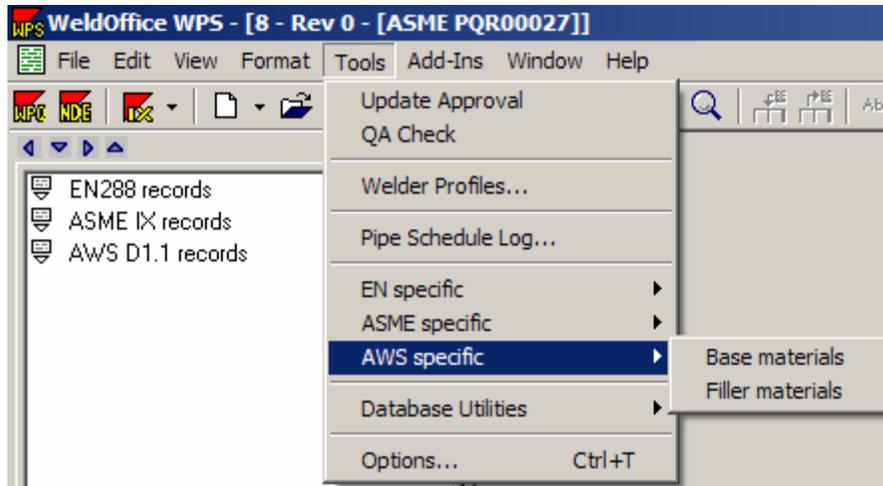
EN Specific: Allows the user to look at the base materials, tungsten electrodes codifications and shielding gases for arc welding specific to EN codes.



ASME Specific: Allows the user to look at the base materials, filler materials and shielding gases for arc welding specific to ASME codes.



AWS Specific: Allows the user to look at the base materials and filler materials specific to AWS codes.

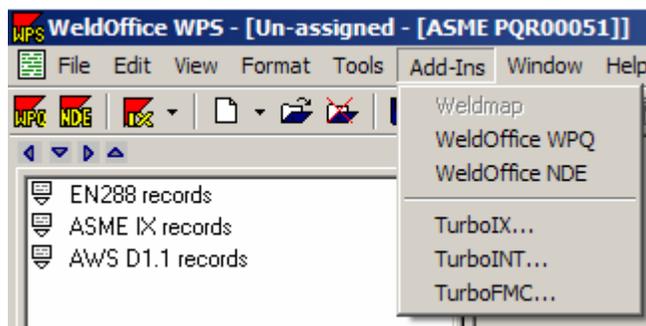


Database Utilities: Click on this heading to be able to compact or backup the database and also be able to remove record locks. This may only be an option for the system administrator.

Options: Click on this heading to be taken to the option screen. Within the option screen the user will be able to setup program directories, setup security settings, change any default settings, setup selection lists, amend menus, add/delete/edit notes, and add/delete/edit keywords.

4.7.6 Subjects under Add-Ins

The Add-Ins menu allows the user to easily open another WeldOffice® component simply by selecting a module from the drop down list of installed WeldOffice® components. A brief description of the modules is listed below.



WeldMap™: WeldMap™ is a production weld management software for full company-wide monitoring and traceability of fabrication information. This option should be available soon. To find out more information go to <http://cspec.com/csp-coo.htm>

WeldOffice® WPQ: Click on this heading to open *WeldOffice® WPQ* (if purchased). If it has not yet been purchased and installed, the area will be grayed out. *WeldOffice® WPQ* automatically creates and manages multi-code welder qualification records (WPQ). To find out more information, go to <http://cspec.com/csp-wql.htm>.

WeldOffice® NDE: Click on this heading to open *WeldOffice® NDE* (if purchased). If it has not yet been purchased and installed, the area will be grayed out. *WeldOffice® NDE* automatically creates and manages non destructive evaluation reports (NDE). The format of the screens which are used for data entry and viewing, and the hardcopy printouts are based on extensive research throughout the industry to develop a standard layout that fulfills any application of NDE. Included in *WeldOffice® NDE* are reports for radiographic, ultrasonic, liquid penetrant and magnetic particle examination, as well as a general report which can be used for other types, such as visual inspection or eddy current examination. To find out more information, go to <http://cspec.com/csp-ndt.htm>

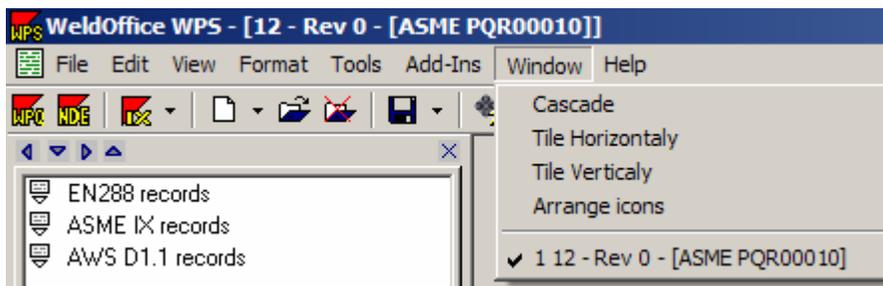
Turbo-IX™ : Click on this heading to open Turbo-IX™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-IX™ ensures qualified welding procedure specifications meet ASME IX code requirements. To find out more information, go to <http://cspec.com/csp-tix.htm>.

Turbo-INT™: Click on this heading to open Turbo-INT™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-INT™ instantly resolves code disputes involving welding procedures, welder qualifications and other code issues. To find out more information, go to <http://cspec.com/csp-int.htm>.

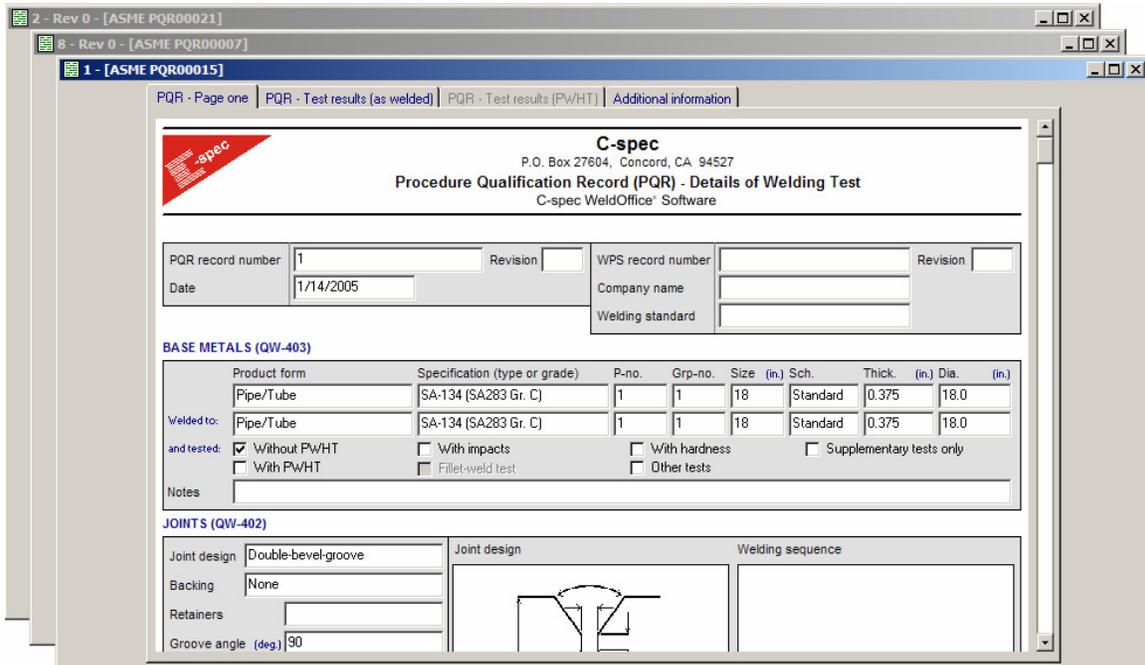
Turbo-FMC™: Click on this heading to open Turbo-FMC™ (if purchased). If it has not yet been purchased and installed, the area will be grayed out. Turbo-FMC™ answers welding and brazing filler metal questions for over 10,000 filler metal trade-names. To find out more information, go to <http://cspec.com/csp-fmc.htm>.

4.7.7 Subjects under Window

Each subject under Window will be described below.

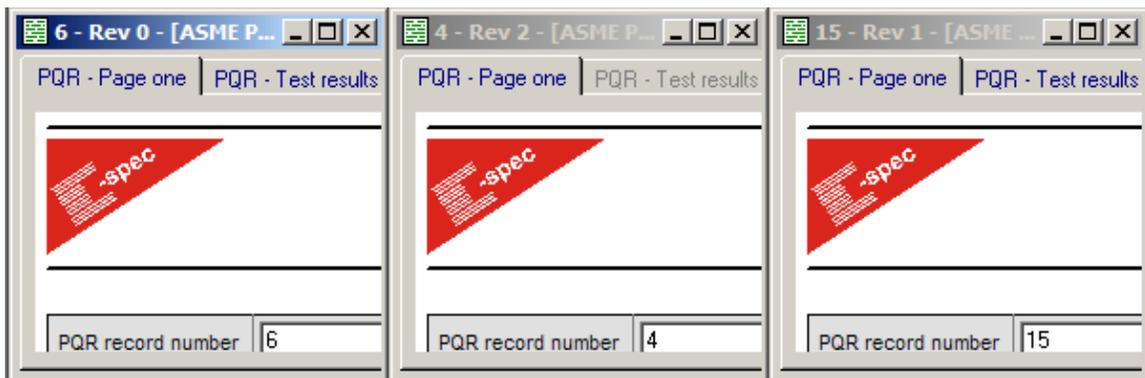


Cascade: This option stacks the open records in a waterfall shape.



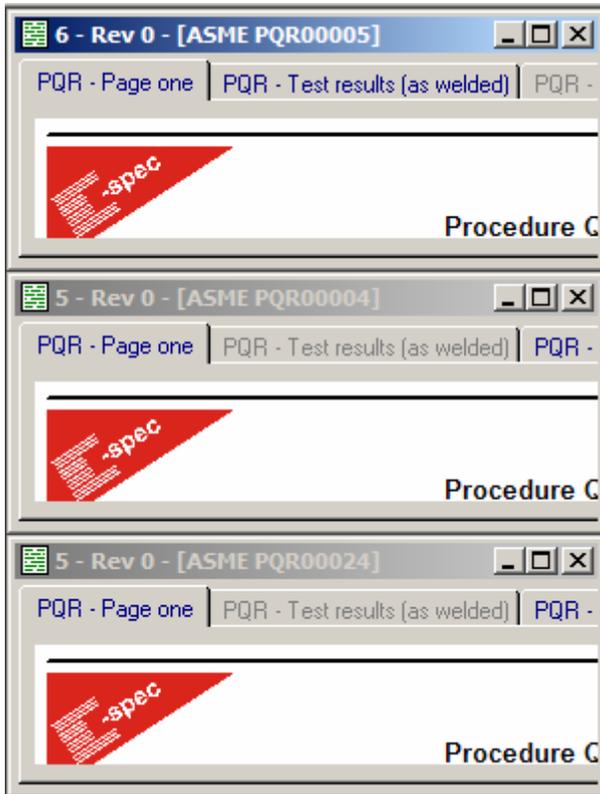
Showing the Cascade window effect.

Tile Horizontally: This option stacks the reports horizontally in the order they were opened.



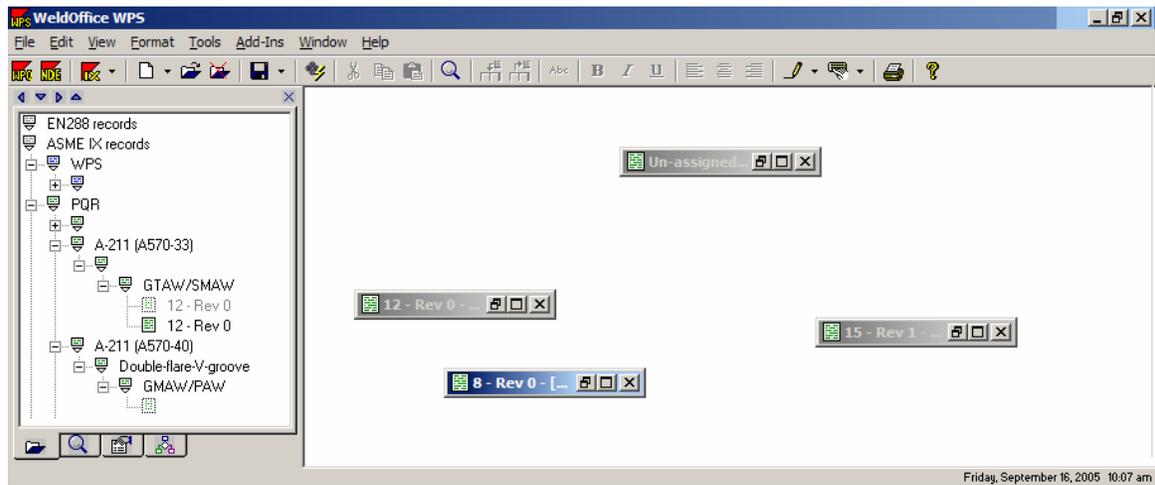
Showing the Horizontal window effect.

Tile Vertically: This option stacks the reports vertically in the order they were opened.

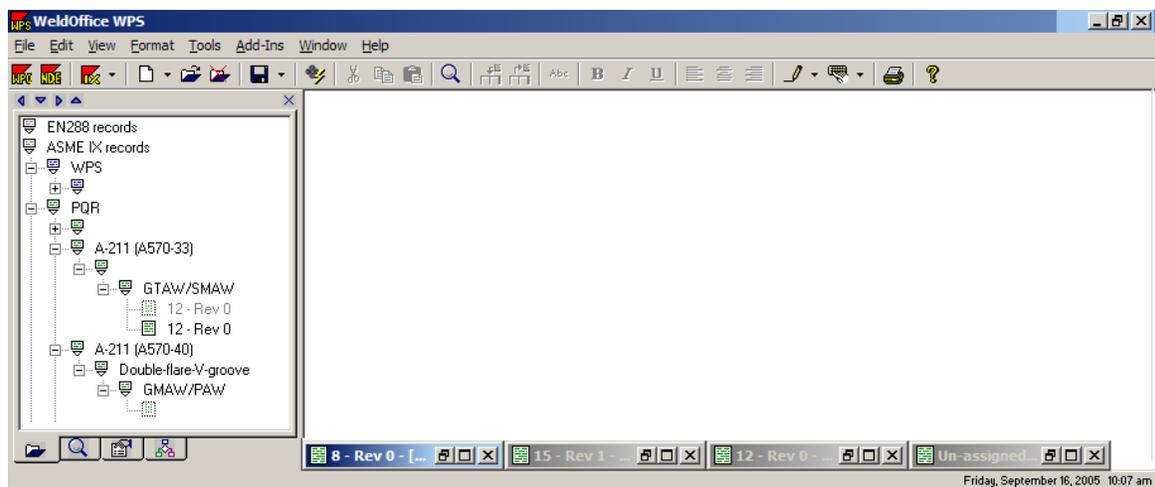


Showing the Vertical window effect.

Arrange Icons: Arranges the records as icons in the order they were opened.



Showing the minimized icons of the records before clicking on Arrange Icons.



Showing the Arrange Icon effect.

4.8 Toolbar Icons

Shown below are the icons that can be viewed along the top row of *WeldOffice® WPS*. A description of icons is listed below.



Icon	Description
	WeldOffice® WPQ: Click on this icon to open the <i>WeldOffice®</i> WPQ Program to create welder performance qualifications, track welders, etc.
	WeldOffice® NDE: Click on this icon to open the <i>WeldOffice®</i> NDE Program to create radiographic, ultrasonic, radiography, penetration and magnetic particle reports, etc.
	Turbo-IX: Click on this icon to open the Turbo-IX Program which lets the user quickly and easily find any information required to qualify and to review welding procedures for ASME Section IX code compliance.
	New Document: Click on this icon to open a new document through the records creation manager. Or click on the down arrow to the right of the icon, and the list of different reports will appear, simply click on the report to be created.
	Existing Documents: Click on this icon to be taken to the records selection manager. Double click on an existing document in the list to open it.
	Close Document: Click on this icon to close the open document.
	Save: Click on this icon to save the current document. Or, click on the drop down arrow to save the document as another type of report.
	Generate Range of Approval: Generates a range of approval based on welding conditions
	Cut: Click on this icon to cut the current selection of text, putting it on the clipboard for later use.
	Copy: Click on this icon to copy the current selection of text to the clipboard.

	Paste: Click on this icon to paste the item on the clipboard into the document where the cursor is located.
	Find: Click on this icon to open the search page.
	Add Column: The user can have up to five different sizes of filler wire. Click in the Filler Metal Size field and the click on the Add Column icon to add another column, continue with this procedure until the sizes are all documented.
	Delete Column: After adding columns to the Filler Metal Size field, the user can delete them simply by clicking on the delete column icon.
	Font: Click on this icon to change the font type, style, size, color, etc. The font can only be change on text added to the additional information page.
	Bold: Click on this icon to make the current selection of text bold in appearance.
	Italic: Click on this icon to make the current selection of text italicized in appearance.
	Underline: Click on this icon to make the current selection of text underlined.
	Left Justification: Click on this icon to make the current selection of text justified to the left hand side of the page.
	Center Justification: Click on this icon to make the current selection of text justified to the center of the page.
	Right Justification: Click on this icon to make the current selection of text justified to the right hand side of the page.
	Note: Click on this icon to add/edit/delete a note. A note is something that the user will have to add to many reports and this features allows the statements to be stored and easily inserted each time they are needed. Click on the down arrow to the right of the note icon to see a list of previously defined notes, and click on the one to be inserted.
	Keywords: Click on this icon to add/edit/delete a keyword, which can be a symbol or statement. A keyword is something that will be added to many reports and this features allows the user to store the keywords and easily insert them each time they are needed. Click on the down arrow to the right of the note icon to see a list of previously defined keywords, and click on the one to be inserted.

	Print: Click on this icon to print the open document. This will use the default printer. If changes need to be made to the printer go through <i>file-print setup</i> from the main header.
	Help: Click on this icon to open the help files.

4.9 Creating Records

Using the Record Creation Manager

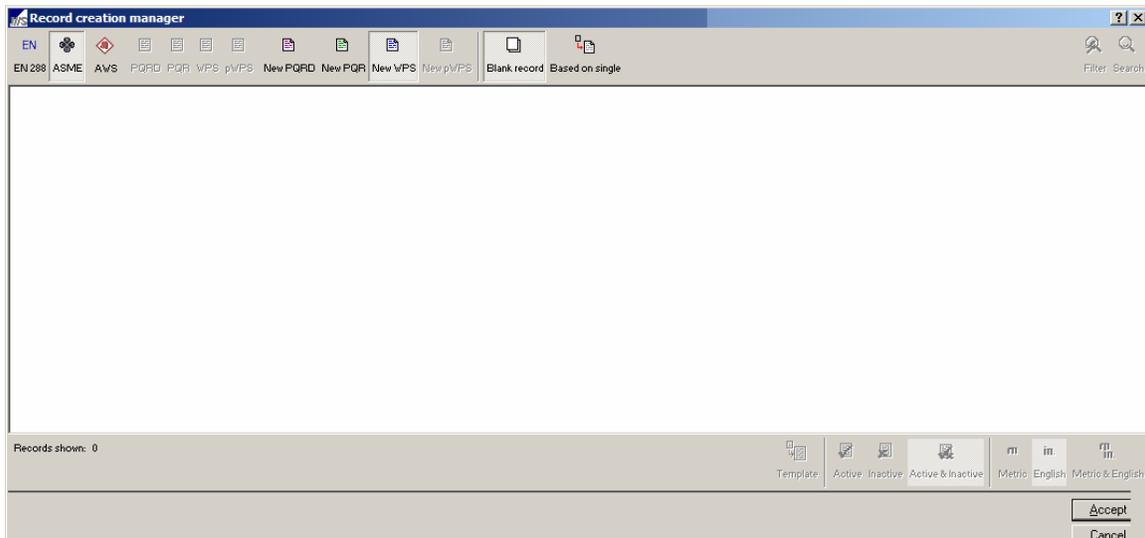
There are three ways to create a new record:

1. Create a new record from the Record Creation Manager
2. Create a new record from the New icon
3. Create a new record from the Drop Down Menu

Each of these will be discussed in sections to follow.

4.9.1 Create a new record from the Record Creation Manager

1. To open the Record Creation Manager, click on **File** and **New**.



2. In the upper left hand corner, select the standard for the new record.
3. Then select the new record type.
4. Then select what the new record will be created from.
 - **Blank:** To create a blank (empty) record.

- **Based on Single:** To create a new record base on the data from another record.
- **Based on Multiple:** To create a new record based on the data from multiple records (only applicable when creating a WPS off of multiple PQRs)

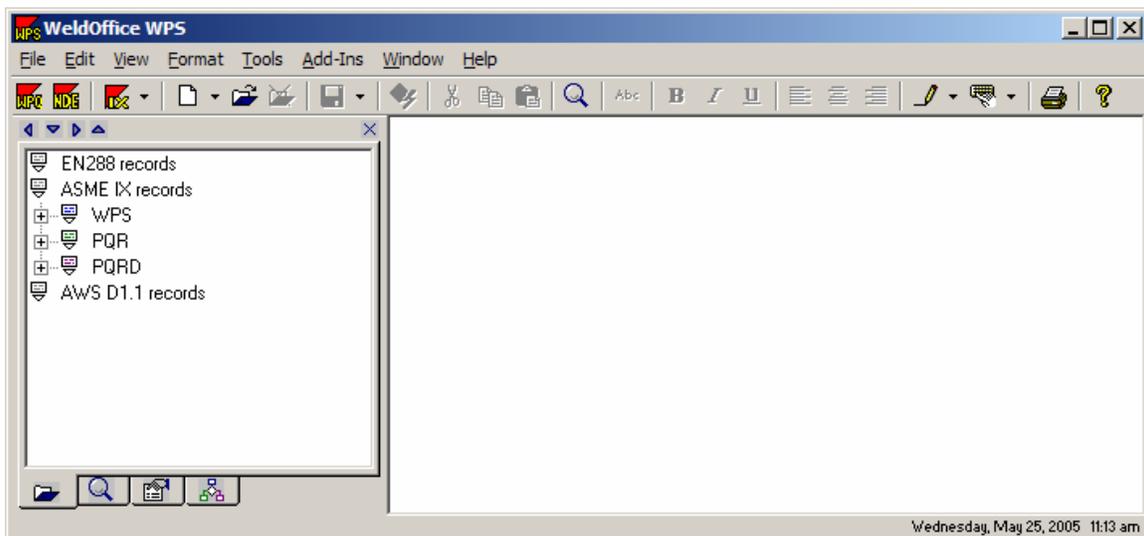
5. If creating a record off of one or more other records, select the desired record form the list.

- To select multiple records, hold the **ctrl** key down while clicking on each of the desired records.
- Use the filter and search options to narrow down the list of records to choose from when basing the new record off of existing data.

6. Press the accept button in the lower right hand corner to create the record.

4.9.2 Create a new record from the New icon

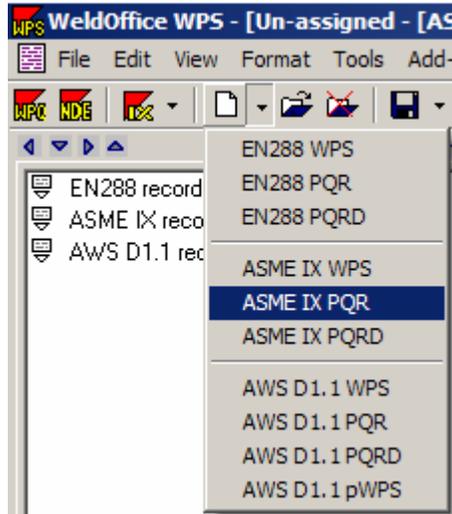
1. From the main screen, click on the New icon .



2. This will open up the *Record Creation Manager*. Follow the steps listed above.

4.9.3 Create a new record from the Drop Down Menu

1. From the main screen, click on the drop down arrow next to the New icon



2. Select the type of document to be created. **Note:** This method will only create new blank records.

4.10 Qualifying a Procedure

Simplified Steps to Qualifying a Welding Procedure

In general, the qualification process of a welding procedure does not vary from one code/standard to another. *WeldOffice*[®] *WPS* has been designed to be as powerful and flexible as possible, so there are powerful document creation routines that the user can utilize.

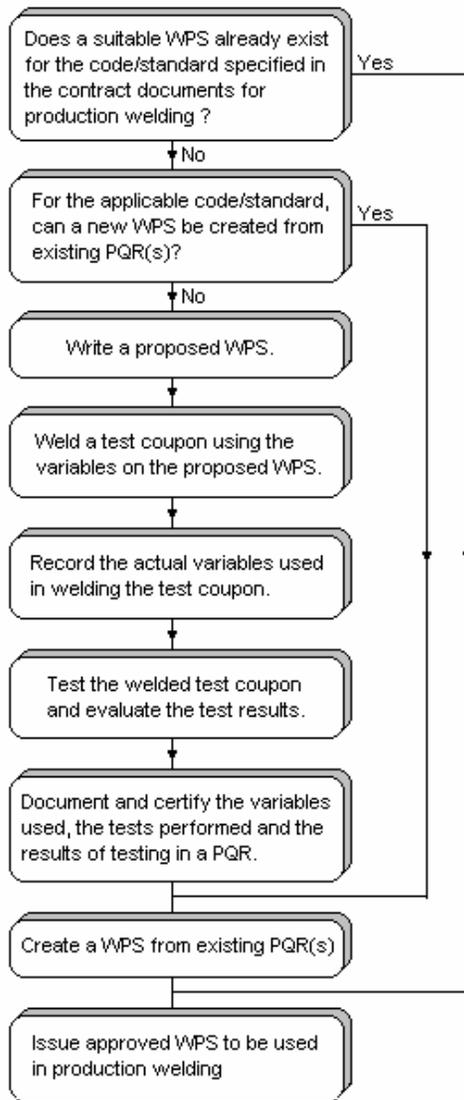
WeldOffice[®] *WPS* has an additional document type called a PQRD, or PQR - data collection sheet in addition to the standard WPS and PQR documents.

The PQRD serves two purposes:

- As a data collection sheet. When a PQRD is created within *WeldOffice*[®] *WPS*, the user is prompted to specify the welding process or processes to be used. The system then creates a tailored document. Only essential, supplementary essential and non-essential variables relevant to that process or combination of processes are displayed, so the PQRD acts as a check that the correct information has been supplied. The user can then print the (partially completed) PQRD, take it to the welding station and record the actual values from the welding test. These can then subsequently be entered into the PQRD on-screen.
- As a traceability document. The PQR only comprises a summary of the welding procedure test, but the PQRD form records all the welding conditions, pass by pass.

Creating a PQR automatically from a PQRD is simply a matter of clicking a button. *WeldOffice*[®] *WPS* automatically summarizes the welding conditions and transfers all relevant data to the new PQR form. Creating one or more WPSs from the PQR is also an automatic process with data transfer wherever possible.

The qualification process and associated *WeldOffice*[®] *WPS* functions can be described as follows:



1. Search *WeldOffice® WPS* for any WPS's which match the key variables
2. Search *WeldOffice® WPS* for any PQR which match the key variables
3. Print a blank PQRD
4. Record actual values on PQRD in *WeldOffice® WPS*
5. Create a PQR from the PQRD
6. Create the WPS(s) automatically from the PQR(s)
7. Sign the document within *WeldOffice® WPS*

WeldOffice® WPS can automate a great deal of the qualification process, helping to ensure that the relevant code requirements are met.

4.11 Create a PQRD

Procedure Qualification Record Data Sheet

What is a PQRD?

WeldOffice[®] *WPS* uses a new code-intelligent weld test data collection sheet (PQRD) to provide the user with directions and to allow the user to record the exact parameters used, pass by pass, during the procedure qualification test. Once this data has been inputted into *WeldOffice*[®] *WPS* in the PQRD form, it can then generate the PQR automatically for the user. The use of the PQRD is entirely optional, however this invaluable tool will keep track of the entire qualification history, including material traceability.

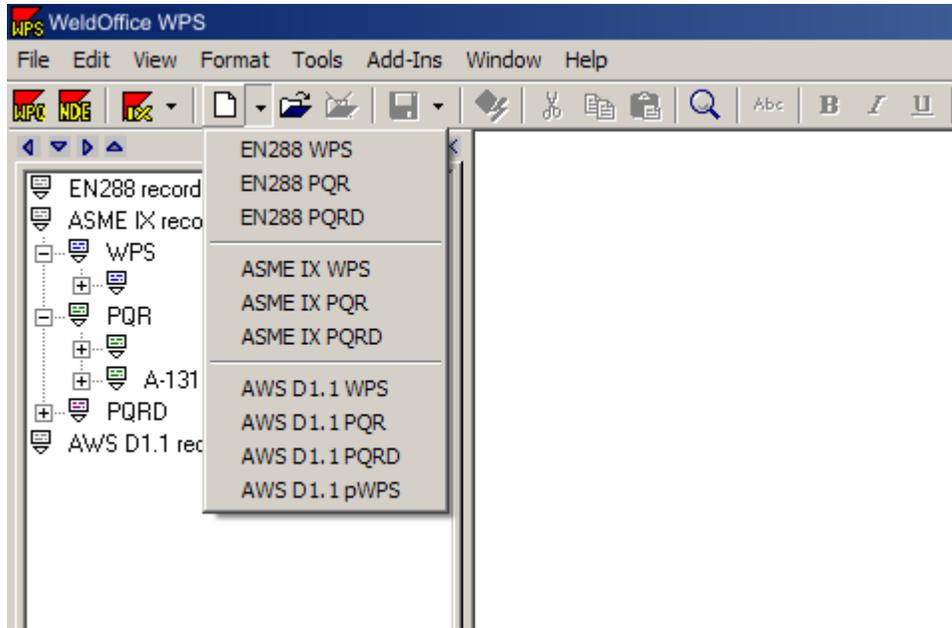
Steps to creating a PQRD will be described in the following sections.

The variables listed below are code dependent. It is attempted to describe all the variables, but please note that depending on the code selected, the user will see more or less variables than described in the following sections.

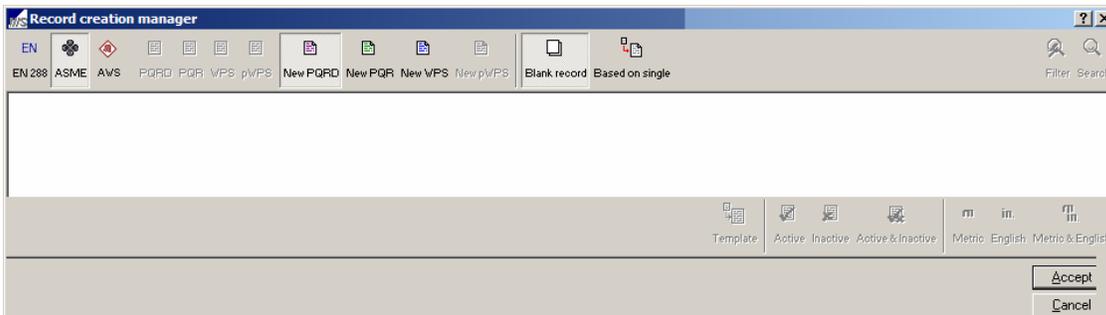
4.11.1 Open a blank PQRD

There are three ways to open a blank PQRD:

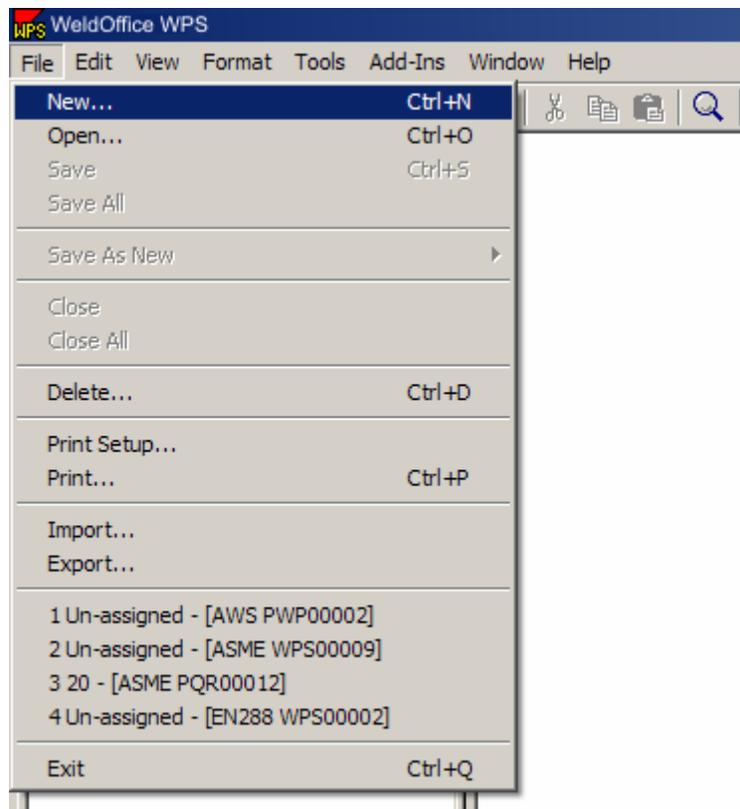
- Click on the down arrow next to the New icon  and select the type of PQRD to create (EN, ASME, or AWS).



- Click on the **New**  icon which will open the **Record Creation Manager**. From here select the Code, New PQRD, and Blank record.



- From the main menu click on **File**, then **New**. This will open the **Record creation manager** screen. Follow the same steps as listed above.

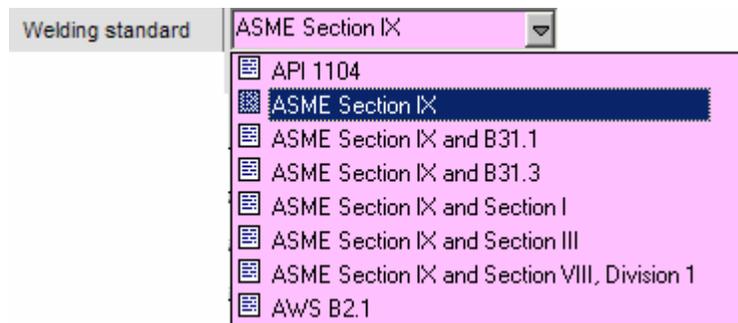


4.11.2 Type information into the Header

PQRD - Welding conditions		PQRD - Welding parameters		Additional information	
 C-spec P.O. Box 27604, Concord, California 94527, +1-877-977-7999 ASME - Welding conditions - (PQRD Welding Data Record) C-spec WeldOffice® Software					
PQRD number	<input type="text"/>	Revision	<input type="text"/>	Date	<input type="text"/>
PQR record number	<input type="text"/>	Revision	<input type="text"/>	Welding standard	<input type="text"/>
WPS record number	<input type="text"/>	Revision	<input type="text"/>	Company name	<input type="text"/>
				to be tested	<input type="checkbox"/> Without PWHT <input type="checkbox"/> With PWHT

- PQRD Number:** Type the PQRD number then press the Tab key. (The Tab key is generally used to move from field to field in a predefined order, usually top to bottom and/or left to right. Press Shift-Tab to move backwards through this order, or simply move the cursor using the mouse and click in the relevant field.)

- **Revision Number:** Good practice suggests that a document revision number should always be included (even if this is an original document), so type 0 (zero) and press Tab. The software does allow this field to be left blank if needed.
- **PQR Number:** Enter a PQR number and revision number, if known at this point.
- **WPS Number:** Enter a WPS number and revision number, if known at this point.
- **Date:** Tab over the date field on the PQRD form. This is usually the date the form was created, but in general, the system will allow any date entered. If tomorrow's date was wanted on the document, click on the calendar access button at the right of the field. This displays the calendar. To select any other date, click on the date and click Accept. *WeldOffice® WPS* will use the date format defined in Windows settings. It is recommended that a 4-digit year be used to avoid any confusion. The user can also type the date directly into the box.
- **Welding Standard:** When the PQRD was opened, the user selected a code to create the PQRD. Listed in the Drop down menu are the selections related to the code originally chosen.



- **Company Name:** Type in the desired company name. This is typically the owner of the PQR. There is also a drop down menu that the user can select from.
- **PWHT:** Select if this procedure is to be conducted with PWHT or not or both.

4.11.3 Welding Procedure section

WELDING PROCESSES			
Welding process			
Type			

- Click on the first box of welding process.
- From the drop down list, chose the process to be used. (Up to three processes can be used for one PQR)

WELDING PROCESSES	
Welding process	GMAW
Type	<ul style="list-style-type: none"> EGW ESW FCAW GMAW GTAW OPW PAW SAW SMAW STUD

- Choose the welding process type from the drop down menu.

WELDING PROCESSES	
Welding process	GMAW
Type	<ul style="list-style-type: none"> Semi-automatic Automatic Machine Semi-automatic Arc stud welding Capacitor discharge Manual

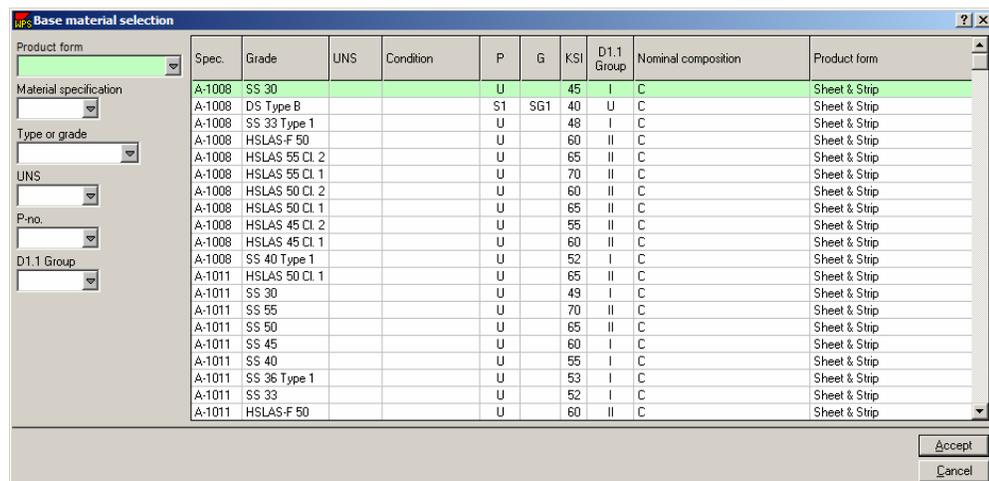
Note: Depending on what process was selected, some of the type options are grayed out. The user can actually type any value into these boxes. However, if the user uses his/her own terminology, the

software will not be able to carry out any checking against the relevant code/standard.

4.11.4 Base Metal section

- Product Form:** Select a product form from the drop down menu.
Note: The process(s) selection will determine what selection of product form the user will be able to choose from in the drop down menu.

- **Material Control Number:** This number should be an identifier of the base material used, for instance: heat number, lot number, or receiving number. This does not have to be filled out but it does help trace a material if needed.
- **Specification:** The user can type in the specification or use the material database. To get to the material database: Click in the specification box, then click on the database icon . The database shown below will appear. Depending on what product form was selected, it will be listed in the product form box of the database, and the database will be sorted by that product form.



Spec.	Grade	UNS	Condition	P	G	KSI	D1.1 Group	Nominal composition	Product form
A-1008	SS 30			U		45	I	C	Sheet & Strip
A-1008	DS Type B			S1	SG1	40	U	C	Sheet & Strip
A-1008	SS 33 Type 1			U		48	I	C	Sheet & Strip
A-1008	HSLAS-F 50			U		60	II	C	Sheet & Strip
A-1008	HSLAS 55 Cl 2			U		65	II	C	Sheet & Strip
A-1008	HSLAS 55 Cl 1			U		70	II	C	Sheet & Strip
A-1008	HSLAS 50 Cl 2			U		60	II	C	Sheet & Strip
A-1008	HSLAS 50 Cl 1			U		65	II	C	Sheet & Strip
A-1008	HSLAS 45 Cl 2			U		55	II	C	Sheet & Strip
A-1008	HSLAS 45 Cl 1			U		60	II	C	Sheet & Strip
A-1008	SS 40 Type 1			U		52	I	C	Sheet & Strip
A-1011	HSLAS 50 Cl 1			U		65	II	C	Sheet & Strip
A-1011	SS 30			U		49	I	C	Sheet & Strip
A-1011	SS 55			U		70	II	C	Sheet & Strip
A-1011	SS 50			U		65	II	C	Sheet & Strip
A-1011	SS 45			U		60	I	C	Sheet & Strip
A-1011	SS 40			U		55	I	C	Sheet & Strip
A-1011	SS 36 Type 1			U		53	I	C	Sheet & Strip
A-1011	SS 33			U		52	I	C	Sheet & Strip
A-1011	HSLAS-F 50			U		60	II	C	Sheet & Strip

To sort the database by another means, type in the know information (i.e. Type or P-no.). Then click on the specification and click **Accept**. *WeldOffice*[®] WPS will automatically input all of the information needed.

Note: The same data will be entered as default for the "welded to" section. This can be overridden, for dissimilar metal joints, simply by selecting a different material for the second material field.

- **Nominal Composition:** List the materials main elements. If the user selected a specification from the material database, this will automatically be filled in.
- **Trade Name:** Enter a trade name for the material used, if there is one.

- **P-number:** P-numbers are assigned by the base materials weldability. This allows groupings of different base materials, thus reducing the number of procedures that need to be qualified. P-numbers have been assigned in the materials database. If the user selected a material from the database, this was filled in automatically.
- **G-number:** G-numbers (Group numbers) are also material groupings used by ASME, AWS and EN. G-numbers have been assigned in the materials database. If the user selected a material from the database, this is filled in automatically.
- **AWS Group Number:** AWS (D1.1) group numbers are assigned by the base materials weldability specifically for AWS codes. This allows groupings of different base materials with the same weldability characteristics resulting in fewer procedures that need to be qualified. AWS group numbers have been assigned in the materials database. If the user selected a material from the database, this was filled in automatically.
- **Nominal Pipe/Tube Size:** Type in the size of pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out.
- **Schedule:** Type in the schedule of the pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out.
- **Length:** Type the length of the coupon or production part. For instance: 18
- **Width:** Type the width of the coupon or production part.
- **Thickness:** Type the thickness of the coupon or production part.

4.11.5 Fill out the Joint Detail section

JOINTS (QW-402)

Joint design	Joint design	Welding sequence

- **Joint Design:** Select the joint design from the drop down menu after clicking in the Joint design box. After selecting a joint design, applicable boxes will appear below the joint design box.

Joint design

Double-flare-V-groove

- Double-bevel-groove
- Double-flare-bevel-groove
- Double-flare-V-groove
- Double-J-groove
- Double-square-groove
- Double-U-groove
- Double-V-groove
- Fillet weld
- K-connection
- Single-bevel-groove

JOINTS (QW-402)

Joint design Double-flare-V-groove

Backing

Retainers

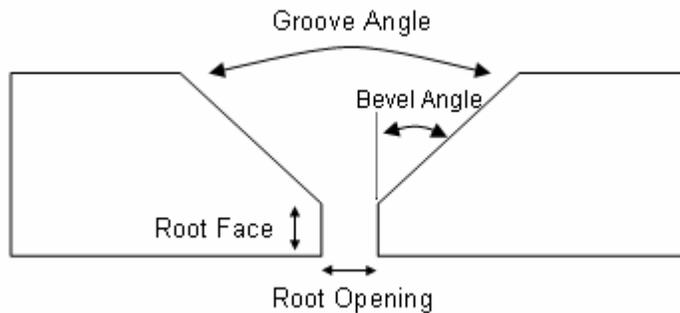
Groove angle (deg.)

Root opening (in.)

Root face (in.)

- **Backing:** Select the backing type from the drop down menu after clicking in the Backing box. If no backing was used, then "none" should be selected.

- **Retainers:** Select the retainer type from the drop down menu after clicking in the Retainers box. If retainers are not used, then "none" should be selected.
- **Groove Angle:** Type in the groove angle used. The groove angle can be measured as the angle between the two faces of a grooved joint.



- **Root Opening:** Type in the root opening used. If there was no root opening, type "0". Root opening is the separation between work pieces at the root. See figure above.
- **Root Face:** Type in the root face dimension. The root face is described as the portion of groove face within the joint root. See the figure above.
- **Joint Design Diagram:** Move the cursor over the joint design box. The cursor will change as shown below. Left click in the box to be taken to the **Sketch Selection Manager** (see section 4.22 for more details). Select a joint and fill in the necessary information.
 - Use sketches from the current procedure. In this case, the Blank sketch, Current sketch, Joint design sketch and Welding sequence sketch are all blank, as the preview will show. If the user were editing the current sketch or creating a welding sequence sketch from the joint design sketch, use these options.

- Use any of the pre-drawn templates. For example, double-click on Joint design sketches, then single-click on Unbacked single V groove. A thumbnail sketch of this template appears in the preview box. The template joint designs have no dimensions listed, these can be drawn in if desired.
- Use any sketches from other procedures that have been created. These may be simply slight modifications of templates or completely custom-drawn sketches.
- **Welding Sequence:** Move the cursor over the Welding Sequence box and click in the box. This will start the Sketch selection manager. Choose a root run sequence or design a new sequence. Use the curve drawing tool to draw the sequence of passes and mark the pass numbers on the sketch. (See section 4.22 for more details).

4.11.6 Cleaning/root treatment section

CLEANING/ROOT TREATMENT	
Surface preparation	<input type="text"/>
Initial/interpass cleaning	<input type="text"/>
Back gouging method	<input type="text"/>

- **Surface Preparation:** Select from the drop down list or type in the surface preparation used.
- **Initial/Interpass Cleaning:** Select from the drop down list or type in the cleaning used.
- **Back Gouging Method:** Select from the drop down list or type in the back gouging method used.

4.11.7 Fill out the PWHT information (if required):

POST WELD HEAT TREATMENT (QW-407)

Temperature (°F)	<input type="text"/>	Time (hrs)	<input type="text"/>	Type	<input type="text"/>
Heating rate (°F/hr)	<input type="text"/>	Method	<input type="text"/>		
Cooling rate (°F/hr)	<input type="text"/>	Method	<input type="text"/>		
Notes	<input type="text"/>				
<input type="checkbox"/> Preheat maintenance after completion of welding prior to PWHT (QW-406.2): Temperature (°F) <input type="text"/>					

- **Temperature:** Type in the temperature used for PWHT.
- **Time:** Enter the PWHT time (For instance 2hrs.).
- **Type:** Select from the drop down the type of PWHT.
- **Heating Rate:** Enter the heating rate used.
- **Method:** Select the method used to heat the sample up to the PWHT temperature from the drop down menu.
- **Cooling Rate:** Enter the cooling rate used.
- **Method:** Select the method used to cool the sample to room temperature from the drop down menu.
- **Notes:** Enter any notes that may pertain to the PWHT.
- **Preheat Maintenance:** If preheat maintenance is to be used, click in the check box. Then enter a temperature that is to be maintained.

4.11.8 Fill in the Pass information

At the top of the PQRD there are three tabs, click on the second tab "**PQRD - Welding Parameters**". This page is used to record the actual parameters of each pass.

This PQRD page 2 can be printed as a "Pre test" data recording sheet. To do so, fill out this page as described below, but leave off any information that is to be recording during the test (such as Amps, Volts, Travel speed, etc.). Provide more passes than is necessary, as unnecessary passes can be removed at a later time (section 4.11.16). Note that six passes will fit on one page. Therefore, 30 passes will span over 5 pages.

PASS INFORMATION

Pass number	<input type="text"/>
Layer number	<input type="text"/>

- **Pass Number:** In the first block, type "1" for the first pass.
- **Layer Number:** After typing in the pass number, a box will appear for the layer number. Type "1" for the first layer.

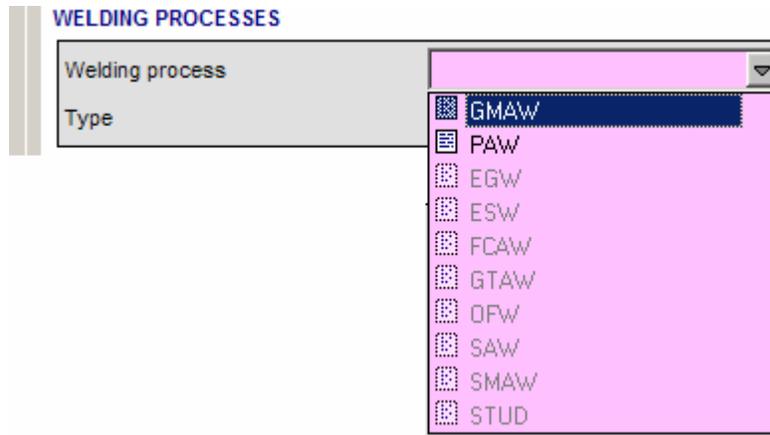
4.11.9 Fill in the Welding Process Information

WELDING PROCESSES

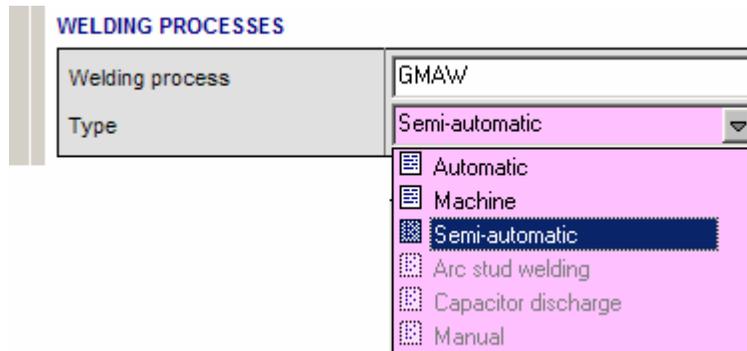
Welding process	<input type="text"/>
Type	<input type="text"/>

After filling in the pass and layer numbers, boxes will appear for the welding process applicable to that pass.

- **Welding Process:** Click in the Welding process box and a drop down arrow will appear, which will lead the user to the drop down menu for the welding processes. Only the processes selected on the first page will be able to be selected. For instance: if it was specified that GMAW and PAW were the processes used for this procedure, the drop down menu for the welding processes would look like this:



- **Type:** Select the type of welding process used from the drop down menu.



4.11.10 Fill in the Filler Metal information

FILLER METALS (QW-404)			
Material control number	<input type="text"/>	<input type="text"/>	<input type="text"/>
SFA specification	<input type="text"/>		
AWS classification	<input type="text"/>		
Filler metal F-number	<input type="text"/>		
Weld metal A-number	<input type="text"/>		
Filler metal nominal composition	<input type="text"/>		
Filler metal trade name	<input type="text"/>		
Filler metal size	(in.)	<input type="text"/>	
Length of filler metal consumed	(in.)	<input type="text"/>	
Deposited thickness	(in.)	<input type="text"/>	
Maximum pass thickness	(in.)	<input type="text"/>	
Weld deposit chemistry	<input type="text"/>		
Supplemental filler metal	<input type="text"/>		
Supplemental filler metal vol.	(ft ³)	<input type="text"/>	

- Material Control Number:** This number should be an identifier of the filler material used, for instance: heat number, lot number, or receiving number. This does not have to be filled out but it does help trace a material if needed.
- SFA Specification:** The SFA specification is the standard to which the filler metal is made. Click in the box, and then click on the drop down arrow to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically.
- AWS Classification:** This is a classification based on the chemical content of the filler metal. Click in the box, and then click on the drop down arrow to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically. If the user has already selected a filler metal from the data base, this information will already be filled in.
- Filler Metal F-Number:** This is an ASME grouping of Filler metals based on their weldability. To find an F-number for a filler metal, look inside the filler metal database. If the user has already selected a filler metal from the data base, this information will already be filled in.

- **Weld metal A-number:** This is a grouping of weld metal chemistries for ferritic metals. To find an A-Number for a certain filler metal, search in the filler metal database. If the user has already selected a filler metal from the data base, this information, if given, will already be filled in.
- **Filler Metal nominal composition:** Enter the basic list of elements used in the filler metal.
- **Filler Metal Trade Name:** Type in the trade name of the filler metal used.
- **Filler Metal Size:** Type in the diameter of the filler metal.
- **Length of Filler Metal Consumed:** Enter the length of filler metal consumed. An estimate of this would be before and after weight measurements and then back calculate a length based on diameter and density. This is used in calculating deposition rates.
- **Deposited Thickness:** Measure and record the thickness of this pass.
- **Weld Deposit Chemistry:** After the coupon has been welded, if a chemical analysis is conducted on the weld metal, record those values here.
- **Supplemental Filler Metal:** List the supplemental filler metal used. If none was used type "none".
- **Supplemental Filler Volume:** Measure the volume of supplemental filler metal used and record it here, if applicable.

There may be more information to fill out depending on the process selected.

4.11.11 Fill in the Position information

POSITION (QW-405)	
Position of groove	<input type="text"/>
Weld progression	<input type="text"/>

- **Position of groove:** Select from the drop down menu the position of the groove during welding. Refer to the applicable code for definitions of positions.
- **Weld Progression:** List if upward or downward progression (for vertical welding)

4.11.12 Fill in the Shielding Gas information

GAS (QW-408)

Shielding gas: Type	<input type="text"/>
Flow rate (cfh)	<input type="text"/>
Trailing gas: Type	<input type="text"/>
Flow rate (cfh)	<input type="text"/>
Backing gas: Type	<input type="text"/>
Flow rate (cfh)	<input type="text"/>
Plasma gas: Type	<input type="text"/>
Flow rate (cfh)	<input type="text"/>

- **Shielding Gas Type:** List the type of shielding gas, this is typically a nominal composition of the gas. Common gases are found in a drop down menu.
- **Shielding Gas Flow Rate:** List the flow rate used.
- **Trailing Gas Type:** If a trailing gas was used, document the type. Common gases are found in a drop down menu. If a trailing gas was not used, type "none".
- **Trailing Gas Flow Rate:** List the flow rate used for the trailing gas. If the user selected none in trailing gas type, then they will not be able to input anything into the trailing gas flow rate.
- **Backing Gas Type:** If a backing gas was used, document the type by selecting from the drop down menu. If a backing gas was not used, type "none".
- **Backing Gas Flow Rate:** List the flow rate used for the backing gas. If the user selected none in backing gas type, then they will not be able to input anything into the backing gas flow rate.
- **Plasma Gas Type:** If a plasma gas was used, document the type by selecting from the drop down menu. If a plasma gas was not used, type "none".

- **Backing Gas Flow Rate:** List the flow rate used for the plasma gas. If the user selected none in plasma gas type, then they will not be able to input anything into the plasma gas flow rate.

4.11.13 Fill in the Electrical information

ELECTRICAL (QW-409)

Filler metal size	(in.)	<input type="text"/>
Amperes		<input type="text"/>
Volts		<input type="text"/>
Travel speed	(in./min)	<input type="text"/>
Maximum heat input	(kJ/in.)	<input type="text"/>
Tungsten size	(in.)	<input type="text"/>
Tungsten type		<input type="text"/>
Current/polarity		<input type="text"/>
Wire feed speed	(in./min)	<input type="text"/>
Arc transfer mode		<input type="text"/>
Stickout	(in.)	<input type="text"/>
Filler wire wattage	(W)	<input type="text"/>

The selections to fill in are narrowed by the selection of process, base material and filler metal according to the code.

- **Filler Metal Size:** The size that was typed in the filler metal section will be automatically inputted here.
- **Amperes:** List the amperage(s) used during the pass.
- **Volts:** List the voltage(s) used during the pass.
- **Travel Speed:** List the travel speed used during the pass.
- **Maximum Heat Input:** This will be automatically calculated based on the amperes, volts and travel speed. The user can overwrite this if needed.
- **Tungsten Size:** List the diameter of the tungsten used.
- **Tungsten type:** Select the type of tungsten used from the drop down list.
- **Current/Polarity:** From the drop down list, select the current (AC or DC) and the polarity (EP or EN)
- **Wire Feed Speed:** Type in the wire feed speed used during the pass.

- **Arc Transfer Mode:** From the drop down list, select the transfer mode.
- **Stickout:** List the stickout used during the pass.
- **Filler Wire Wattage:** List the wattage used during the pass.

4.11.14 Fill in the Technique information

TECHNIQUE (QW-410)	
String or weave	<input type="text"/>
Orifice/gas cup size	<input type="text"/>
C.T.W.D (in.)	<input type="text"/>
Multi/Single pass per side	<input type="text"/>
Peening	<input type="text"/>
Initial/interpass cleaning	<input type="text"/>
Back gouging method	<input type="text"/>

- **String or Weave:** From the drop down menu select if the bead was a string bead, a weave bead or both.
- **Orifice/Gas Cup Size:** List the cup size or the orifice diameter.
- **CTWD:** List the CTWD (contact tip to work distance)
- **Multi/Single Pass per side:** List if the procedure is a multipass or single pass per side.
- **Peening:** From the drop down menu select if peening was used or not.
- **Initial/Interpass Cleaning:** From the drop down menu, select the method for cleaning.
- **Back Gouging Method:** From the drop down menu, select the method of back gouging or "none".

4.11.15 Fill in the "Pass Witnessed by" information

PASS PERFORMED/WITNESSED BY

Welder's name	<input type="text"/>
Recorded/witnessed by	<input type="text"/>
Date	<input type="text"/>
Data entry by	<input type="text"/>

- **Welder's Name:** When the user clicks in this box two buttons will appear. One will open the Welder Selection screen , where the user could select a welder by double clicking on a welder. The other button is the drop down menu  which will display a list of welders, from which the user can just click on one.
- **Recorded/Witnessed by:** From the drop down menu select a name or type in the name of the witness.
- **Date:** Type in the date or open the calendar and pick the date.
- **Data Entry By:** Enter the person who entered this data or select the name from the drop down menu if available.

4.11.16 Move on to the Second (subsequent) pass

Now that the user has entered the data for the first pass, it's possible to copy all the data from the first pass to the second pass.

PQRD number		Revision		Date	
				1/12/2005	

PASS INFORMATION

Pass number	1	
Layer number	1	

WELDING PROCESSES

Welding process	GMAW
Type	Semi-automatic

FILLER METALS (QW-404)

Material control number	4567		
SFA specification	5.9		
AWS classification	ER16-8-2		
Filler metal F-number	6		
Weld metal A-number	8		
Filler metal nominal composition	Cu-Al		
Filler metal trade name			
Filler metal size	(in.) 0.35		
Length of filler metal consumed	(in.) 120		
Deposited thickness	(in.) 0.125		
Maximum pass thickness	(in.) 0.125		
Weld deposit chemistry	48% Fe		
Flux nominal composition			
Flux trade name			
Supplemental filler metal	None		
Supplemental filler metal vol.	(ft ³) none		

A. Click in the pass number "1" box. (The box will turn pink to let the user know its active)

B. Click on the **Duplicate Current Pass** button  at the bottom right of the page. This will bring up a duplicate copy of the first pass.

C. Rename this pass to be the second pass: The cursor will already be in the pass number field of the duplicate pass, delete the number "1" in the field and replace it with "2".

PQRD number	Revision	Date	1/12/2005
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;">  </div> <div style="text-align: center;"> C-spec P.O. Box 27604, Concord, California 94527, +1-877-977-7999 PQRD - Welding Parameters C-spec WeldOffice® Software </div> </div>			
PASS INFORMATION			
Pass number	1	1	
Layer number	1	1	
WELDING PROCESSES			
Welding process	GMAW	GMAW	
Type	Semi-automatic	Semi-automatic	
FILLER METALS (QW-404)			
Material control number	4567	4567	
SFA specification	5.9	5.9	
AWS classification	ER16-8-2	ER16-8-2	
Filler metal F-number	6	6	
Weld metal A-number	8	8	
Filler metal nominal composition	Cu-Al	Cu-Al	
Filler metal trade name			
Filler metal size	(in.) 0.35	0.35	
Length of filler metal consumed	(in.) 120	120	
Deposited thickness	(in.) 0.125	0.125	
Maximum pass thickness	(in.) 0.125	0.125	
Weld deposit chemistry	48% Fe	48% Fe	
Flux nominal composition			
Flux trade name			
Supplemental filler metal	None	None	
Supplemental filler metal vol.	(ft³) none	none	

PQRD - Welding conditions		PQRD - Welding parameters		Additional information	
 <div style="text-align: center;"> C-spec P.O. Box 27604, Concord, California 94527, +1-877-977-7999 PQRD - Welding Parameters C-spec WeldOffice® Software </div>					
PQRD number		Revision		Date	1/12/2005
PASS INFORMATION					
Pass number	1	2			
Layer number	1	1			
WELDING PROCESSES					
Welding process	GMAW	GMAW			
Type	Semi-automatic	Semi-automatic			
FILLER METALS (QW-404)					
Material control number	4567	4567			
SFA specification	5.9	5.9			
AWS classification	ER16-8-2	ER16-8-2			
Filler metal F-number	6	6			
Weld metal A-number	8	8			
Filler metal nominal composition	Cu-Al	Cu-Al			

D. To create another pass, repeat the process listed above, changing the necessary information **OR** click in the empty pass field and type in the subsequent number, this case being "3" and then type in all the information.

E. In order to look at previous passes or skip ahead, use the arrow key buttons  at the bottom right of the page. They will only be active if the cursor is in a pass field.

4.11.17 Fill in the Additional Information Page

On the Additional Information Page, the user can add any other information necessary for the procedure. This can include Excel tables, pictures, video, sounds, etc.

If there are several lines of data, when printed, the user may end up with 2 additional pages instead of one.

PQRD - Welding conditions | PQRD - Welding parameters | **Additional information**

C-spec
 P.O. Box 27604, Concord, California 94527, +1-877-977-7999
ASME - Additional information - (PQRD Welding Data Record)
 C-spec WeldOffice® Software

PQRD number	Revision	Date	1/12/2005
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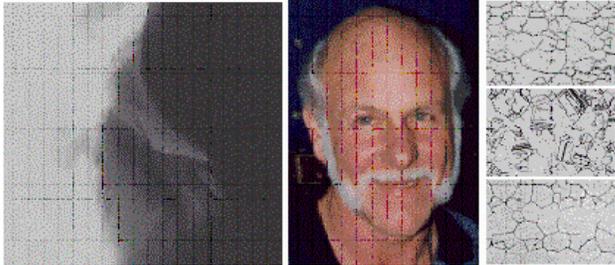
This "Additional information" page can be used to provide additional instructions in the form of **formatted text**.

Tables (Cut and paste from Excel spreadsheets)

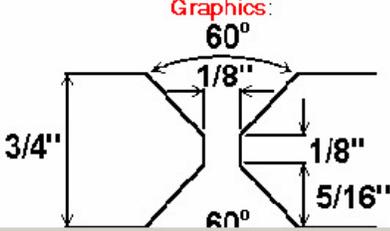
	Sound	Video
instructions	listen	watch
short-circuiting arc transfer	listen	watch
globular transfer	listen	watch
spray transfer	listen	watch

Instructions can include video or sound. Click on any of the above selections.

Radiographs **Pictures** **Micrographs**



Graphics:



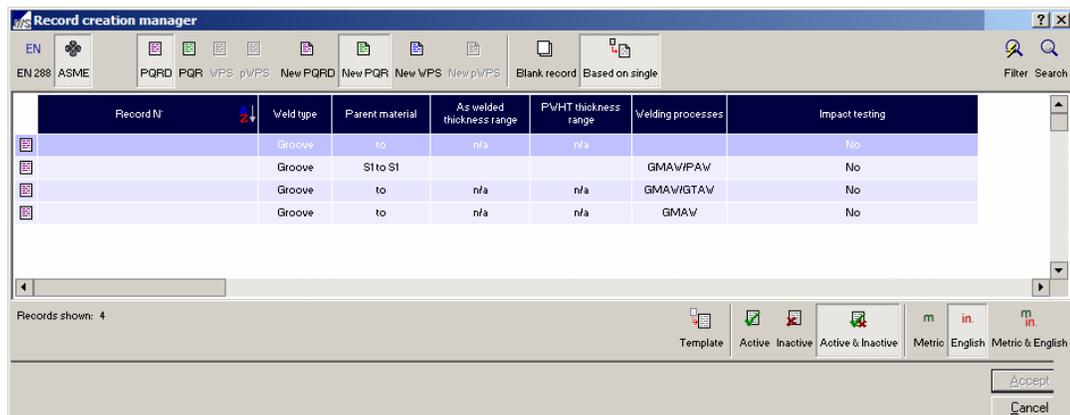
4.12 Automatically create a PQR from a PQRD

Procedure Qualification Record from a PQR datasheet

There are two ways to create a PQR from a PQRD:

1. Use the File - New method

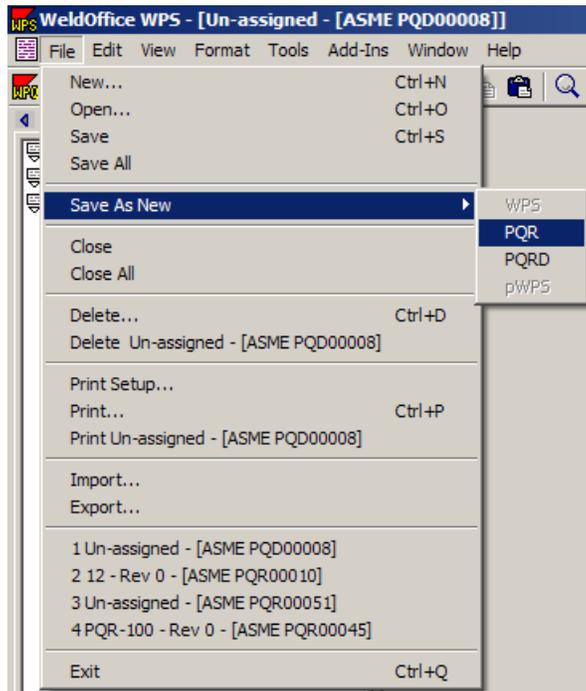
- Click on **File** and then **New**. This will open the **Record Creation Manager**.
- From the **Record Creation Manager**, click on the desired **code**, click on **New PQR** and then click on **Based on Single**. Click on **PQRD** for the reference document.
- The list of PQRD records will appear. Select a **PQRD** to create the PQR from by clicking on it. Then click on **Accept**.



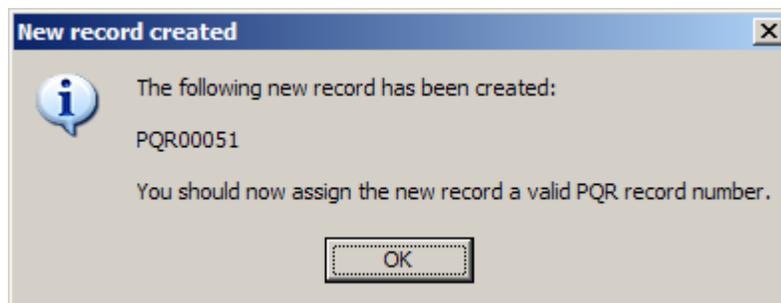
- The process will take a few seconds to create the PQR, but it will open automatically.

2. Using the Save As New feature

- Open a PQRD.
- Click on **File** and then **Save As New**.



- Click on **PQR** when prompted.
- *WeldOffice® WPS* will process for a few seconds and then display the new document.
- The user will be prompted with a reminder to input a record number for the new PQR.



4.13 Creating a PQR

Procedure Qualification Record

Steps to creating a PQR will be described in sections to follow.

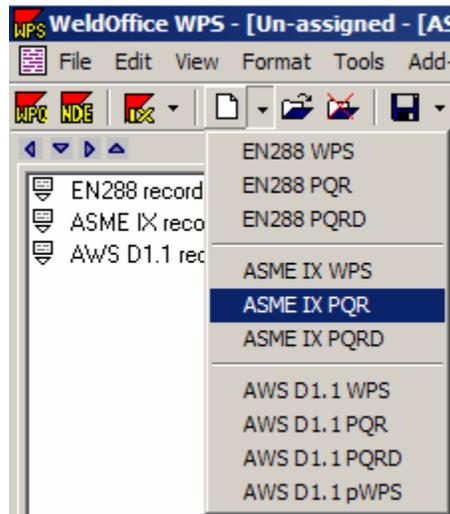
(For automatic creation of a PQR from a PQRD, see section 4.12)

The variables listed below are code dependent. It is attempted to describe all the variables, but please note that depending on the code selected, the user will see more or less variables then described in the following sections.

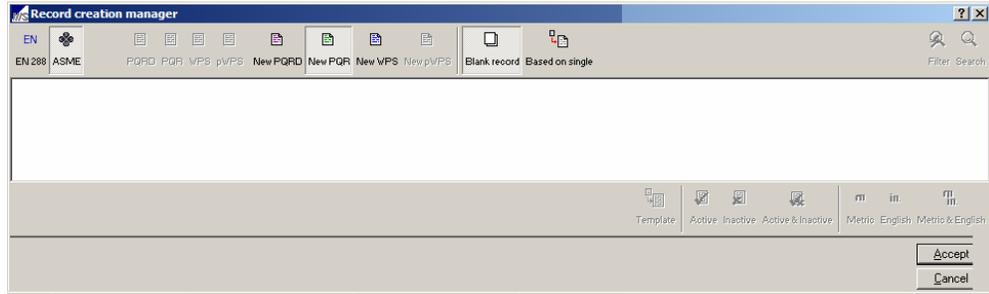
4.13.1 Open a blank PQR

There are three ways to do this:

1. Click on the down arrow next to the New icon  and select the type of PQR to create (EN, ASME, or AWS).



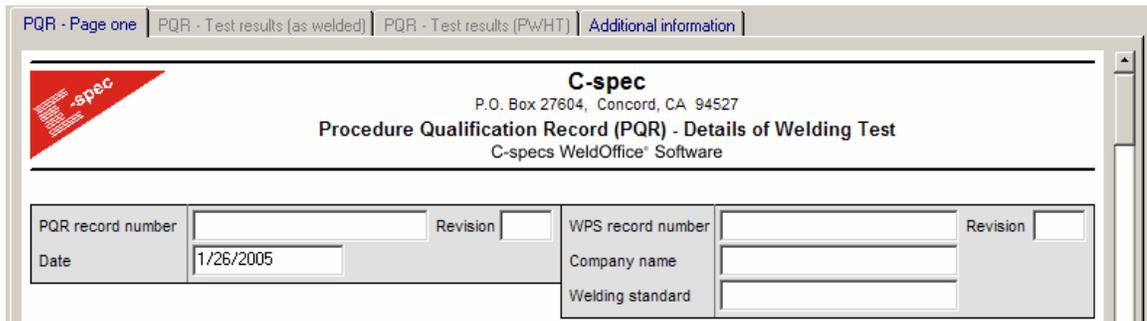
2. Click on the **New**  icon which will open the **Record Creation Manager**. From here select the Code, New PQR, and Blank record. Click **Accept**. This will open a blank PQR document in *WeldOffice® WPS*.



or

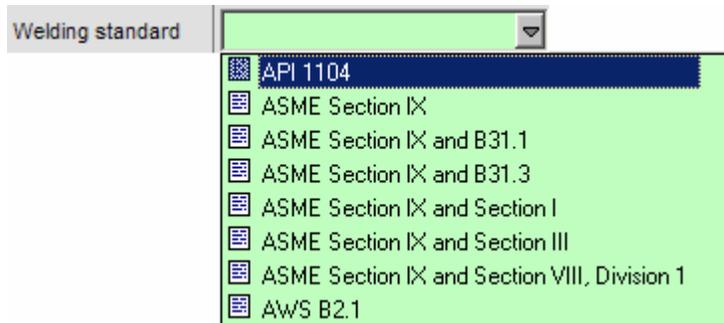
3. Click on **File** and then **New** from the Main Menu. This will open the **Record Creation Manager**, follow the instructions as stated above.

4.13.2 Fill in the header section



- **PQR Record Number:** Type the PQR number then press the Tab key. (The Tab key is generally used to move from field to field in a predefined order, usually top to bottom and/or left to right. Shift-Tab is also used to move backwards through this order, or simply move the cursor using the mouse and click in the relevant field.)
- **Revision Number:** Good practice suggests that a document revision number should always be included (even if this is an original document), so 0 (zero) is an acceptable number. Type the number in and then press Tab. The software does allow this field to be left blank if necessary.

- **WPS Record Number:** The user may or may not want to mention a WPS number depending on the business practice. This is generally a number that is created after the PQR has been created. If there is no WPS to enter, then leave this field blank.
- **Revision:** If the WPS document had a revision number, enter this number here.
- **Date:** Tab over the date field on the PQR form. This is usually the date the form was created, but in general, the user can enter whatever date they want. If the user wanted to put tomorrow's date on the document, click on the calendar access button at the right of the field. This displays the calendar. To select any other date, click on the date and click *Accept*. *WeldOffice*[®] *WPS* will use the date format defined in Windows settings. It is recommended that a 4-digit year be used to avoid any confusion. The user can also type the date directly into the box.
- **Company Name:** Type in the company name of who owns the procedure. There is also a drop down menu from which the user can select.
- **Welding Standard:** From the drop down menu select the code that this PQR was qualified to.



4.13.3 Type information into the Base Metal section

BASE METALS (QW-403)

Product form	Specification (type or grade)	P-no.	Grp-no.	Size (in.)	Sch.	Thick. (in.)	Dia. (in.)

Welded to:

and tested:

Without PWHT With impacts With hardness Supplementary tests only

With PwHT Fillet-weld test Other tests

Notes

- **Product Form:** Select a product form from the drop down menu.

Product form

Plate

- Corrosion-resistant overlay
- Hardfacing overlay
- Hardfacing spray fuse
- Pipe
- Pipe/Tube
- Plate
- Stud
- Tube

- **Specification:** The user can type in the specification or use the material database. To get to the material database: Click in the specification box, then click on the database icon . The database shown below will appear. Depending on what product form was selected, it will be listed in the product form box of the database, and the database will be sorted by that product form. See section 4.20 for more information on the material databases.

Base material selection

Product form	Spec.	Grade	UNS	Condition	P	G	KSI	D1.1 Group	Nominal composition	Product form
Plate	SA-283	B	K01702		1	1	50	U	C	Plate
	SA-283	C	K02401		1	1	55	U	C	Plate
	SA-283	D	K02702		1	1	60	U	C	Plate
	SA-283	A	K01400		1	1	45	U	C	Plate
	SA-285	A	K01700		1	1	45	U	C	Plate
	SA-285	B	K02200		1	1	50	U	C	Plate
	SA-285	C	K02801		1	1	55	U	C	Plate
	SA-299		K02803		1	2	75	U	C-Mn-Si	Plate
	SA-36		K02600		1	1	58	I	C-Mn-Si	Plate, Bar & Shapes
	SA-455		K03300		1	2	70	U	C-Mn-Si	Plate
	SA-455		K03300		1	2	73	U	C-Mn-Si	Plate
	SA-455		K03300		1	2	75	U	C-Mn-Si	Plate
	SA-515	60	K02401		1	1	60	U	C	Plate
	SA-515	65	K02800		1	1	65	U	C-Si	Plate
	SA-515	70	K03101		1	2	70	U	C-Si	Plate
	SA-516	55	K01800		1	1	55	I	C-Si	Plate
	SA-516	60	K02100		1	1	60	I	C-Mn-Si	Plate
	SA-516	65	K02403		1	1	65	II	C-Mn-Si	Plate
	SA-516	70	K02700		1	2	70	II	C-Mn-Si	Plate
	SA-537	Cl. 3	K12437		1	3	75	U	C-Mn-Si	Plate

Material specification

Type or grade

UNS

P-no.

D1.1 Group

Accept

Cancel

To sort the database by another means, type in the known information (i.e. type or P-no.). Then click on the specification and click **Accept**. *WeldOffice® WPS* will automatically input all of the information needed.

Note: The same data will be entered as default for the "welded to" section. This can be overridden, for dissimilar metal joints, simply by selecting a different material for the second material field.

- **P-number:** P-numbers are assigned by the base materials weldability. This allows groupings of different base materials and overall less procedures that need to be qualified. P-numbers have been assigned in the materials database. If the user selected a material from the database, this was filled in automatically.
- **Group Number:** Group numbers are assigned to ferrous base metals and become necessary when procedures are qualified by impact testing. It is a further categorization of the materials weldability, composition, and mechanical properties. If the user selected a P no from the selection list, then if there was an applicable group number it will be entered into the PQR automatically.
- **Size:** If Tube or Pipe is selected as the product form, type in the size of pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out. See section 4.20 for more information on the material databases.
- **Schedule:** Type in the schedule of the pipe or tube. Select the Pipe Schedule log database  to see the database of schedules and thicknesses for pipe and tube. If Pipe/tube is not selected as the product form, this detail will be grayed out. See section 4.20 for more information on the material databases.
- **Thickness:** Type the thickness of the coupon or production part.
- **Diameter:** Type the diameter of the coupon or production part.
- **and Tested:** Select the Post Weld Heat Treatment (PWHT) condition and or tests that will be performed, by clicking in the boxes next to each applicable item.
- **Notes:** Type in any notes that may be applicable.

4.13.4 Fill in the PWHT data

POST WELD HEAT TREATMENT (QW-407)

Temperature (F)	<input type="text"/>	Time (hrs)	<input type="text"/>	Type	<input type="text"/>
Heating rate (F/hr)	<input type="text"/>	Method	<input type="text"/>		
Cooling rate (F/hr)	<input type="text"/>	Method	<input type="text"/>		
Notes	<input type="text"/>				
<input type="checkbox"/> Preheat maintenance after completion of welding prior to PWHT (QW-406.2):					Temperature (F) <input type="text"/>

If in the Base Metal section, the Tested with "PWHT" box was checked, then the data in the PWHT fields needs to be filled out.

Note: Clicking the Tab key will take the user to the next field.

- **Temperature:** Type in the temperature used for PWHT.
- **Time:** Enter the PWHT time
- **Type:** Select from the drop down the type of PWHT.
- **Heating Rate:** Enter the heating rate used.
- **Method:** Select the method used to heat the sample up to the PWHT temperature from the drop down menu.
- **Cooling Rate:** Enter the cooling rate used.
- **Method:** Select the method used to cool the sample to room temperature from the drop down menu.
- **Notes:** Enter any notes that may pertain to the PWHT.
- **Preheat Maintenance:** If preheat maintenance was used, click in the check box, to signify that preheat maintenance was used. Then enter a temperature that was to be maintained.

4.13.5 Fill out the Joint Detail section

JOINTS (QW-402)

Joint design	Joint design	Welding sequence

- **Joint Design:** Select the joint design from the drop down menu after clicking in the Joint design box. After selecting a joint design, applicable boxes will appear below the joint design box.

Joint design

Double-flare-V-groove

- Double-bevel-groove
- Double-flare-bevel-groove
- Double-flare-V-groove
- Double-J-groove
- Double-square-groove
- Double-U-groove
- Double-V-groove
- Fillet weld
- K-connection
- Single-bevel-groove

JOINTS (QW-402)

Joint design Double-flare-V-groove

Backing

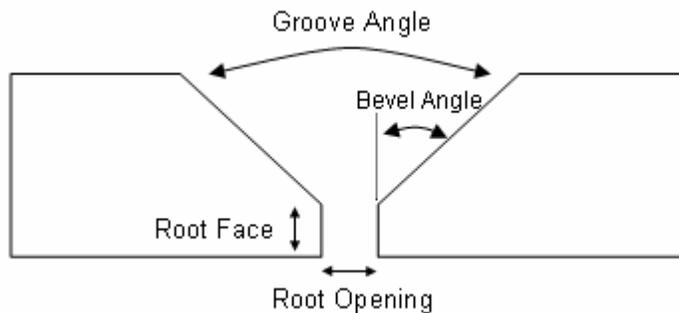
Retainers

Groove angle (deg.)

Root opening (in.)

Root face (in.)

- **Backing:** Select the backing type from the drop down menu after clicking in the Backing box. If there was no backing used, then "none" should be selected.
- **Retainers:** Select the retainer type from the drop down menu after clicking in the Retainers box. If there was no retainer used, then "none" should be selected.
- **Groove Angle:** Type in the groove angle that was used. The groove angle can be measured as the angle between the two faces of a grooved joint.



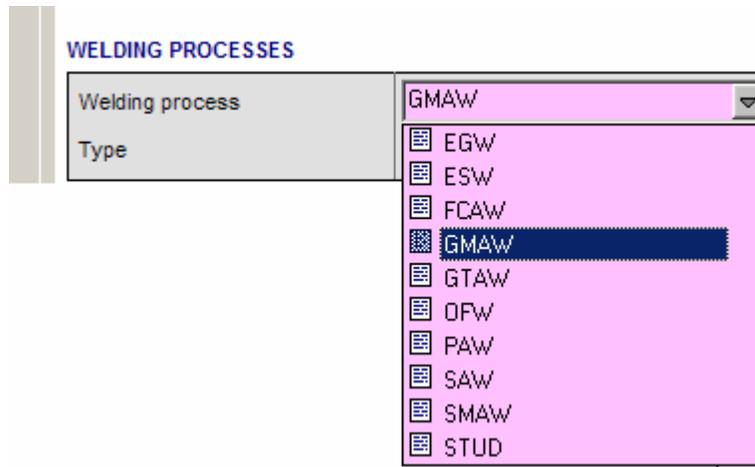
- **Root Opening:** Type in the root opening that was used. If there was no root opening, it should be listed as "0". Root opening is the separation between work pieces at the root. See figure above.
- **Root Face:** Type in the root face dimension. The root face is described as the portion of groove face within the joint root. See the figure above.
- **Joint Design Diagram:** Move the cursor over the joint design box. The cursor will change as shown below. Left click in the box to be taken to the **Sketch Selection Manager**. Select a joint and fill in the necessary information. For more information on the Sketch Selection Manager, see section 4.22.

- Use sketches from the current procedure. In this case, the Blank sketch, Current sketch, Joint design sketch and Welding sequence sketch are all blank, as the preview will show. If editing the current sketch or if creating a welding sequence sketch from the joint design sketch, use these options.
- Use any of the pre-drawn templates. For example, double-click on Joint design sketches, then single-click on Unbacked single V groove. A thumbnail sketch of this template appears in the preview box. All the template joint designs have no dimensions, so to complete these sketches, see section 4.22.
- Use any sketches from other procedures that have been created. These may be simply slight modifications of templates or completely custom-drawn sketches.
- **Welding Sequence:** Move the cursor over the Welding Sequence box and click in the box. This will start the Sketch selection manager. Choose a root run sequence or design a new sequence. Use the curve drawing tool to draw the sequence of passes and mark the pass numbers on the sketch.

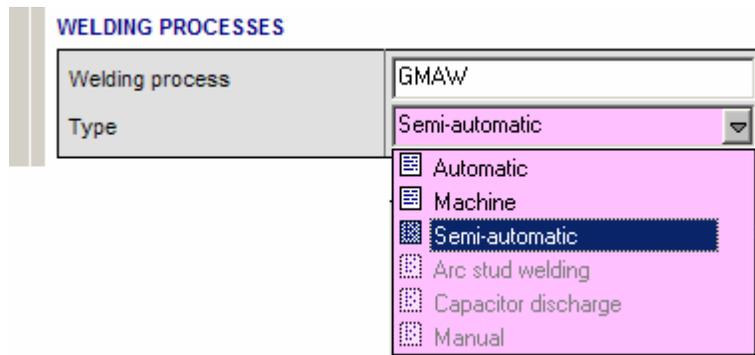
4.13.6 Fill in the Welding Process Information

WELDING PROCESSES			
Welding process	<input type="text"/>	<input type="text"/>	<input type="text"/>
Type	<input type="text"/>	<input type="text"/>	<input type="text"/>

- Click on the first box of welding process.
- From the drop down list, chose the process to be used. (Up to three processes can be used for one PQR)



- Choose the welding process type from the drop down menu.



Note: Depending on what process was selected, some of the type options are grayed out. The user can actually type any value into these boxes. However, if the user uses his/her own terminology, the software may not be able to carry out any checking against the relevant code/standard.

4.13.7 Fill in the Filler Metal information

WELDING PROCESSES			
Welding process	GTAW	GMAW	SAW
Type	Semi-automatic	Semi-automatic	Machine
FILLER METALS (QW-404)			
SFA specification			
AWS classification			
Filler metal F-number			
Weld metal A-number			
Filler metal nominal composition			
Filler metal trade name			
Filler metal size (in.)			
Deposited thickness (in.)			
Maximum pass thickness (in.)			
Weld deposit chemistry			
Flux AWS specification			
Flux AWS classification			
Flux nominal composition			
Flux trade name			
Flux type			
Flux from recrushed slag			
Supplemental filler metal			
Supplemental filler metal vol. (ft ³)			

Depending on the process(s) selected, the filler metal details needed will dynamically appear. Some variables are listed for some processes and not others. The *WeldOffice*[®] software identifies essential and non essential variables and lists them according to what the user has entered. *WeldOffice*[®] WPS allows the user to have five different filler metal sizes for each process.

- SFA Specification:** The SFA specification is the standard to which the filler metal is made. Click in the box, and then click on the database icon  to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically. See section 4.20 for more information on the material databases.

WPS Filler material selection

AWS classification:

AWS/SFA specification:

F-no.:

A-no.:

UNS:

Show: GTAW (10H)
 GTAW (10H)
 All materials

Type: Solid
 Metal cored
 Flux cored
 Powder
 Insert
 Flux
 Other types
 All types

Include discontinued:

Classification	Spec.	F-no.	A-no.	UNS	Comment
ER16-8-2	5.9	6	8	S16880	Solid wire
ER19-10H	5.9	6	8	S30480	Solid wire
ER209	5.9	6	NA	S20980	Austenitic Cr-Ni-Mn-Mo SS fil
ER218	5.9	6	NA	S21880	Solid wire
ER219	5.9	6	NA	S21980	Solid wire
ER2209	5.9	6	8	S39209	Solid wire
ER240	5.9	6	NA	S24080	Solid wire
ER2553	5.9	6	NA	S39553	Solid wire
ER307	5.9	6	NA	S30780	Solid wire
ER308	5.9	6	8	S30880	Solid wire
ER308H	5.9	6	8	S30880	Solid wire
ER308L	5.9	6	8	S30883	Solid wire
ER308LMo	5.9	6	8	S30886	Solid wire
ER308LSi	5.9	6	8	S30888	Solid wire
ER308Mo	5.9	6	8	S30882	Solid wire
ER308Si	5.9	6	8	S30881	Solid wire
ER309	5.9	6	8	S30980	Solid wire
ER309L	5.9	6	8	S30983	Solid wire
ER309LMo	5.9	6	8	S30986	Solid wire
ER309LSi	5.9	6	8	S30988	Solid wire
ER309Mo	5.9	6	8	S30982	Solid wire
ER309Si	5.9	6	8	S30981	Solid wire
ER310	5.9	6	9	S31080	Solid wire
ER312	5.9	6		S31380	Solid wire
ER316	5.9	6	8	S31680	Solid wire

Accept

Cancel

Filler Metal Database

- **AWS Classification:** This is a classification based on the chemical content of the filler metal. Click in the box, and then click on the database icon  to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically. If the user has already selected a filler metal from the data base, this information will already be filled in.
- **Filler Metal F-Number:** This is an ASME grouping of Filler metals based on their weldability. To find an F-number for a filler metal, look inside the filler metal database . If the user has already selected a filler metal from the data base, this information will already be filled in.

- **Weld metal A-number:** This is a grouping of weld metal chemistries for ferritic metals. To find an A-Number for a certain filler metal, search in the filler metal database. If the user has already selected a filler metal from the data base, this information, if given, will already be filled in.
- **Filler Metal nominal composition:** Enter the basic list of elements used in the filler metal.
- **Filler Metal Trade Name:** Type in the trade name of the filler metal used.
- **Filler Metal Size:** Type in the diameter of the filler metal. **TIP:** The user can select up to five filler metal sizes for each process. To do this, click inside the filler metal size field. Then on the toolbar at the top of the page click on  the **Add Column** button to add a column. This will also split all other applicable fields allowing specific information to be entered for each filler metal size. To delete a column, click in the field to delete and click on  the **Remove column** button.
- **Length of Filler Metal Consumed:** Enter the length of filler metal consumed. An estimate of this would be before and after weight measurements and then back calculate a length based on diameter and density. This is used in calculating deposition rates.
- **Deposited Thickness:** Measure and record the thickness of the total deposited weld metal.
- **Maximum pass Thickness:** Record the maximum thickness of any pass.
- **Weld Deposit Chemistry:** After the coupon has been welded, if a chemical analysis is conducted on the weld metal, record those values here.
- **Flux SFA Specification:** The SFA specification is the standard to which the flux is made. Click in the box, and then click on the drop down arrow to open the filler metal database. Choose one of these fluxes based on information that is known about the flux. The rest of the information will be filled in automatically.
- **Flux AWS Classification:** This is a classification based on the chemical content of the flux. Click in the box, and then click on the drop down arrow to open the filler metal database. Choose one of these fluxes based on information that is known about the flux. The rest of the information will be filled in automatically. If the user has already selected a flux from the data base, this information will already be filled in.

- **Flux nominal composition:** Enter the basic list of elements used in the flux.
- **Flux Trade Name:** Type in the trade name of the flux used.
- **Flux Type:** From the drop down menu, select the type of flux (Active, alloy or neutral)
- **Flux from Recrushed Slag:** From the drop down menu enter yes or no to the question of is the flux from recrushed slag.
- **Supplemental Filler Metal:** List the supplemental filler metal used. If none was used type "none".
- **Supplemental Filler Volume:** Measure the volume of supplemental filler metal used and record it here, if applicable.

There may be more information to fill out depending on the process selected.

4.13.8 Fill in the position information

POSITION (QW-405)			
Position of groove	<input type="text"/>	<input type="text"/>	<input type="text"/>
Weld progression	<input type="text"/>	<input type="text"/>	<input type="text"/>

- **Position of groove:** Select from the drop down menu the position of the groove during welding. Refer to the applicable code for definitions of positions.
- **Weld Progression:** List if upward or downward progression (for vertical welding)

4.13.9 Fill in the Preheat Reference information

PREHEAT (QW-406)			
Preheat temperature	(F)	<input type="text"/>	<input type="text"/>
Maximum interpass temperature	(F)	<input type="text"/>	<input type="text"/>

- **Preheat temperature:** Type in the preheat temperature used for each process. (If room temperature list the temperature of the room.)
- **Maximum Interpass Temperature:** List the maximum temperature between passes.

4.13.10 Fill in the Shielding Gas information

GAS (QW-408)			
Shielding gas: Type		<input type="text"/>	<input type="text"/>
Flow rate	(cfh)	<input type="text"/>	<input type="text"/>
Trailing gas: Type		<input type="text"/>	<input type="text"/>
Flow rate	(cfh)	<input type="text"/>	<input type="text"/>
Backing gas: Type		<input type="text"/>	<input type="text"/>
Flow rate	(cfh)	<input type="text"/>	<input type="text"/>

NOTE: This section will only appear if required by the chosen process. For example, the third process in this example is SAW, which had no requirements for shielding gas. Thus, there are no fields to fill out under the SAW shielding gas.

- **Shielding Gas Type:** List the type of shielding gas, this is typically a nominal composition of the gas. Common gases are found in a drop down menu.
- **Shielding Gas Flow Rate:** List the flow rate used.
- **Trailing Gas Type:** If a trailing gas was used, document the type. Common gases are found in a drop down menu. If a trailing gas was not used, type "none".
- **Trailing Gas Flow Rate:** List the flow rate used for the trailing gas. If the user selected none in trailing gas type, then they will not be able to input anything into the trailing gas flow rate.

- **Backing Gas Type:** If a backing gas was used, document the type by selecting from the drop down menu. If a backing gas was not used, type "none".
- **Backing Gas Flow Rate:** List the flow rate used for the backing gas. If the user selected none in backing gas type, then they will not be able to input anything into the backing gas flow rate.
- **Plasma Gas Type:** (PAW variable) If a plasma gas was used, document the type by selecting from the drop down menu. If a plasma gas was not used, type "none".
- **Backing Gas Flow Rate:** List the flow rate used for the plasma gas. If the user selected none in plasma gas type, then they will not be able to input anything into the plasma gas flow rate.

4.13.11 Fill in the Electrical information

ELECTRICAL (QW-409)

Filler metal size	(in.)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Amperes		<input type="text"/>	<input type="text"/>	<input type="text"/>
Volts		<input type="text"/>	<input type="text"/>	<input type="text"/>
Travel speed	(in./min)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Maximum heat input	(kJ/in.)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tungsten size	(in.)	<input type="text"/>		
Tungsten type		<input type="text"/>		
Current/polarity		<input type="text"/>	<input type="text"/>	<input type="text"/>
DC pulsing current		<input type="text"/>		
Wire feed type		<input type="text"/>		
Wire feed speed	(in./min)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Arc transfer mode		<input type="text"/>		
		<input type="text"/>		

- **Filler Metal Size:** The size that was typed in the filler metal section will be automatically inputted here.
- **Amperes:** List the average amps used during the pass(es).
- **Volts:** List the voltage used during the pass(es).
- **Travel Speed:** List the travel speed used during the pass(es).
- **Maximum Heat Input:** This will be automatically calculated based on the amperes, volts and travel speed. The user can overwrite this if needed.

- **Tungsten Size:** List the diameter of the tungsten used.
- **Tungsten type:** Select the type of tungsten used from the drop down list.
- **Current/Polarity:** From the drop down list, select the current (AC or DC) and the polarity (EP or EN)
- **Wire Feed Speed:** Type in the wire feed speed (range) used during the pass(es).
- **Arc Transfer Mode:** From the drop down list, select the transfer mode, if a GMAW process was used.
- **Stickout:** List the wire distance from the cup to the work (stickout) used during the pass(es).
- **Filler Wire Wattage:** List the maximum wattage used during the pass(es).

4.13.12 Fill in the Technique information

TECHNIQUE (QW-410)			
String or weave	<input type="text"/>	<input type="text"/>	<input type="text"/>
Orifice/gas cup size	<input type="text"/>	<input type="text"/>	<input type="text"/>
C.T.W.D	(in.) <input type="text"/>	<input type="text"/>	<input type="text"/>
Oscillation	<input type="text"/>		<input type="text"/>
Multi/single electrode	<input type="text"/>		<input type="text"/>
Electrode angle	(deg.) <input type="text"/>	<input type="text"/>	<input type="text"/>
Multi/Single pass per side	<input type="text"/>	<input type="text"/>	<input type="text"/>
Multiple or single layer	<input type="text"/>		<input type="text"/>
Peening	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial/interpass cleaning	<input type="text"/>	<input type="text"/>	<input type="text"/>
Back gouging method	<input type="text"/>	<input type="text"/>	<input type="text"/>

- **String or Weave:** From the drop down menu select if the bead was a string bead, a weave bead or both.
- **Orifice/Gas Cup Size:** List the cup size or the orifice opening size.
- **CTWD:** List the CTWD (contact tip to work distance)
- **Oscillation:** From the drop down menu select if oscillation is used.

- **Multi/Single Electrode:** From the drop down menu, select if the process uses multiple or a single electrode. If multiple is selected, 2 more fields will appear:
 - **Electrode Spacing - Longitudinal:** Enter the spacing of the electrodes parallel to the travel direction.
 - **Electrode Spacing - Lateral:** Enter the spacing of the electrodes perpendicular to the travel direction.
- **Electrode Angle:** Type in the electrode angle.
- **Multi/Single Pass per side:** List if the procedure is a multipass or single pass per side.
- **Multiple/Single Layer:** From the drop down menu, select if it is a multiple or single layer or both.
- **Peening:** From the drop down menu select if peening was used or not.
- **Initial/Interpass Cleaning:** From the drop down menu, select the method for cleaning.
- **Back Gouging Method:** From the drop down menu, select the method of back gouging or "none".

4.13.13 Fill in the Test results

The testing that was selected in the base metal section, will appear in this section. If both with and without PWHT were checked, then the user will have to fill out page 2 and 3.

TENSILE TESTS

Reduced section Turned Full section

Specimen number	Width	Thickness	Area	Ultimate total load	Ultimate unit stress	Type of failure and location
	(in.)	(in.)	(in ²)	(lb)	(psi)	
569a	0.75	0.376	0.2820	26000	92000	Ductile-Base Metal
582b	0.755	0.377	0.2846	26000	91500	Brittle-Base Metal

Comments

GUIDED BEND TESTS

Type of test	Acceptance criteria	Result	Comments
2 transverse face bends per 4.8.3.1 and Fig. 4.12	4.8.3.3	Acceptable	see - AWS D1.1 - T4.2
2 transverse root bends per 4.8.3.1 and Fig. 4.12	4.8.3.3	Acceptable	see - AWS D1.1 - T4.3

Comments

TOUGHNESS TESTS

Specimen number	Notch location	Notch type	Specimen size	Test temp.	Impact values			Drop weight break
			(in.) x (in.)	(F)	(ft lb)	(% Shear)	(Mils)	
265	Weld Metal	V-notch	0.394 x 0.295	0	21000			No

Comments

CERTIFICATION

Welders name	ID number	Stamp number	Mechanical testing by	A1 Test Lab
Welder Z	222-22-2222	WZ-04	Laboratory test number	12548
			Test file number	6851
			Tests conducted by	Joe Weld

- **Tensile Test:** When entering the tensile test data, *WeldOffice*[®] WPS automatically calculates "Area" and Ultimate Stress". If the calculated ultimate stress is below the specified requirements for the base metal on page one, *WeldOffice*[®] WPS will prompt the user with a Code Checking warnings after selecting the "Type of failure and location".
- **Bend Test:** Bend test information is already entered for the user. Based on the information entered on page one, *WeldOffice*[®] WPS's code checking automatically specifies the required testing.

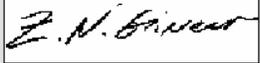
- **Toughness Tests:** When entering toughness test information, only enter the top line of data. When the first line is completed, click the cursor in the specimen number field on the second line. *WeldOffice® WPS* automatically replicates the test information from the previous line.
- **Welder's Name:** Normally, a user would be able to select a welder from the database of welders. This requires information to have been inputted into the welder database. If there is no information in the welder database, the user may enter the information manually.
- **ID number:** Enter the welders ID number
- **Stamp number:** Enter the welders stamp number.
- **Mechanical Testing:** List the company or person who conducted the mechanical testing.
- **Laboratory Test Number:** List the laboratory test number used to track the samples.
- **Test File Number:** Typically when using an outside firm to conduct the testing, they develop a File number. The user may use this to suit their needs.
- **Tests conducted by:** This typically would be the person who actually conducted the tests. The user may use this to suit their needs.

4.13.14 Fill in the Signature section

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1 (definable in Tools-Options-Default Settings)		Also user-definable	
Name	Signature	Name	Signature
<input style="width: 95%;" type="text"/>	<input style="width: 95%; height: 30px;" type="text"/>	<input style="width: 95%; background-color: yellow;" type="text"/>	<input style="width: 95%; height: 30px;" type="text"/>
Date		Date	
<input style="width: 95%;" type="text"/>		<input style="width: 95%; background-color: yellow;" type="text"/>	

- Signature 1:** Click in the Signature field of Signature 1. *WeldOffice*[®] WPS will automatically bring in the name and signature of the person logged in to the system as well as the date. The title of the box "Signature 1 (definable in Tools-Options-Default Settings section 4.2.4) is telling the user that the title of the box has not been set up. The user can have any title here (i.e. NDE Inspector) as shown below. The password and electronic signature functions must be turned on in order for the signatures to fill in automatically. See sections 4.2.1.3 and 4.2.1.4 for more information about passwords and electronic signatures.

NDE Technician		Quality Control	
Name	Signature	Name	Signature
Joe Smith			
Date		Date	
1/28/2005			

This is an example of how the signature box titles can be formatted.

4.13.15 Fill in any Additional Information

On the additional information page, the user may include any information they want to view with the procedure. If there are several lines of data, when printed, the user may end up with 2 additional pages instead of one.

PQR - Page one | PQR - Test results (as welded) | PQR - Test results (PWHT) | **Additional information**

C-spec
 P.O. Box 27604, Concord, California 94527, +1-877-977-7999
Procedure Qualification Record (PQR) - Additional information
 WeldOffice WPS

PQR record number	15	Revision	1	WPS record number		Revision	
Date	1/14/2005						

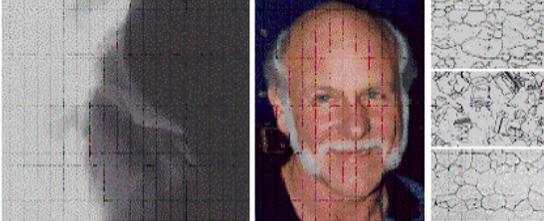
This "Additional information" page can be used to provide additional instructions in the form of **formatted text**.

Tables (Cut and paste from Excel spreadsheets)

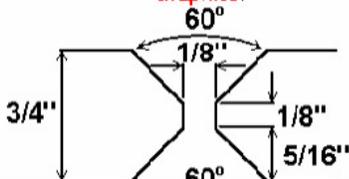
	Sound	Video
instructions	listen	watch
short circuiting arc transfer	listen	watch
globular transfer	listen	watch
spray transfer	listen	watch

Instructions can include video or sound. Click on any of the above selections.

Radiographs **Pictures** **Micrographs**



Graphics:



4.14 Create a WPS

Welding Procedure Specification

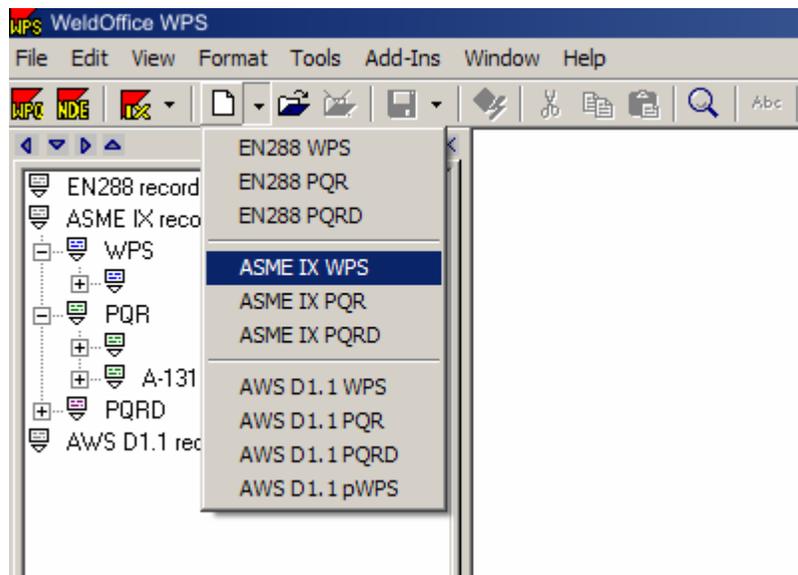
Steps to creating a WPS from a blank form will be described in sections to follow.

The variables listed below are code dependent. It is attempted to describe all the variables, but please note that depending on the code selected, the user will see more or less variables then described in the following sections.

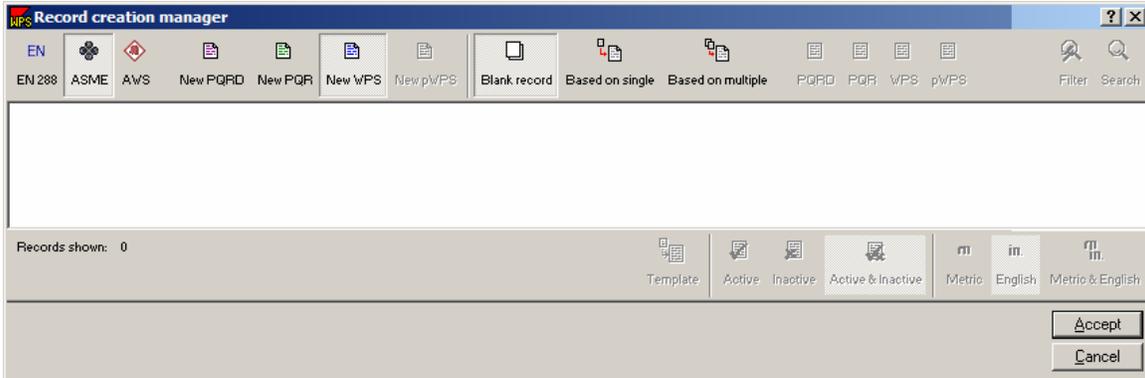
4.14.1 Open a blank WPS

There are three ways to do this:

1. Click on the down arrow next to the New icon  and select the type of WPS to create (EN, ASME, or AWS).



2. Click on the **New**  icon which will open the **Record Creation Manager**. From here select the Code, New WPS, and Blank record. Click **Accept**. A new WPS will appear.

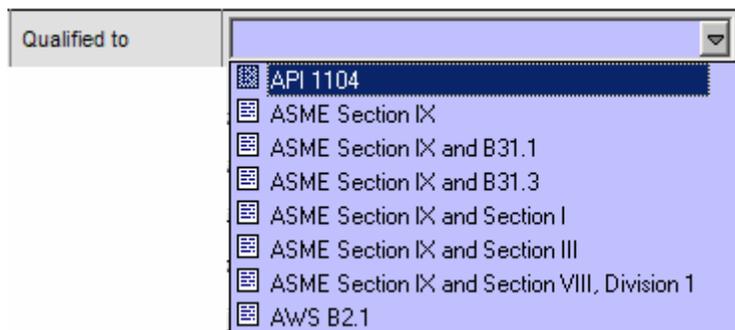


- From the main menu click on **File**, then **New**. This will open the **Record creation manager** screen. Follow the same steps as listed above.

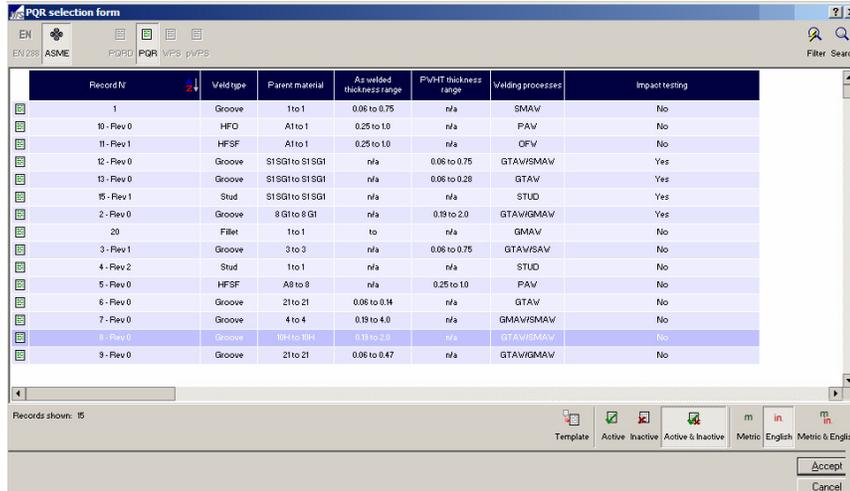
4.14.2 Filling in the Header information

WPS - Page one		WPS - Page two		Additional information	
		C-spec P.O. Box 27604, Concord, California, 94527, +1-877-977-7999 Welding Procedure Specification - Page 1 C-spec WeldOffice® Software			
		WPS record number	<input type="text"/>	Revision	<input type="text"/>
Date	<input type="text" value="1/19/2005"/>			Company name	<input type="text"/>
Supporting PQR(s)	<input type="text"/>				
Reference docs.	<input type="text"/>				
Scope	<input type="text"/> <input type="checkbox"/> Groove <input type="checkbox"/> Corrosion resistant overlay <input type="checkbox"/> Hard-facing spray fuse <input type="checkbox"/> With PWHT <input type="checkbox"/> Impact tested <input type="checkbox"/> Fillet <input type="checkbox"/> Hardfacing overlay <input type="checkbox"/> Stud welding <input type="checkbox"/> No PWHT (As-welded)				
Joint	Joint details for this welding procedure specification in: <input type="checkbox"/> JOINTS section of this WPS <input type="checkbox"/> Production drawings <input type="checkbox"/> Engineering specifications <input type="checkbox"/> Reference documents				

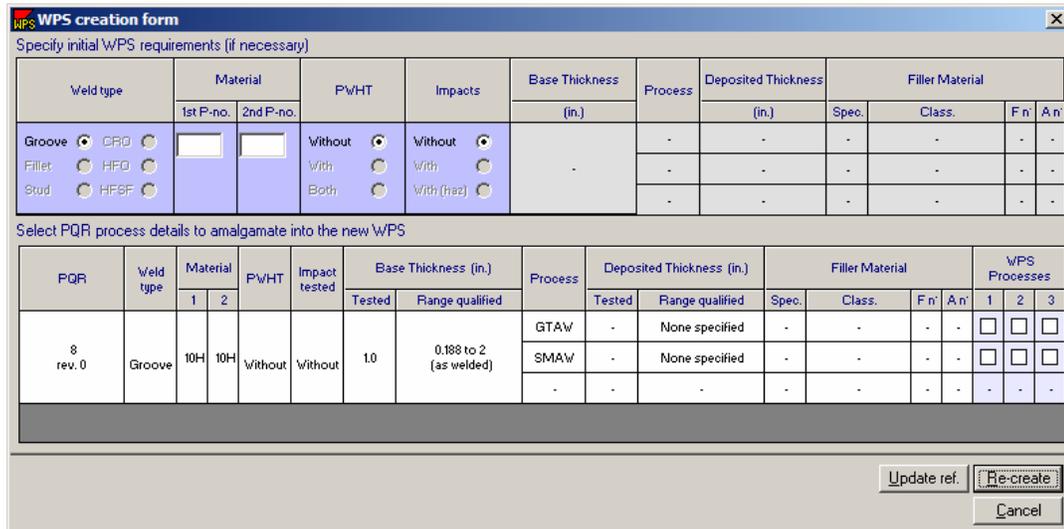
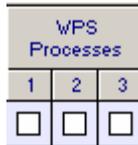
- **WPS Record Number:** Type the WPS number then press the Tab key. (The Tab key is generally used to move from field to field in a predefined order, usually top to bottom and/or left to right. Shift-Tab also moves backwards through this order, or simply move the cursor using the mouse and click in the relevant field.)
- **Revision Number:** Good practice suggests that a document revision number should always be included (even if this is an original document), so 0 (zero) is an acceptable number. Type the number in and then press Tab. The software does allow the user to leave this field blank if necessary.
- **Qualified To:** From the drop down menu select the code that this WPS/PQR was qualified to.



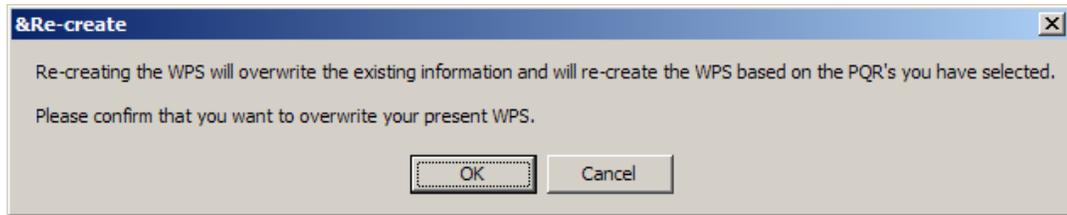
- **Date:** Tab over the date field on the WPS form. This is usually the date the form was created, but in general, the user can enter whatever date needed. If the user wanted to put tomorrow's date on the document, click on the calendar access button at the right of the field. This displays the calendar. To select any other date, click on the date and click Accept. *WeldOffice®* WPS will use the date format defined in Windows settings. It is recommended that a 4-digit year be used to avoid any confusion. The user can also type the date directly into the box.
- **Company Name:** Type in the company name of who owns the procedure. There is also a drop down menu that the user can select from.
- **Supporting PQR(s):** The user can type in PQR numbers that support this WPS. The user can also select from the **Record Selection Manager** by clicking on the  button (after clicking in the Supporting PQR box, this button will show up). Once the manager opens, select the procedure(s) that support this WPS and click **Accept**.



Another window will open called the **WPS Creation Form**. There are two sections to this form, WPS requirements and the PQR Process details. In the WPS requirements section, make sure that the selections that are made are correct. If necessary, make changes. Then in the PQR process details section, select the process(s) that are to be used on the WPS, by clicking in the boxes provided.



Click on Re-Create when finished. The following message will appear:



This is to let the user know that information will be pulled from the PQR and placed in the WPS, and potentially overwrite any information that has been entered into the WPS. Click OK to accept the changes. This will move all of the selected data to the current WPS.

The update reference button only updates the PQR number selected. It does not update any other information.

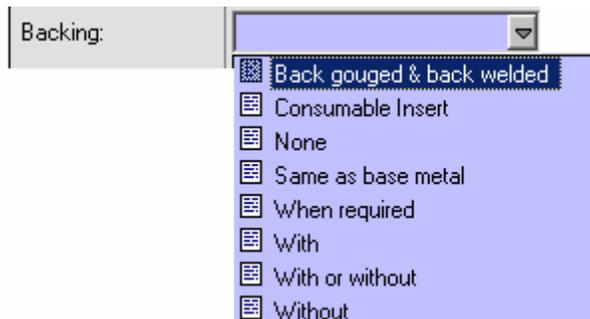
This tool comes in very handy when dealing with multiple PQRs.

- **Reference Documents:** If there are any reference documents, list them here. For instance: a drawing number, general standards....
- **Scope:** Type in the general type of WPS this record represents. For instance: "Shielded metal arc and flux cored arc welding of carbon steel for impact tested and PWHT applications".
- **Check Boxes:** Click on any of the check boxes that are relevant to this WPS. The dynamic forms in *WeldOffice*[®] WPS use these check boxes to determine which fields are needed. For example, when "With PWHT" is not selected, *WeldOffice*[®] WPS will not require data to be entered for PWHT Thickness Range Qualified, in the Base Metal section.
- **Joint:** Use the check boxes to select where the joint details for this WPS are located.

4.14.3 Filling in the Welding Process information

WELDING PROCESSES			
Welding process			
Type			

- **Type:** From the drop down menu, select the type of material. This will automatically fill in the P-no and Grp-no. boxes if the material is selected from the drop down menu. It will also automatically fill in the welded to section with the same material information. If this is a dissimilar weld, simply click in the Welded to field and select another material.
- **Backing:** From the drop down menu, select if backing is used and what type or none.



- **Retainers:** From the drop down menu, select if retainers are used and what type or none.
- **Notes:** Write any notes that may pertain to the base metal section. If the user has any notes saved in the database, they will appear in the drop down window.
- **Thickness Range Qualified:** *WeldOffice*[®] *WPS* will automatically fill out this section based on the PQR testing and whether it was conducted on PWHT material or as-welded condition.
- **Pipe/Tube diameter range qualified:** From the PQR selected, *WeldOffice*[®] *WPS* will calculate the diameter range qualified and automatically update the form.

4.14.5 Fill in the Filler Metal Information

FILLER METALS (QW-404)						THICKNESS RANGE QUALIFIED (in.)			
	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded		With PWHT	
						Min.	Max.	Min.	Max.
GTAW									
Cons. insert						<input type="radio"/> Required <input checked="" type="radio"/> Optional <input type="radio"/> None			
Flux						<input type="radio"/> Required <input type="radio"/> Optional <input checked="" type="radio"/> None			
Consumable insert size (in.)									

Note: Different processes may bring up different options regarding the fill metals and consumables.

- SFA Specification:** The SFA specification is the standard to which the filler metal is made. Click in the box, and then click on the database icon  to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically. See section 4.20 for more information on the material databases.
- AWS Classification:** This is a classification based on the chemical content of the filler metal. Click in the box, and then click on the database icon  to open the filler metal database. Choose one of these filler metals base on information that is known about the filler metal. The rest of the information will be filled in automatically. If the user has already selected a filler metal from the data base, this information will already be filled in. See section 4.20 for more information on the material databases.

TIP: Multiple filler metal classifications for one process may be specified. In the drop down menu select the SFA specification. Then double click on a filler metal classification. *WeldOffice® WPS* will then narrow down the field to only those filler metals with the same F-No.'s. Double click on any other filler metal classification and it will appear on the right hand side of the screen under selected classifications. To include another F-No., select a different F-no. from the drop down side on the left hand side of the screen. Double click on those filler metal classifications to be included in the WPS. In the Notes section of the WPS, these filler metal classifications will appear as shown below.

WPS Filler material selection

AWS classification:

AWS/SFA specification: 5.10

F-no.: 21

A-no.: NA

UNS:

Show: GTAW (21)
 GTAW (21)
 All materials

Type: Solid
 Metal cored
 Flux cored
 Powder
 Insert
 Flux
 Other types
 All types

Include discontinued

Classification	Spec.	F-no.	A-no.	UNS	Comment
ER1100	5.10	21	NA	A91100	Aluminum GMAW bare electrode
ER1188	5.10	21	NA	A91188	Aluminum GMAW bare electrode
R1100	5.10	21	NA	A91100	Aluminum OFW/GTAW/PAW bare rod
R1188	5.10	21	NA	A91188	Aluminum OFW/GTAW/PAW bare rod

Selected classifications: ER1100, ER1188

Accept
Cancel

NOTES

NOTES:
 The following AWS/SFA classifications can be used with this procedure:
 (gtaw note) ER1100, R1188, R5554, R5654

- **Filler Metal F-Number:** This is an ASME grouping of Filler metals based on their weldability. To find an F-number for a filler metal, look inside the filler metal database. If the user has already selected a filler metal from the data base, this information will already be filled in.
- **Weld metal A-number:** This is a grouping of weld metal chemistries for ferritic materials. To find an A-Number for a certain filler metal, search in the filler metal database. If the user has already selected a filler metal from the data base, this information, if given, will already be filled in.
- **Filler Metal Trade Name:** Type in the trade name of the filler metal used.
- **Ranges Qualified:** These are based on a PQR and will be filled in automatically, based on as welded condition or PWHT.

- **Consumable Insert:** List the supplemental filler SFA, classification, F-No., A-No. and chemical analysis of the consumable insert.
- **Flux:** List the supplemental filler SFA, classification, F-No., A-No. and chemical analysis of the flux.
- **Consumable Insert Size:** List the insert thickness.
- **Supplemental Filler Metal:** List the supplemental filler SFA, classification, F-No., A-No. and chemical analysis.

4.14.6 Fill in the Welding Process Information

Depending on the information filled out above and the PQR's that were selected, *WeldOffice® WPS* creates a list of essential and non-essential items that need to be documented for the WPS. The figure below shows an example for a process which requires GTAW and SMAW with no PWHT. *WeldOffice® WPS* allows the user to specify up to three processes each with a maximum of five filler metal sizes.

WELDING PROCEDURE		GTAW	SMAW
Welding process			
Type			
Minimum preheat/interpass temp. (F)	50	50	
Maximum interpass temperature (F)			
Tungsten size (in.)			
Tungsten type			
Filler metal size (in.)			
Layer number			
Position of groove	.	.	
Weld progression	.	.	
Current/polarity			
Amperes			
Volts			
Travel speed (in./min)			
Maximum heat input (kJ/in.)			
DC pulsing current			
Shielding gas: Type			
Flow rate (cfh)			
Trailing gas: Type			
Flow rate (cfh)			
Backing gas: Type			
Flow rate (cfh)			
String or weave			
Orifice/gas cup size			
Multi/Single pass per side			
Maximum pass thickness (in.)			
Weld deposit chemistry			
Notes			

Fill in the information where prompted.

TIP: Remember to utilize the drop down menus as much as possible. *WeldOffice® WPS* prevents the entry of non-relevant information and minimizes the potential introduction of errors by having the dynamic forms.

TIP: The user can select up to five filler metal sizes for each process. To do this, click inside the filler metal size field. Then on the toolbar at the top of the page click on  the **Add Column** button to add a column. This will also split all other applicable fields allowing specific information to be entered for each filler metal size. To delete a column, click in the field to delete and click on  the **Remove column** button.

WELDING PROCEDURE

Welding process	GMAW
Type	Semi-automatic
Minimum preheat/interpass temp. (F)	50
Maximum interpass temperature (F)	75
Filler metal size (in.)	0.035
Layer number	
Position of groove	All
Weld progression	-
Current/polarity	
Amperes	
Volts	

WELDING PROCEDURE

Welding process	GMAW
Type	Semi-automatic
Minimum preheat/interpass temp. (F)	50
Maximum interpass temperature (F)	75
Filler metal size (in.)	0.035
Layer number	
Position of groove	All
Weld progression	-
Current/polarity	
Amperes	
Volts	

4.14.7 Fill out the Joint Detail section

The amount of information necessary in this section depends on what method of joint detailing was selected in the header section.

Joint	Joint details for this welding procedure specification in:
	<input type="checkbox"/> JOINTS section of this WPS <input type="checkbox"/> Production drawings <input type="checkbox"/> Engineering specifications <input type="checkbox"/> Reference documents

If **JOINTS section of this WPS** was checked, then the Joints section will appear on Page two as shown below. For all other selections, the Joints section will not appear, but it is assumed that in the Notes section data will be inputted as far as document numbers, etc...

JOINTS (QW-402) Typical joint(s). See actual production drawings and engineering specifications for details.

- **Joint Design Diagram:** Move the cursor over one of the joint design boxes. Left click in the box to be taken to the **Sketch Selection Manager** (section 4.22). Select a joint and fill in the necessary information.
 - Use sketches from the current procedure. In this case, the Blank sketch, Current sketch, Joint design sketch and Welding sequence sketch are all blank, as the preview will show. If editing the current sketch or creating a welding sequence sketch from the joint design sketch, use these options.

- Use any of the pre-drawn templates. For example, double-click on Joint design sketches, then single-click on Unbacked single V groove. A thumbnail sketch of this template appears in the preview box. All the template joint designs do not have any dimensions, so to complete these sketches, follow the instructions in the Drawing section (4.22).
- Use any sketches from other procedures that have been created. These may be simply slight modifications of templates or completely custom-drawn sketches.

4.14.8 Fill in the Preheat Reference information

PREHEAT TABLE	
Applicable standard	
ASME Section I	175 (°F) for thickness over 1 (in.) and specified maximum carbon content over 0.30%. 50 (°F) for all other materials.

The P-numbers selected in section 4 for the base metals, will determine what information is available in this section. If the P-numbers selected do not need preheat, there will be no information that appears.

- Click in the Applicable Standard box to pick a construction code from the drop down list. If there is any information about preheat it will appear in the box to the right of the code box.

4.14.9 Fill in the PWHT information

POST WELD HEAT TREATMENT (QW-407)			
Temperature (F)	<input type="text"/>	Time (hrs)	<input type="text"/>
Heating rate (F/hr)	<input type="text"/>	Method	<input type="text"/>
Cooling rate (F/hr)	<input type="text"/>	Method	<input type="text"/>
Notes	<input type="text"/>		
<input type="checkbox"/> Preheat maintenance after completion of welding prior to PWHT (QW-406.2): Temperature (F) <input type="text"/>			

On page 1, if the "with PWHT" box is checked, this PWHT specification box will appear on the second page. If there is no PWHT conducted, this box will not be available.

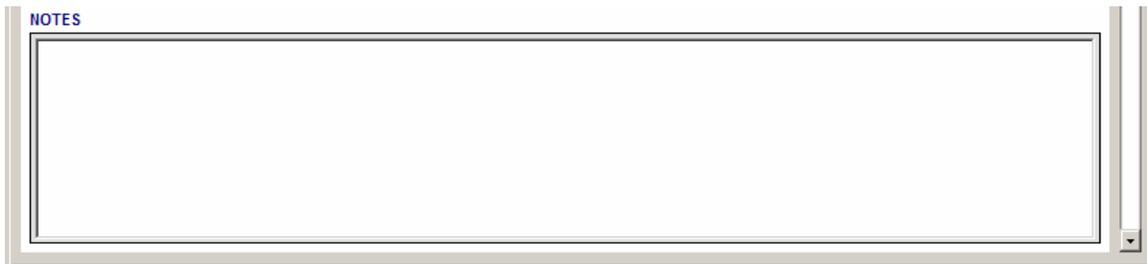
- **Temperature:** Type in the temperature used for PWHT.
- **Time:** Enter the PWHT time (For instance 2hrs.).
- **Type:** Select from the drop down the type of PWHT.
- **Heating Rate:** Enter the heating rate used.
- **Method:** Select the method used to heat the sample up to the PWHT temperature from the drop down menu.
- **Cooling Rate:** Enter the cooling rate used.
- **Method:** Select the method used to cool the sample to room temperature from the drop down menu.
- **Notes:** Enter any notes that may pertain to the PWHT.
- **Preheat Maintenance:** If preheat maintenance is required, click in the check box, to signify that preheat maintenance was used. Then enter a temperature that is to be maintained.

4.14.10 Fill in the Technique information

TECHNIQUE (QW-410)	
Peening	<input type="text"/>
Surface preparation	<input type="text"/>
Initial/interpass cleaning	<input type="text"/>
Back gouging method	<input type="text"/>

- **Peening:** From the drop down menu select if peening is to be used
- **Surface Preparation:** From the drop down menu pick if the surface was chemically cleaned or sandblasted. If another option is needed, type it in the box.
- **Initial/Interpass Cleaning:** From the drop down menu, select the method for cleaning.
- **Back Gouging Method:** From the drop down menu, select the method of back gouging or "none".

4.14.11 Fill in the Notes section

A rectangular box with a double border, intended for entering additional information. The word "NOTES" is written in blue text in the top left corner of the box. The box is empty.

Fill in any additional information that may be needed.

4.14.12 Fill out the Additional Information page

On the Additional Information Page, the user can add any other information necessary for the procedure. This can include Excel tables, pictures, video, sounds, etc.

WPS - Page one | WPS - Page two | **Additional information**

C-spec
 P.O. Box 27604, Concord, California 94527, +1-877-977-7999
ASME - Additional information (WPS)
 C-spec WeldOffice® Software

WPS record number	P1-AT-Lh-CVH	Revision 0	Qualified to	ASME Section IX
Date	11/28/2000			

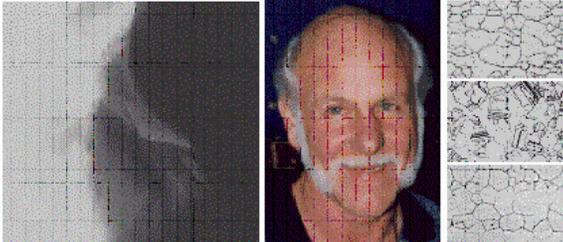
This "Additional information" page can be used to provide additional instructions in the form of **formatted text**.

Tables (Cut and paste from Excel spreadsheets)

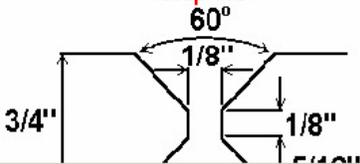
	Sound	Video
instructions	listen	watch
short-circuiting arc transfer	listen	watch
globular transfer	listen	watch
spray transfer	listen	watch

Instructions can include video or sound. Click on any of the above selections.

Radiographs **Pictures** **Micrographs**



Graphics:



4.15 Auto Create a WPS from a Single PQR

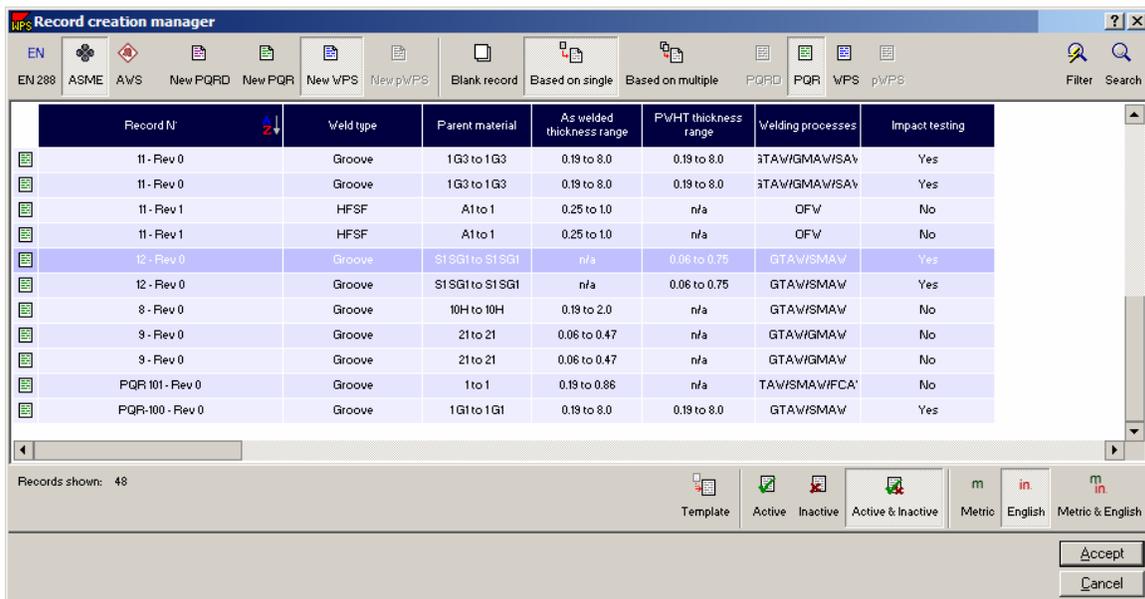
Weld Procedure Specification from a Procedure Qualification Record

Once a PQR has been created, *WeldOffice® WPS* can automatically create a WPS based on that PQR.

There are two ways to create a WPS from a PQR:

1. Use the File - New method

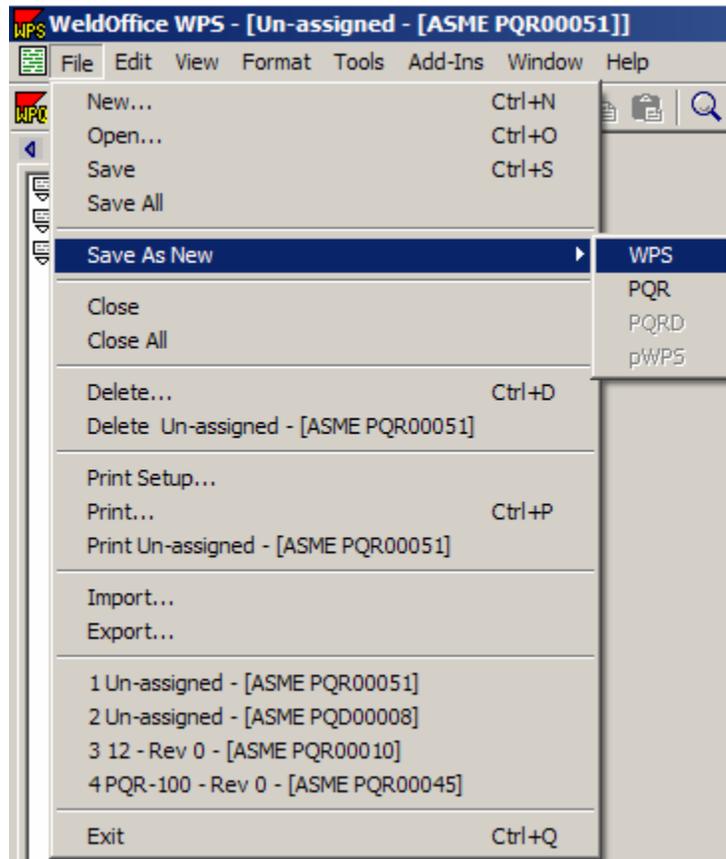
- Click on **File** and then **New**. This will open the **Record Creation Manager**.
- From the **Record Creation Manager**, click on the desired **code**, click on **New WPS** and then click on **Based on Single**. Click on **PQR** for the reference document.
- The list of PQR records will appear. Select a **PQR** to create the WPS from by clicking on it. Then click on **Accept**.



- The new WPS will open.

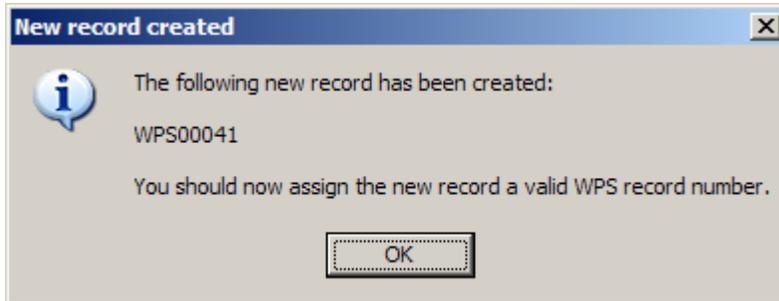
2. Use the Save As New method

- Open the PQR to create the WPS from. (If the user just created the PQR leave it open). To open a PQR, click on File and then Open or double click on the record on the navigation bar.
- Once the PQR is open, click on **File**, and then **Save as New**.



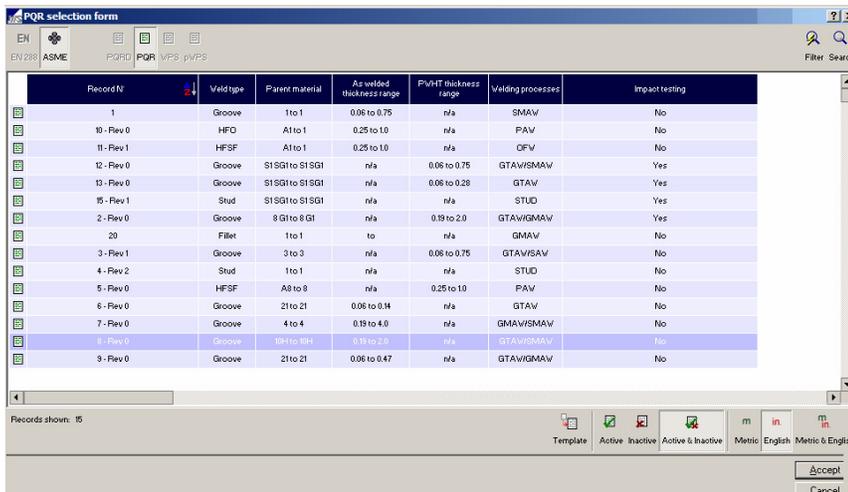
- Select **WPS** when prompted.
- *WeldOffice*[®] WPS will then take the pertinent data from the PQR and place it in the WPS. Additionally, the code checking supplies the user with even more data straight out of the code such as thickness and diameter ranges qualified.

- The user will be prompted with a reminder to input a record number for the new WPS.



3. Supporting PQR method

- Open a blank WPS.
- Click in the box titled Supporting PQR (s) in the header section.
- The user can type in PQR number that support this WPS. The user can also select from the **Record Selection Manager** by clicking on the  button (after clicking in the Supporting PQR box, this button will appear). Once the manager opens, select the procedure that supports this WPS and click **Accept**.



- Another window will open called the **WPS Creation Form**. There are two sections to this form, WPS requirements and the PQR Process details. In the WPS requirements section, make sure that

the selections that are made are correct. If necessary, make changes. Then in the PQR process details section, select the process(s) that are to be used on the WPS, by clicking in the boxes provided.

WPS creation form

Specify initial WPS requirements (if necessary)

Weld type	Material		PWHT	Impacts	Base Thickness (in.)	Process	Deposited Thickness (in.)		Filler Material		
	1st P-no.	2nd P-no.					Spec.	Class.	F n	A n	
Groove <input checked="" type="radio"/> CPD <input type="radio"/>			Without <input checked="" type="radio"/>	Without <input checked="" type="radio"/>		-	-	-	-	-	-
Fillet <input type="radio"/> HFD <input type="radio"/>			With <input type="radio"/>	With <input type="radio"/>		-	-	-	-	-	-
Stud <input type="radio"/> HF8F <input type="radio"/>			Both <input type="radio"/>	With (haz) <input type="radio"/>		-	-	-	-	-	-

Select PQR process details to amalgamate into the new WPS

PQR	Weld type	Material		PWHT	Impact tested	Base Thickness (in.)		Process	Deposited Thickness (in.)		Filler Material			WPS Processes						
		1	2			Tested	Flange qualified		Tested	Flange qualified	Spec.	Class.	F n	A n	1	2	3			
		8 rev. 0	Groove			10H	10H		Without	Without	1.0	0.188 to 2 (as welded)	GTAW	-	None specified	-	-	-	-	-
								SMAW	-	None specified	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
								-	-	-	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update ref. **Re-create** Cancel

Click on Re-Create **Re-create** when finished. The following message will appear:

&Re-create

Re-creating the WPS will overwrite the existing information and will re-create the WPS based on the PQR's you have selected. Please confirm that you want to overwrite your present WPS.

OK Cancel

This is to let the user know that information will be pulled from the PQR and placed in the WPS, and potentially overwrite any information that has been entered into the WPS. Click OK to accept the changes. This will move all of the selected data to the current WPS.

The update reference button **Update ref.** only updates the PQR number selected. It does not update any other information.

This tool comes in very handy when dealing with multiple PQRs, section 4.16.

4.16 Auto Create a WPS from Multiple PQRs

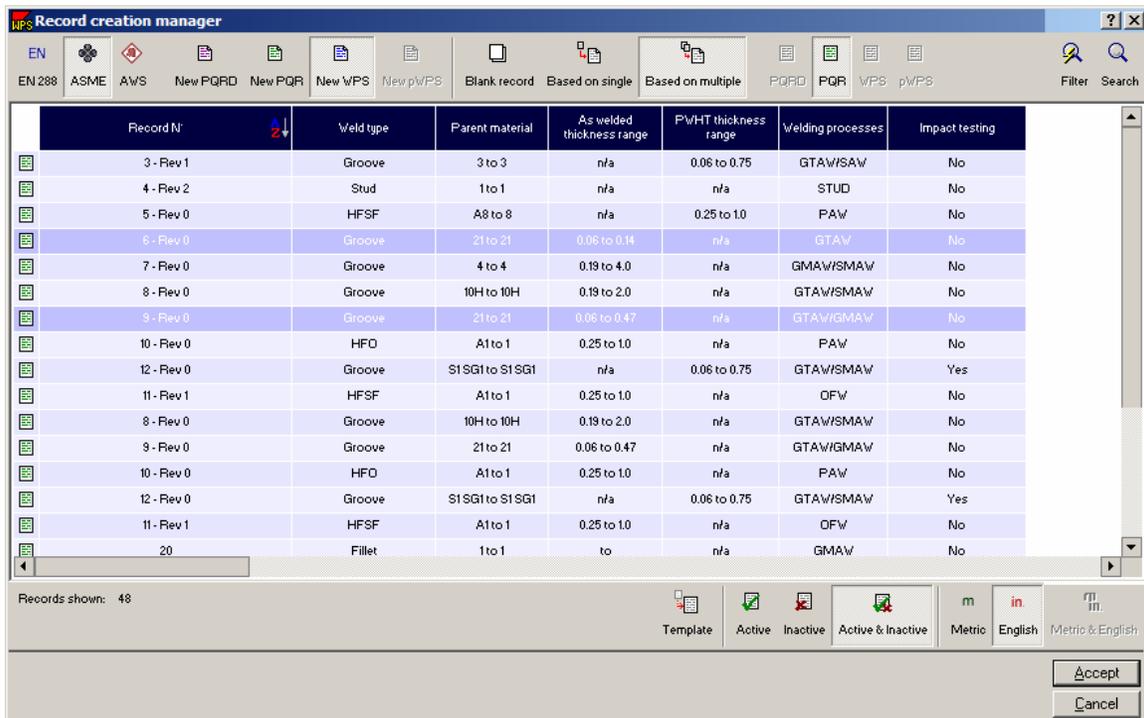
Weld Procedure Specification from multiple Procedure Qualification Records

Once a PQR has been created, *WeldOffice® WPS* can automatically create a WPS based on that PQR.

There are two ways to create a WPS from a PQR:

1. Use the File - New method

- Click on **File** and then **New**. This will open the **Record Creation Manager**.
- From the **Record Creation Manager**, click on the desired **code**, click on **New WPS** and then click on **Based on Multiple**. Click on **PQR** for the reference document.
- The list of PQR records will appear. Select the **PQRs** to create the WPS from by clicking on them. Hold shift down to select multiple. Then click on **Accept**.



- A WPS creation form window will open. In this window there are two sections, WPS and PQR section, which are highlighted in green.

Specify initial WPS requirements (if necessary)

Weld type	Material		PWHT	Impacts	Base Thickness (in.)	Process	Deposited Thickness (in.)	Filler Material				
	1st P-no.	2nd P-no.						Spec.	Class.	F n'	A n'	
Groove <input checked="" type="radio"/> CRD <input type="radio"/>			Without <input checked="" type="radio"/>	Without <input checked="" type="radio"/>		-	-	-	-	-	-	-
Fillet <input type="radio"/> HFD <input type="radio"/>			With <input type="radio"/>	With <input type="radio"/>		-	-	-	-	-	-	-
Stud <input type="radio"/> HFSF <input type="radio"/>			Both <input type="radio"/>	With (haz) <input type="radio"/>		-	-	-	-	-	-	-

Select PQR process details to merge into the new WPS.

PQR	Weld type	Material		PWHT	Impact tested	Base Thickness (in.)		Process	Deposited Thickness (in.)		Filler Material				WPS Processes							
		1	2			Tested	Range qualified		Tested	Range qualified	Spec.	Class.	F n'	A n'	1	2	3					
6 rev. 0	Groove	21	21	Without	Without	0.07	0.063 to 0.144 (as welded)	GTAW	-	None specified	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
								-	-	-	-	-	-	-	-	-	-	-	-	-		
								-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9 rev. 0	Groove	21	21	Without	Without	0.24	0.063 to 0.474 (as welded)	GTAW	-	None specified	-	-	-	-	-	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
								GMAW	-	None specified	-	-	-	-	-	-	-	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
								-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Accept Cancel

- The section that needs to be focused on first is the PQR section with the selection of 'WPS processes'. The selected PQRs are listed with a few of the details from each PQR. The user must select the process to include on the WPS. Click in the boxes that represent the processes used on the WPS. The WPS can have up to 3 processes, that is why there are three columns under 'WPS Processes'.

PQR	Weld type	Material		PWHT	Impact tested	Base Thickness (in.)		Process	Deposited Thickness (in.)		Filler Material				WPS Processes							
		1	2			Tested	Range qualified		Tested	Range qualified	Spec.	Class.	F n'	A n'	1	2	3					
6 rev. 0	Groove	21	21	Without	Without	0.07	0.063 to 0.144 (as welded)	GTAW	-	None specified	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
								-	-	-	-	-	-	-	-	-	-	-	-			
								-	-	-	-	-	-	-	-	-	-	-	-			
9 rev. 0	Groove	21	21	Without	Without	0.24	0.063 to 0.474 (as welded)	GTAW	-	None specified	-	-	-	-	-	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
								GMAW	-	None specified	-	-	-	-	-	-	-	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
								-	-	-	-	-	-	-	-	-	-	-	-	-		

Once the processes have been selected, the information in the WPS section will be filled out as shown below.

WPS creation form

Specify initial WPS requirements (if necessary)

Weld type	Material		PWHT	Impacts	Base Thickness (in.)	Process	Deposited Thickness (in.)	Filler Material			
	1st P-no.	2nd P-no.						Spec.	Class.	F n	A n
Groove <input checked="" type="radio"/> CRG <input type="radio"/>	21	21	Without <input checked="" type="radio"/>	Without <input checked="" type="radio"/>	0.063 to 0.474 (as welded)	GTAW	None specified	-	-	-	-
Fillet <input type="radio"/> HFD <input type="radio"/>			With <input type="radio"/>	With <input type="radio"/>		GMAW	None specified	-	-	-	-
Stud <input type="radio"/> HFSF <input type="radio"/>			Both <input type="radio"/>	With (haz) <input type="radio"/>		GTAW	None specified	-	-	-	-

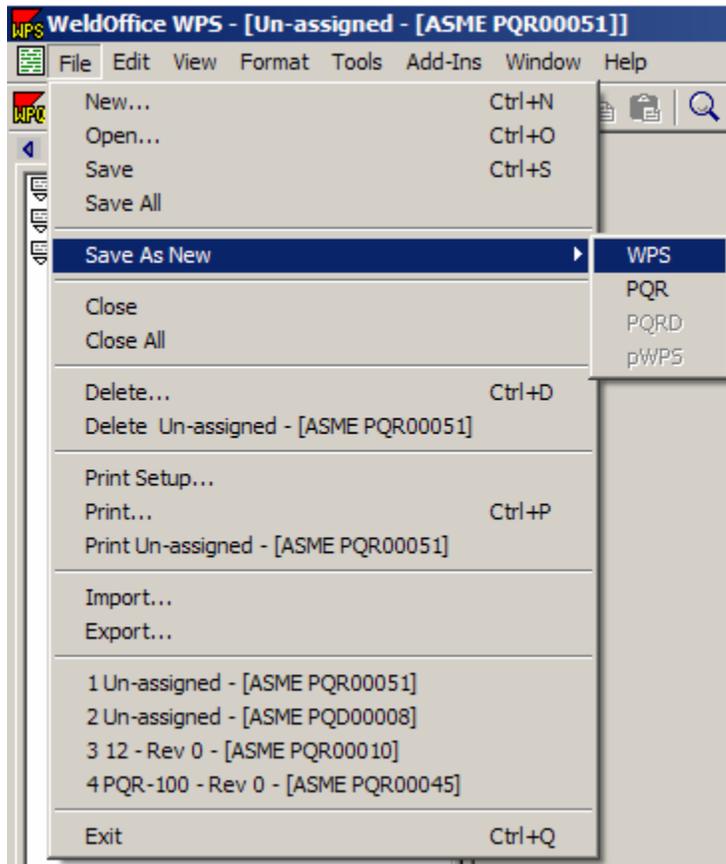
Select PQR process details to merge into the new WPS.

PQR	Weld type	Material		PWHT	Impact tested	Base Thickness (in.)		Process	Deposited Thickness (in.)		Filler Material				WPS Processes				
		1	2			Tested	Range qualified		Tested	Range qualified	Spec.	Class.	F n	A n	1	2	3		
		6 rev. 0	Groove			21	21		Without	Without	0.07	0.063 to 0.144 (as welded)	GTAW	-	None specified	-	-	-	-
9 rev. 0	Groove	21	21	Without	Without	0.24	0.063 to 0.474 (as welded)	GTAW	-	None specified	-	-	-	-	-	-	<input type="checkbox"/>	-	<input checked="" type="checkbox"/>

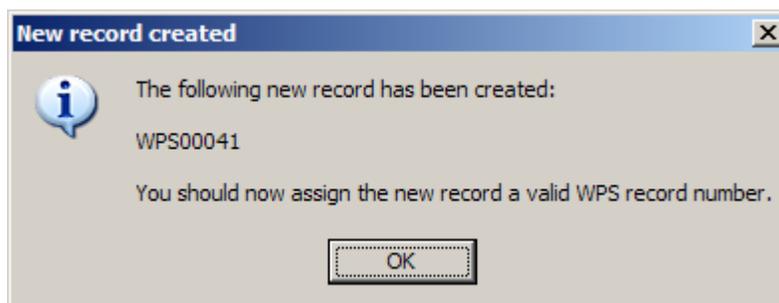
- Click Accept and the new WPS will open.

2. Use the Save As New method

- Open the PQR to create the WPS from. (If the user just created the PQR leave it open). To open a PQR, click on File and then Open or double click on the record on the navigation bar.
- Once the PQR is open, click on **File**, and then **Save as New**.

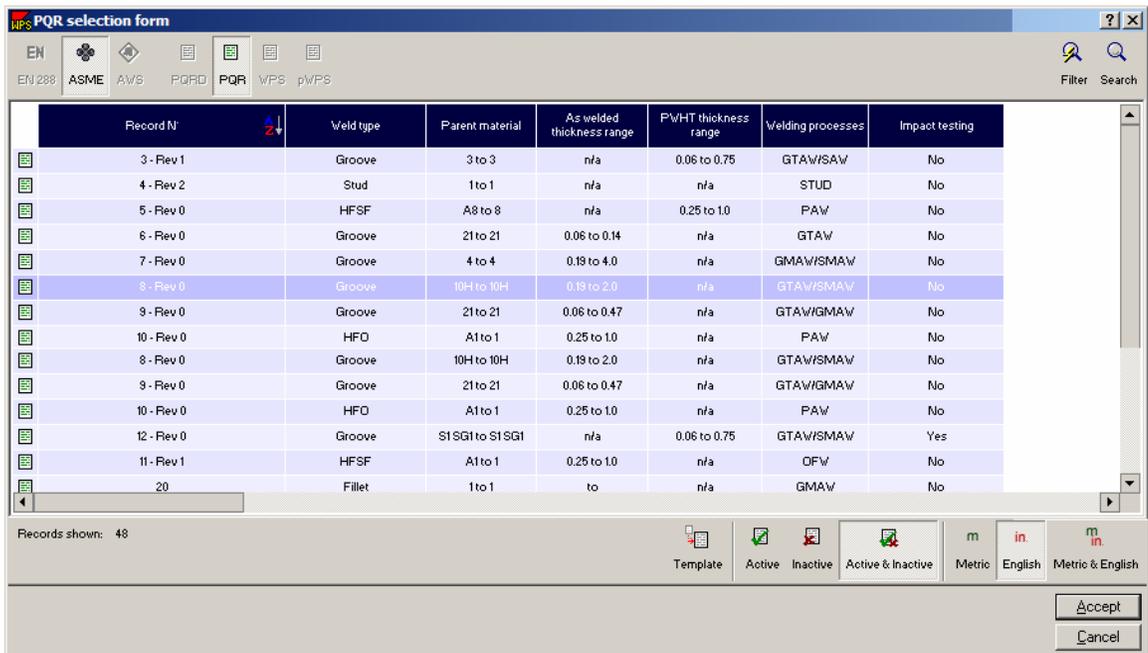


- Select **WPS** when prompted.
- *WeldOffice*[®] *WPS* will then take the pertinent data from the PQR and place it in the WPS. Additionally, the code checking supplies the user with even more data straight out of the code such as thickness and diameter ranges qualified.
- The user will be prompted with a reminder to input a record number for the new WPS.



4. Supporting PQR method

- Open a blank WPS.
- Click in the box titled Supporting PQR (s) in the header section.
- The user can type in PQR number that support this WPS. The user can also select from the **Record Selection Manager** by clicking on the  button (after clicking in the Supporting PQR box, this button will appear). Once the manager opens, select the procedure that supports this WPS and click **Accept**.
- When the user opened the WPS, they selected the code type. This is why the other code types are grayed out.



Record N	Weld type	Parent material	As welded thickness range	PWHT thickness range	Welding processes	Impact testing
3 - Rev 1	Groove	3 to 3	n/a	0.06 to 0.75	GTAW/SAW	No
4 - Rev 2	Stud	1 to 1	n/a	n/a	STUD	No
5 - Rev 0	HFSF	A8 to 8	n/a	0.25 to 1.0	PAW	No
6 - Rev 0	Groove	21 to 21	0.06 to 0.14	n/a	GTAW	No
7 - Rev 0	Groove	4 to 4	0.19 to 4.0	n/a	GMAW/SAW	No
8 - Rev 0	Groove	10H to 10H	0.19 to 2.0	n/a	GTAW/SAW	No
9 - Rev 0	Groove	21 to 21	0.06 to 0.47	n/a	GTAW/GMAW	No
10 - Rev 0	HFD	A1 to 1	0.25 to 1.0	n/a	PAW	No
8 - Rev 0	Groove	10H to 10H	0.19 to 2.0	n/a	GTAW/SAW	No
9 - Rev 0	Groove	21 to 21	0.06 to 0.47	n/a	GTAW/GMAW	No
10 - Rev 0	HFD	A1 to 1	0.25 to 1.0	n/a	PAW	No
12 - Rev 0	Groove	S1SG1 to S1SG1	n/a	0.06 to 0.75	GTAW/SAW	Yes
11 - Rev 1	HFSF	A1 to 1	0.25 to 1.0	n/a	DFW	No
20	Fillet	1 to 1	to	n/a	GMAW	No

- Another window will open called the **WPS Creation Form**. There are two sections to this form, WPS requirements and the PQR Process details. In the WPS requirements section, make sure that the selections that are made are correct. If necessary, make changes. Then in the PQR process details section, select the process(s) that are to be used on the WPS, by clicking in the boxes provided.

WPS creation form

Specify initial WPS requirements (if necessary)

Weld type	Material		PWHT	Impacts	Base Thickness (in.)	Process	Deposited Thickness (in.)	Filler Material			
	1st P-no.	2nd P-no.						Spec.	Class.	F n	A n
Groove <input checked="" type="radio"/> CPD <input type="radio"/>			Without <input checked="" type="radio"/>	Without <input checked="" type="radio"/>		-	-	-	-	-	-
Fillet <input type="radio"/> HFD <input type="radio"/>			With <input type="radio"/>	With <input type="radio"/>		-	-	-	-	-	-
Stud <input type="radio"/> HF8F <input type="radio"/>			Both <input type="radio"/>	With (haz) <input type="radio"/>		-	-	-	-	-	-

Select PQR process details to amalgamate into the new WPS

PQR	Weld type	Material		PWHT	Impact tested	Base Thickness (in.)		Process	Deposited Thickness (in.)		Filler Material				WPS Processes				
		1	2			Tested	Range qualified		Tested	Range qualified	Spec.	Class.	F n	A n	1	2	3		
		8 rev. 0	Groove			10H	10H		Without	Without	1.0	0.188 to 2 (as welded)	GTAW	-	None specified	-	-	-	-
								SMAW	-	None specified	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update ref. Re-create Cancel

Click on Re-Create  when finished. The following message will appear:

&Re-create

Re-creating the WPS will overwrite the existing information and will re-create the WPS based on the PQR's you have selected. Please confirm that you want to overwrite your present WPS.

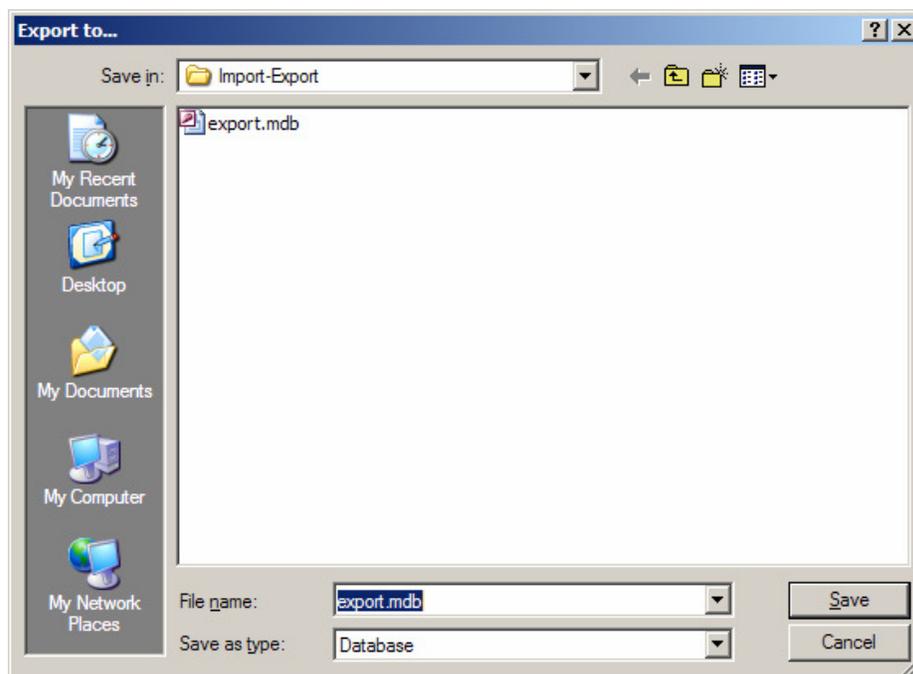
OK Cancel

This is to let the user know that information will be pulled from the PQR and placed in the WPS, and potentially overwrite any information that has been entered into the WPS. Click OK to accept the changes. This will move all of the selected data to the current WPS.

The update reference button  only updates the PQR number selected. It does not update any other information.

4. Specify the "style of report to be exported".
 - **Welding records** will export a complete welding record
 - **Record summary** will export a summary of the selected record(s)
 - **Summary card** will export a summary card of the selected record(s)
5. Select the report to export by double clicking on it. (To select more than one report to export, hold the **ctrl** button down while selecting the reports. Click **Accept** when finished.)
6. The user will be prompted to give the file a name and a location.

It is suggested that the user make a Import-Export folder under the WeldOffice WPS directory and then use "export" as the filename of the database to export. This way there is no confusion on what database to import later. Problems can occur when the master database is accidentally imported on to itself.



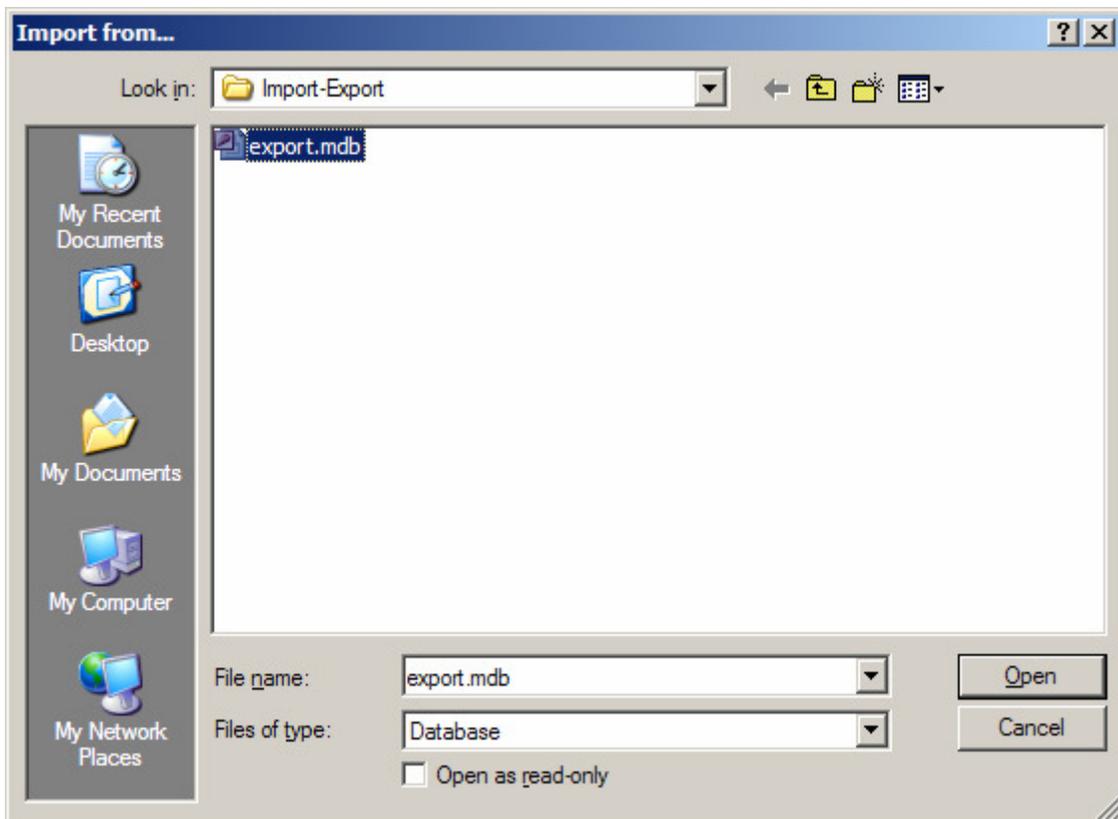
7. Click **Save** after choosing a name and location.
8. Bars will appear showing the progress of the export. When these bars disappear, the export was completed.

4.18 Importing Records

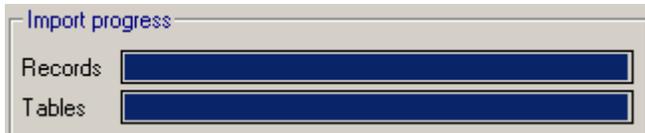
Using the Import Utility

Importing and exporting in the WeldOffice® software is used to share records between computers that can not share data through a network.

1. Click on *File* and then *Import*.
2. The **Import** dialog box will appear. Select the location of another database to import. Importing may only be done with Access database files exported from other WeldOffice® software installations.



3. Click *Open* in the **Import from** box after the file has been selected.
4. Importing bars will appear showing the user the progress of the import.



5. When the import progress bars disappear, the import will be complete. To open the imported files, click on *File* and then *Open* and double-click on the new record(s).

4.19 Finding Documents

Using the Record Selection Manager

The *Record Selection Manager* displays a list of documents (WPSs, PQRs, etc.) which are currently held on file for the appropriate welding standard. This method of selecting procedures is used in a number of places in *WeldOffice® WPS* including:

- Selecting documents to open for editing
- Selecting documents to print
- Selecting documents to export
- Selecting documents to view

To open the *Record Selection Manager*, click on **File** and then **Open**. The *Record Selection Manager*, as shown below, will open.

Record N	Weld type	Parent material	As-welded thickness range	PWHT thickness range	Welding processes	Impact testing
	Groove	to	to	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
52	Groove	to	n/a	n/a	GMAV	No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	to	n/a		No
	Fillet	U to U	no min. to no max.	n/a	GMAV	No
	Groove	G to G	n/a	to	TEST	Yes
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a	GMAV	No
	HFD	to	n/a	n/a	PAV	No
	Groove	to	n/a	n/a		No
	HFSF	to	n/a	n/a	DFW	No
20	Fillet	U to U	to	n/a	GMAV	No
	Groove	to	n/a	n/a		No
	Groove	to	n/a	n/a	GMAV	No

2. Select the code applicable to the desired record.



3. Then specify the type of record to be opened by selecting PQRD, PQR, WPS or pWPS.



4. To easily locate a specific record, use one or more of the following Sorting/Filtering tools:

- Clicking on a column header will sort the records alphabetically by that column. Use this feature to easily scroll through all of the records.

- A series of filtering icons have been provided to hide undesirable records from view. By selecting one of these the user can:



- Allow only templates to be visible
- Allow only active and/or inactive records to be visible
- Allow only metric and/or imperials records to be visible

- For the most comprehensive searching capabilities, click on one of the search buttons to convert the Record Selection Manager into a Search Engine.

For the most comprehensive searching capabilities, click on one of the search buttons to convert the Record Selection Manager into a search Engine.

Using this search feature, specify one or more of the known parameters of the desired record in order to filter the data. The more information specified, the fewer records will appear.

Once filtering information has been specified, click on the Filter Records icon.



5. When the desired record has been located, select it by clicking the cursor in the box of the record to highlight it. To select multiple records, hold the **ctrl** key and click on any additional records.

6. With all desired record(s) selected, click on the **Accept** icon at the bottom

right hand corner of the screen.

or

7. Double click on a single record to open it.

4.20 Material Databases

Using the databases of Base Metals, Filler Metals, and Pipe Schedules

1. Access to the materials databases can be done by clicking on the database icon  in one of the following fields on any form.

- Base Metal specification (Base material database)
- Base metal P-no. (Base material database)
- Base metal G-no. (Base material database)
- Filler metal specification (Filler material database)
- Filler metal classification (Filler material database)
- Filler metal F-number (Filler material database)
- Filler metal A-number (Filler material database)
- Base metal size (Pipe schedule log)
- Base metal schedule (Pipe schedule log)
- Base metal thickness (Pipe schedule log)
- Base metal diameter (Pipe schedule log)

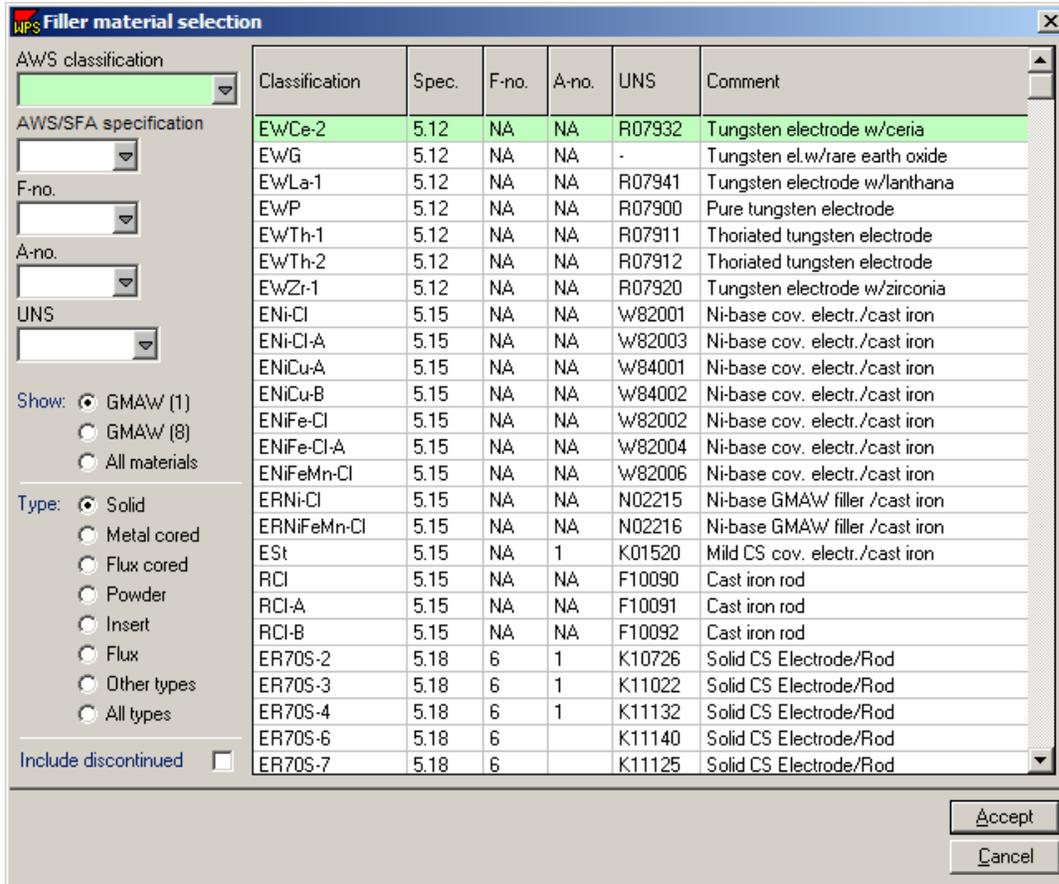
2. The filler and base metal databases contain over 2000 ASME and AWS materials each. To easily locate the desired material, use one of the following Sorting/Filtering methods:

A. Several fields are provided on the left hand side of the databases to allow filtering of the data. From one or more of these fields, select known variables (such as P-no. or SFA). This will narrow the database down which will allow easier location of the desired materials.

B. Clicking on the header of any column will sort the materials alphabetically by that column.

Product form	Spec.	Grade	UNS	Condition	P	G	KSI	D1.1 Group	Nominal composition	Product form
	A-1008	SS 30			U		45	I	C	Sheet & Strip
	A-1008	DS Type B			S1	SG1	40	U	C	Sheet & Strip
	A-1008	SS 33 Type 1			U		48	I	C	Sheet & Strip
	A-1008	HSLAS-F 50			U		60	II	C	Sheet & Strip
	A-1008	HSLAS 55 Cl. 2			U		65	II	C	Sheet & Strip
	A-1008	HSLAS 55 Cl. 1			U		70	II	C	Sheet & Strip
	A-1008	HSLAS 50 Cl. 2			U		60	II	C	Sheet & Strip
	A-1008	HSLAS 50 Cl. 1			U		65	II	C	Sheet & Strip
	A-1008	HSLAS 45 Cl. 2			U		55	II	C	Sheet & Strip
	A-1008	HSLAS 45 Cl. 1			U		60	II	C	Sheet & Strip
	A-1008	SS 40 Type 1			U		52	I	C	Sheet & Strip
	A-1011	HSLAS 50 Cl. 1			U		65	II	C	Sheet & Strip
	A-1011	SS 30			U		49	I	C	Sheet & Strip
	A-1011	SS 55			U		70	II	C	Sheet & Strip
	A-1011	SS 50			U		65	II	C	Sheet & Strip
	A-1011	SS 45			U		60	I	C	Sheet & Strip
	A-1011	SS 40			U		55	I	C	Sheet & Strip
	A-1011	SS 36 Type 1			U		53	I	C	Sheet & Strip
	A-1011	SS 33			U		52	I	C	Sheet & Strip
	A-1011	HSLAS-F 50			U		60	II	C	Sheet & Strip

3. The filler material database offers even more filtering capabilities. Based on the base materials and process specified on the record (GMAW with P1 and P8 material in the example below) the database has offered two additional filtering buttons. The first one allows filtering the database to show only those filler metals possible to weld with GMAW and P1 while the second button shows only those filler metals possible to weld with GMAW and P8.



4. The Pipe Schedule log offers an easy to read matrix for finding the desired pipe size and schedule. Locate the diameter in the left hand column and then move to the right to find the proper schedule.

The pipe schedule log also offers three different tables for Carbon Steel, Stainless Steel and Tube/Gauge thickness.

WPS Pipe schedule log ? X

Carbon steel and alloys (ANSI-B36.10) | Stainless steel (ANSI-B36.19) | Tube gauge/thickness table

Nominal pipe size	Outside diameter	Schedule 10	Schedule 20	Schedule 30	Standard	Schedule 40	Schedule 60	XS	Schedule 80	Schedule 100	Schedule 120	Schedule 140	Schedule 160	XX
(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
40	40.0				0.375			0.500						
42	42.0				0.375			0.500						
0.125	0.405				0.068	0.068		0.095	0.095					
0.25	0.540				0.088	0.088		0.119	0.119					
0.375	0.675				0.091	0.091		0.126	0.126					
0.50	0.840				0.109	0.109		0.147	0.147				0.188	0.294
0.75	1.050				0.113	0.113		0.154	0.154				0.219	0.308
1	1.315				0.133	0.133		0.179	0.179				0.250	0.358
1.25	1.660				0.140	0.140		0.191	0.191				0.250	0.382
1.50	1.900				0.145	0.145		0.200	0.200				0.281	0.400
2	2.375				0.154	0.154		0.218	0.218				0.344	0.436
2.50	2.875				0.203	0.203		0.276	0.276				0.375	0.552
3	3.5				0.216	0.216		0.300	0.300				0.438	0.600
3.50	4.0				0.226	0.226		0.318	0.318					
4	4.5				0.237	0.237		0.337	0.337		0.438		0.531	0.674
5	5.563				0.258	0.258		0.375	0.375		0.500		0.625	0.750
6	6.625				0.280	0.280		0.432	0.432		0.562		0.719	0.864
8	8.625		0.250	0.277	0.322	0.322	0.406	0.500	0.500	0.594	0.719	0.812	0.906	0.875
10	10.75		0.250	0.307	0.365	0.365	0.500	0.500	0.594	0.719	0.844	1.000	1.125	1.000
12	12.75		0.250	0.330	0.375	0.406	0.562	0.500	0.688	0.844	1.000	1.125	1.312	1.000
14	14.0	0.250	0.312	0.375	0.375	0.438	0.594	0.500	0.750	0.938	1.094	1.250	1.406	
16	16.0	0.250	0.312	0.375	0.375	0.500	0.656	0.500	0.844	1.031	1.219	1.483	1.594	
18	18.0	0.250	0.312	0.438	0.375	0.562	0.750	0.500	0.938	1.156	1.375	1.562	1.781	
20	20.0	0.250	0.375	0.500	0.375	0.594	0.812	0.500	1.031	1.281	1.500	1.750	1.969	
22	22.0	0.250	0.375	0.500	0.375		0.875	0.500	1.125	1.375	1.625	1.875	2.125	
24	24.0	0.250	0.375	0.562	0.375	0.688	0.969	0.500	1.218	1.531	1.812	2.062	2.344	
26	26.0	0.312	0.500		0.375			0.500						
28	28.0	0.312	0.500	0.625	0.375			0.500						
30	30.0	0.312	0.500	0.625	0.375			0.500						
32	32.0	0.312	0.500	0.625	0.375	0.688		0.500						
34	34.0	0.312	0.500	0.625	0.375	0.688		0.500						
36	36.0	0.312	0.500	0.625	0.375	0.750		0.500						
38	38.0				0.375			0.500						

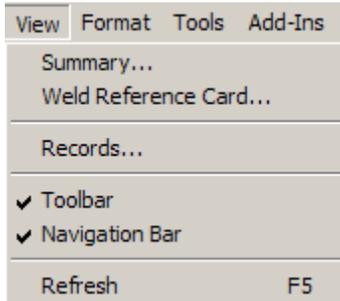
Accept
Cancel

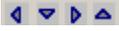
5. When the desired material has been located in any one of these databases, click on the material to select it and then press the Accept button, located in the lower right hand corner. This will input all the associated data in the appropriate fields on the record.

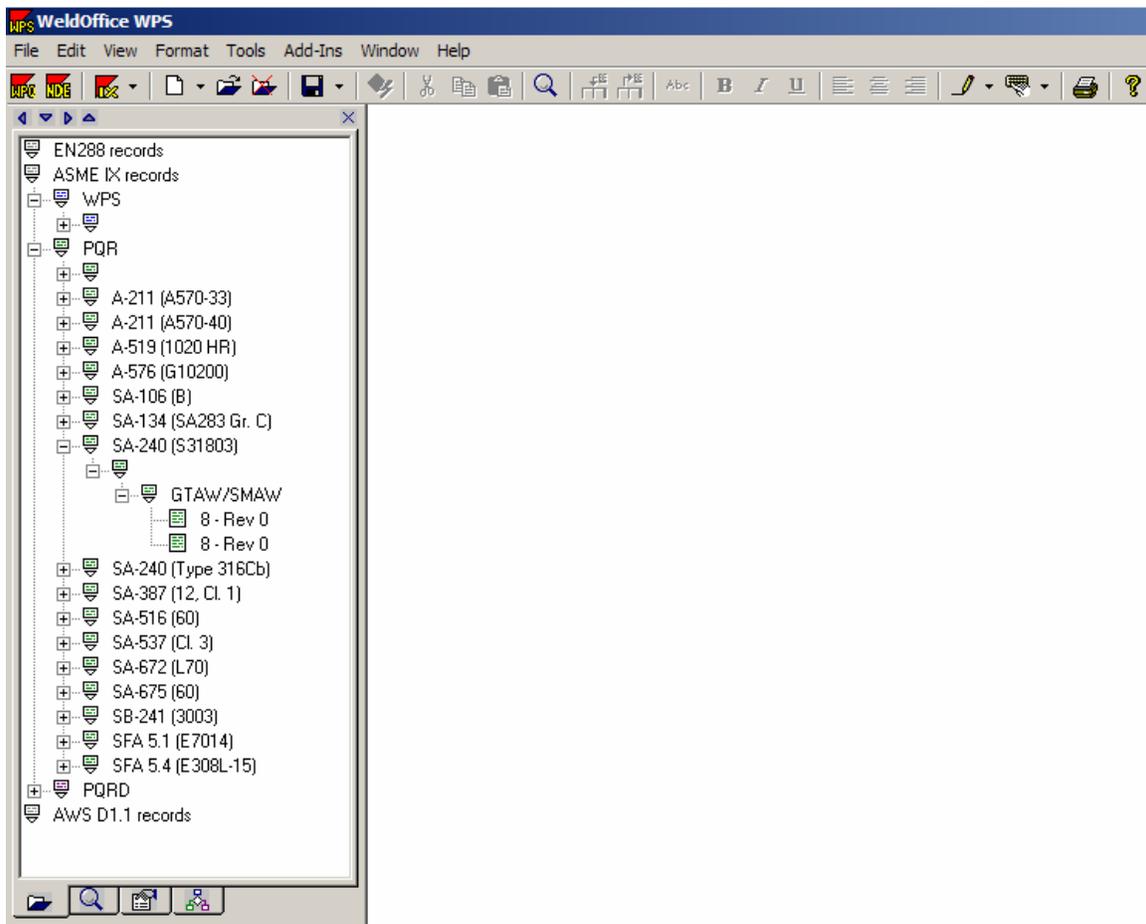
4.21 Navigating Records and Properties

Using the Navigation Bar

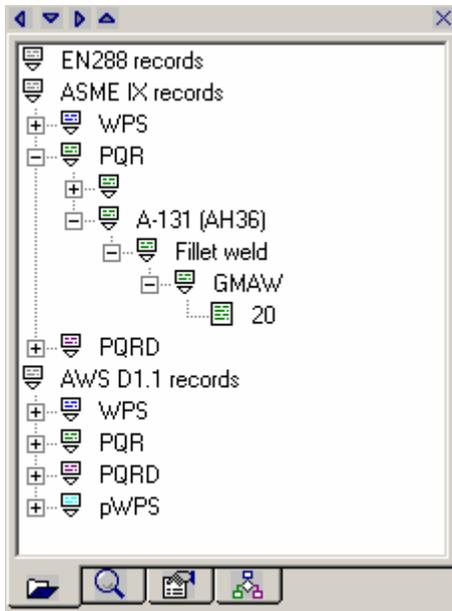
1. To open the Navigation Bar, click on **View** and then make sure the **Navigation Bar** has a check in front of it. This will enable the view of the Navigation Bar (the program defaults to showing the Navigation Bar) .



Using the arrow buttons just above the navigation window , the user can place the navigation pane anywhere on the screen. Or click on the  to close the navigation window.

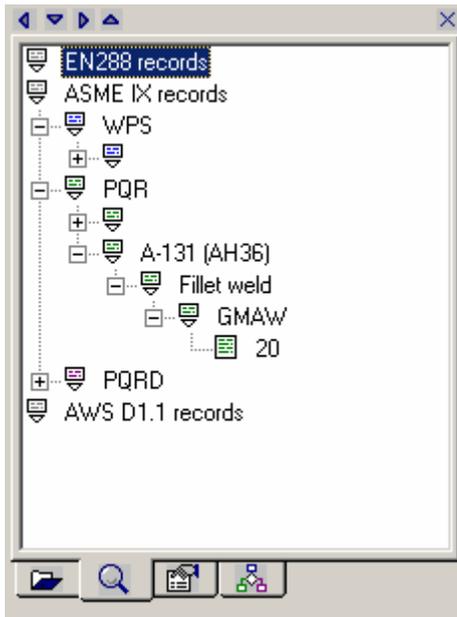


2. At the bottom of the bar, click on the first tab  to show the **Record Selection List**. This provides a quick list of the records in the system. The grouping in the example below is by 1- Material type, 2-Joint type, 3-process(es), and 4-record number. If a grouping sequence other than that provided is desired, the Navigation Bar grouping may be changed in the Options/Default Settings/Navigation Bar Groupings. See section 4.2.1.10.



Record Selection List

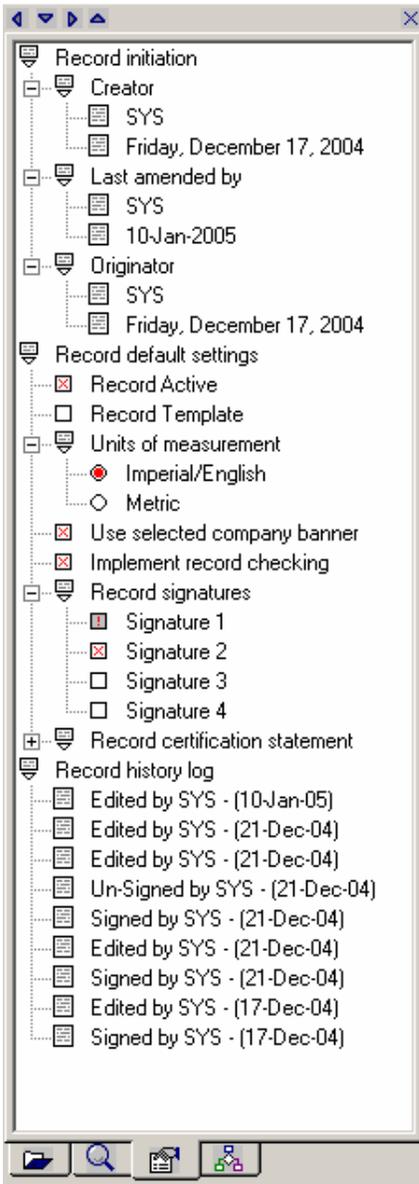
3. Click on the second tab  to show the **Record Search Results Selection List**. The list of records that will be displayed are the records meeting the criteria of the last search performed. For more information on finding and searching records, see section 4.19.



Record Search Results

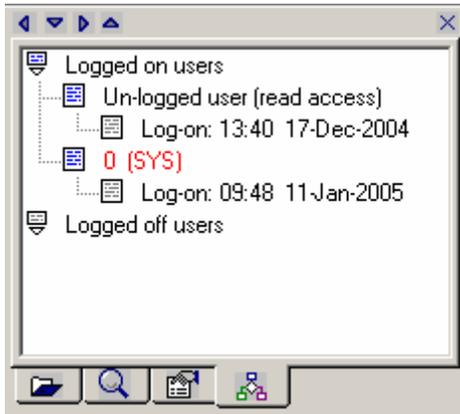
4. Click on the third tab  to show the **Current Record Properties**. This tab displays several settings and properties of the record that is currently being viewed. Changes to these setting may be necessary in certain circumstances. For example:

- **Record Template** may need to be checked in order to turn a new record into a template. By indicating that a record is a template, it will be kept separate from all other records.
- **Implement record checking** allows control over the code checking. Turn this setting off if it is desired to keep the software from automatically entering code information into the records.



Current Record Properties

5. Click on the fourth tab  to display the **Network Status**. This will show all the users that are currently logged on and all of those that are currently logged off the network.



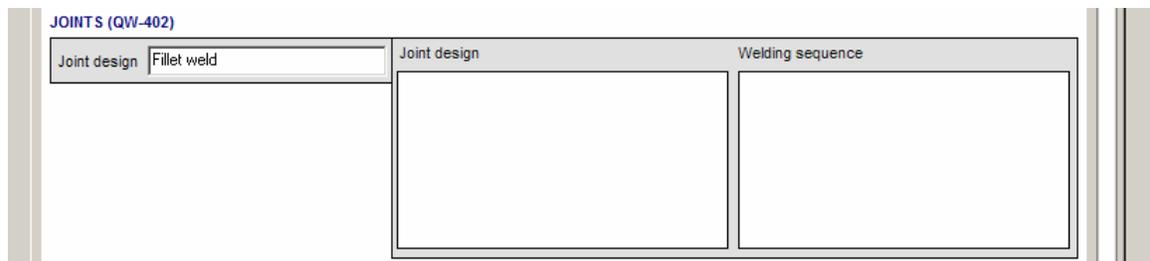
Network Properties

4.22 Drawing and Sketches

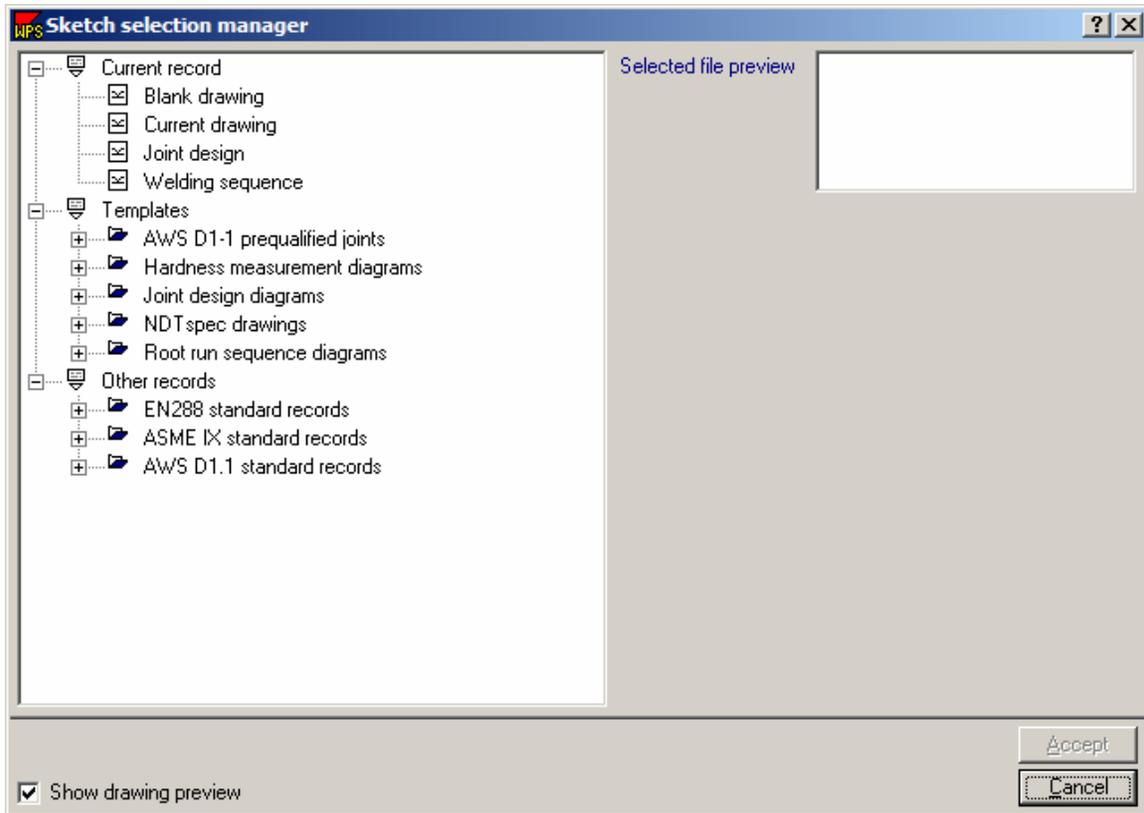
Using the Sketch Selection Manager

Sketches of the joint preparation and alignment, the sequence of weld passes and the location of hardness measurements are commonly required by welding codes and standards. *WeldOffice® WPS* features a link to any OLE-compliant sketching/graphics tool to help the user draw and manage sketches.

1. To open the Sketch Selection Manager, click inside any drawing box within *WeldOffice® WPS*. Drawing boxes are found in the following locations:



- PQR form - Joint Design diagram
- PQR form - Weld Sequence diagram
- PQRD form - Joint Design diagram
- PQRD form - Welding Sequence diagram
- WPS form - Joint section on page two



2. Rather than drawing sketches manually, the sketch Selection Manager allows several options from which to begin drawing. This includes being able to modify a copy of a sketch from the database of templates or modify a copy of a sketch located on one of the previous records. Here are the drawing options:

A. Blank Drawing: This will provide the user with a blank page from which they can draw the entire sketch manually.

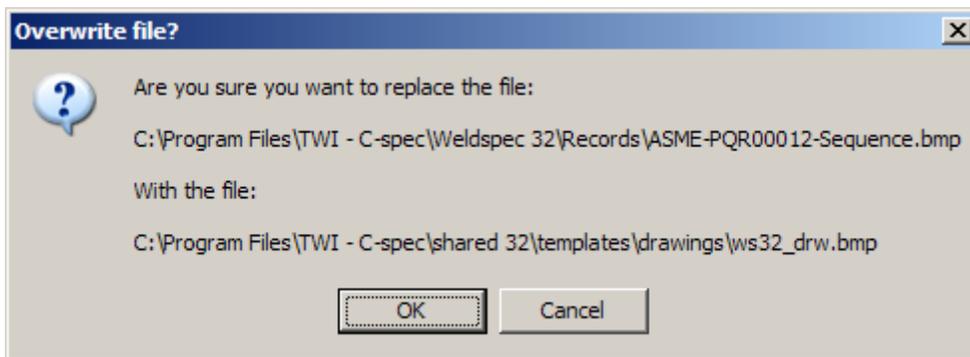
B. Modify Drawings: Modify a copy of a drawing already located on the current record.

C. Modify Template: Modify a copy of a template included in the Sketch Database.

D. Modify a Copy: Modify a copy of a drawing previously placed on another record.

NOTE: Upon selecting a sketch to modify, a preview of the sketch will appear in the preview window.

3. When the user is ready to begin modifying the sketch, press the **Accept** button
4. Before modifying the sketch, the user will first be given an "Overwrite File" message. Verify overriding the current drawing by pressing "**OK**".



5. Next, the user will be taken into the drawing program that is specified in the Options (If the user has not changed this setting, Windows Paint Brush will be the default drawing program.) The user can now make any necessary modification to the sketch. When finished, save the changes, close the drawing program, and the sketch will automatically be placed on the form with the modifications included.

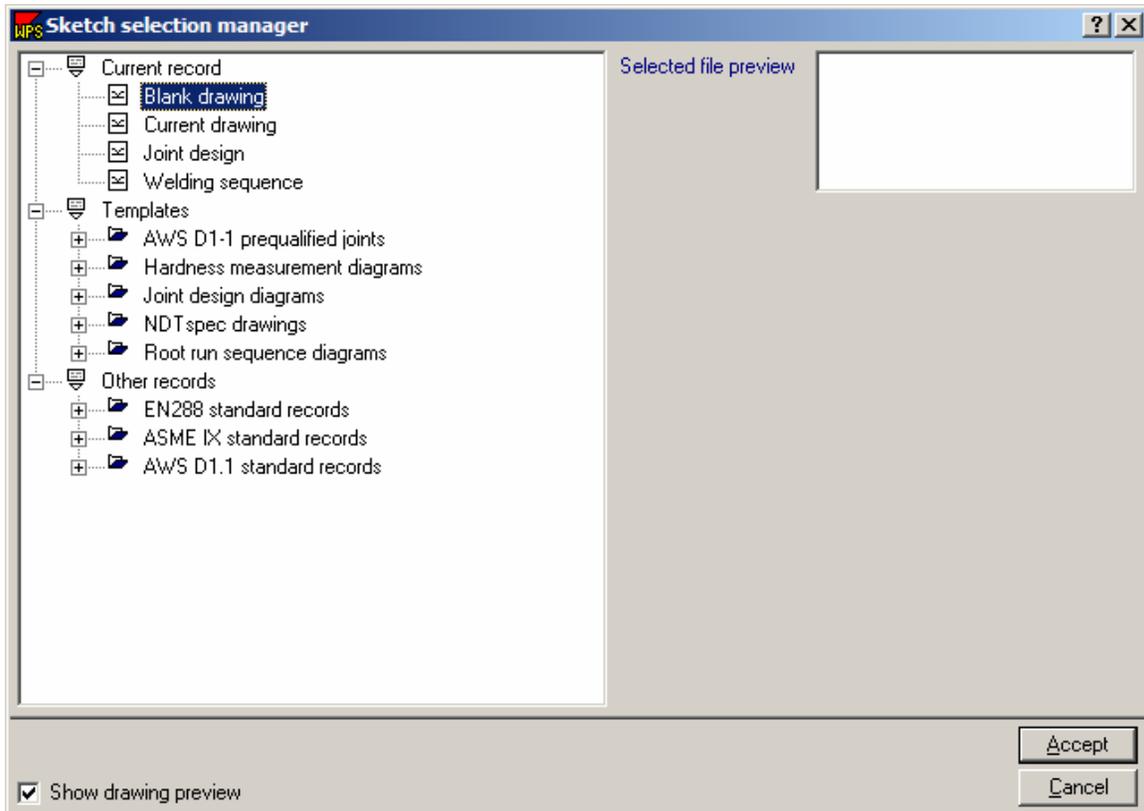
A tutorial of drawing a joint diagram can be found in the **Sample Drawing Session** in the section below.

4.22.1 Sample Drawing Session

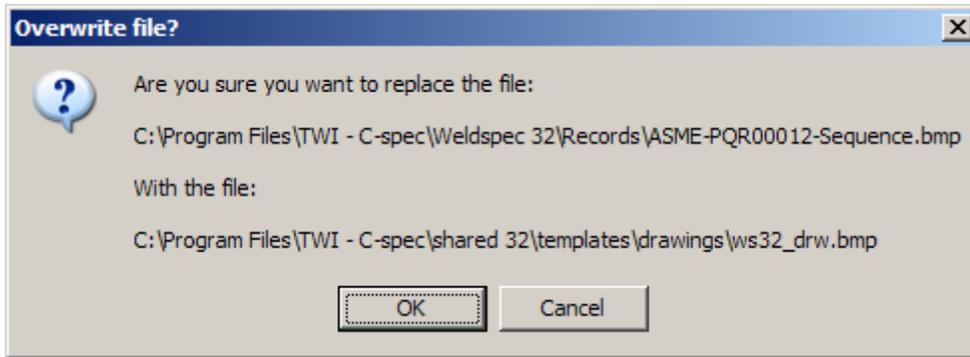
Using Microsoft Paint

This section describes how to draw a sketch starting from a blank sketch using MS Paint. A single V groove weld will be drawn.

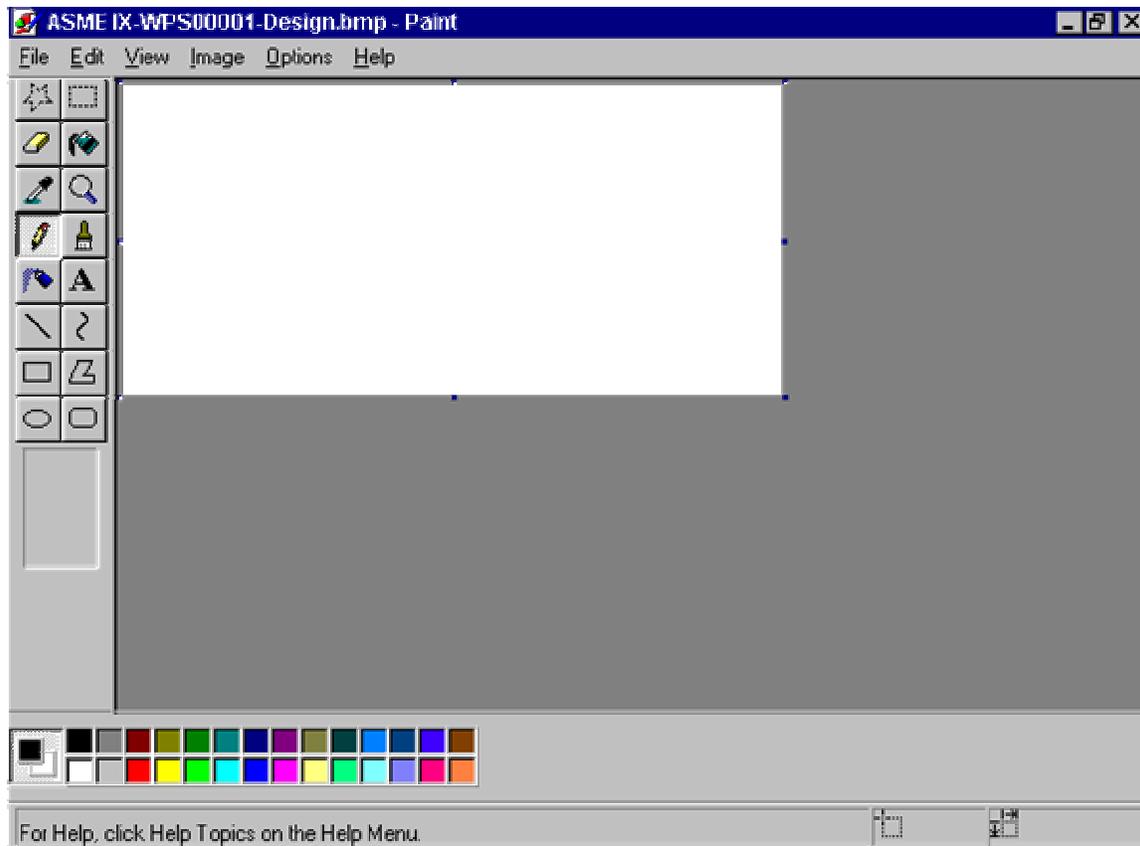
1. Double click on **Blank drawing** under Current record on the Sketch selection manager.



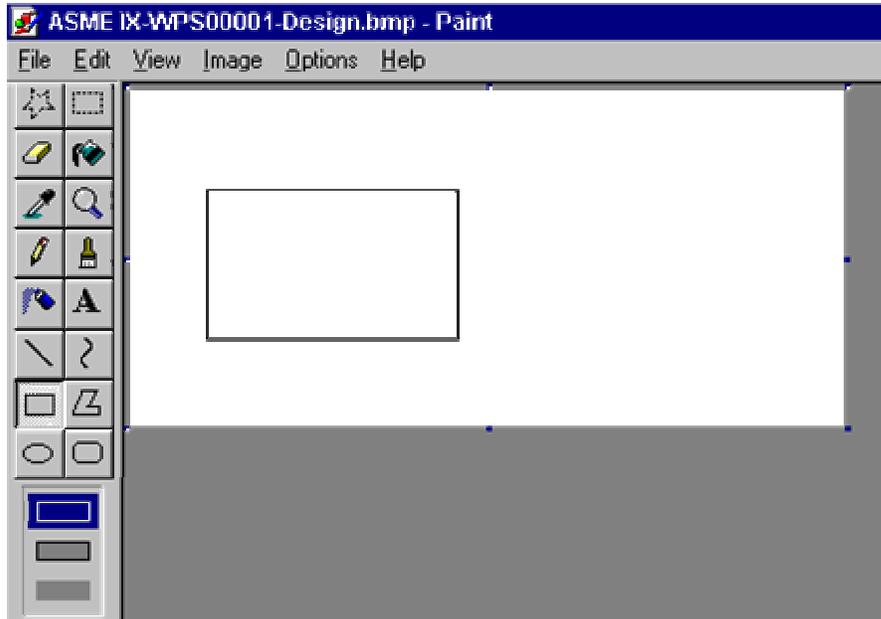
2. The system will ask for confirmation on overwriting the existing sketch. Click on **yes**.



3. The system starts MS Paint with a blank sketch of the right size for the *WeldOffice® WPS* sketch boxes, as shown below :

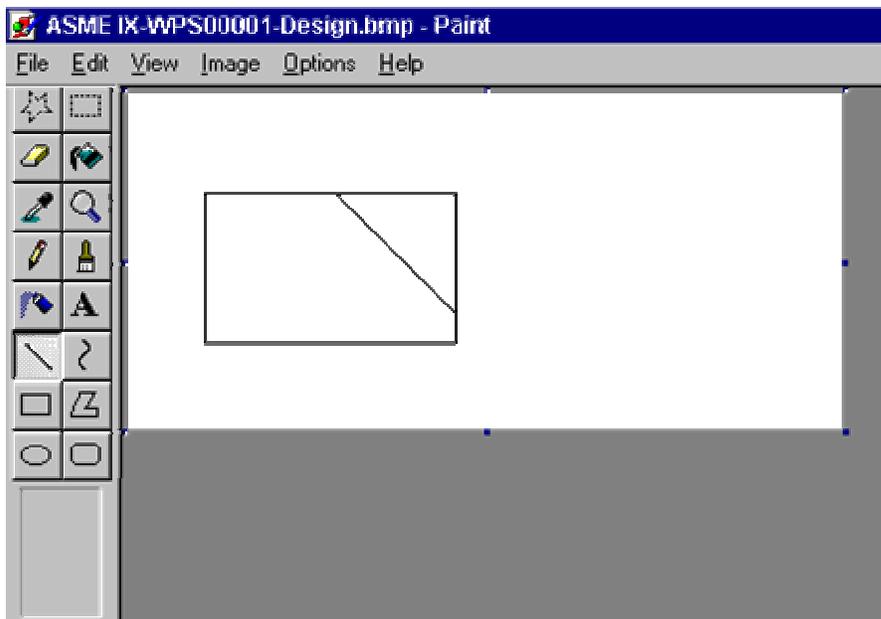


4. Use the Rectangle tool to draw a box which will represent one half of the joint preparation. The rectangle tool is shown highlighted in the following picture. Click on the **rectangle tool**. To draw a rectangle, move the cross cursor to any corner of the rectangle window, then press the left mouse button and (keeping the left button pressed) drag the opposite corner to the required position. Release the mouse button. The sketch should look as follows :



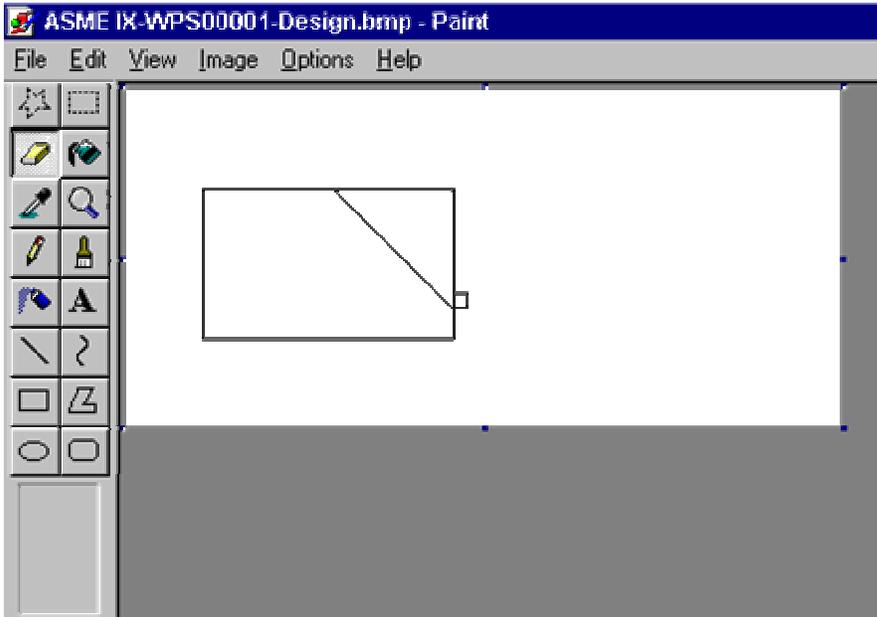
5. Draw a line which will represent the prepared joint bevel. Although the sketch is not exactly to scale, try to make the angle of the line similar to the real angle. The line tool is shown highlighted below.

Click on the **Line Tool**. To draw a line, move the cross cursor to the required start position, press (and keep pressed) the left mouse. Then drag the cursor to the other end of the line and release the mouse button. The sketch now looks as follows. **Note:** if a mistake is made at any stage, click on Edit-Undo, to revert to the sketch as it was when a tool was last selected.

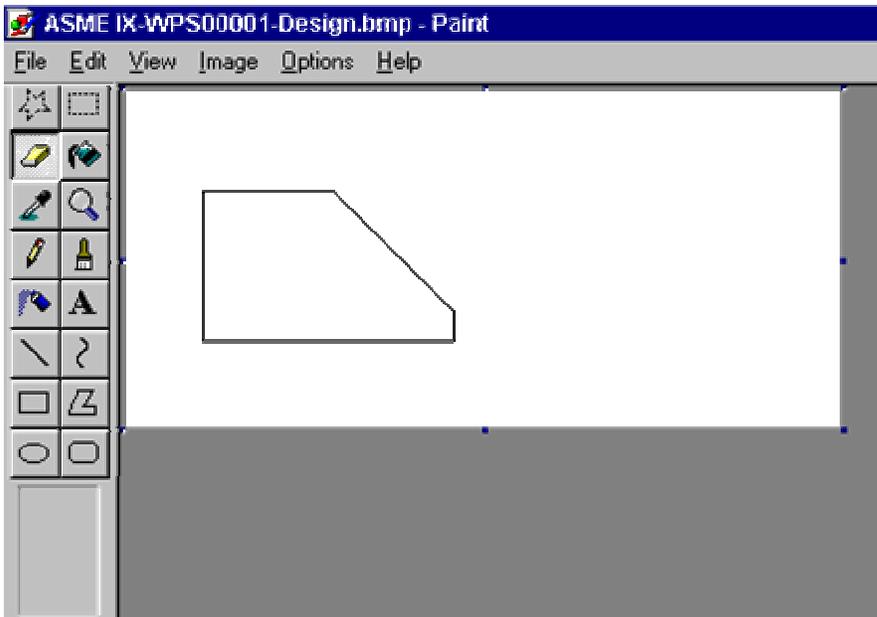


6. Remove the lines which represented the material removed during preparation.

Click on the **eraser tool** (shown below), and move the box cursor to the position shown below. When the left mouse button is pressed and moved, everything under the box cursor is erased.

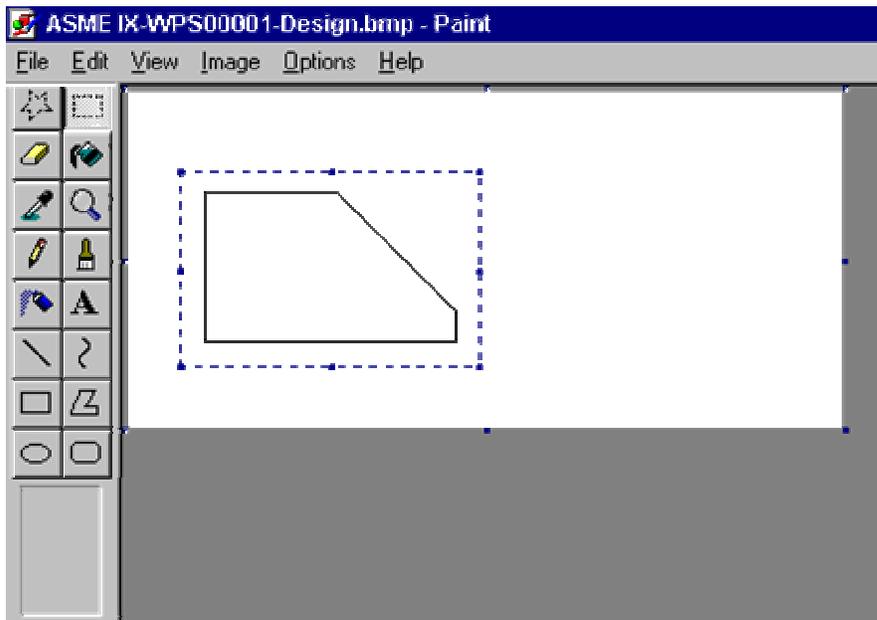


7. Move the cursor up and then to the left to remove the unnecessary lines, as shown below.

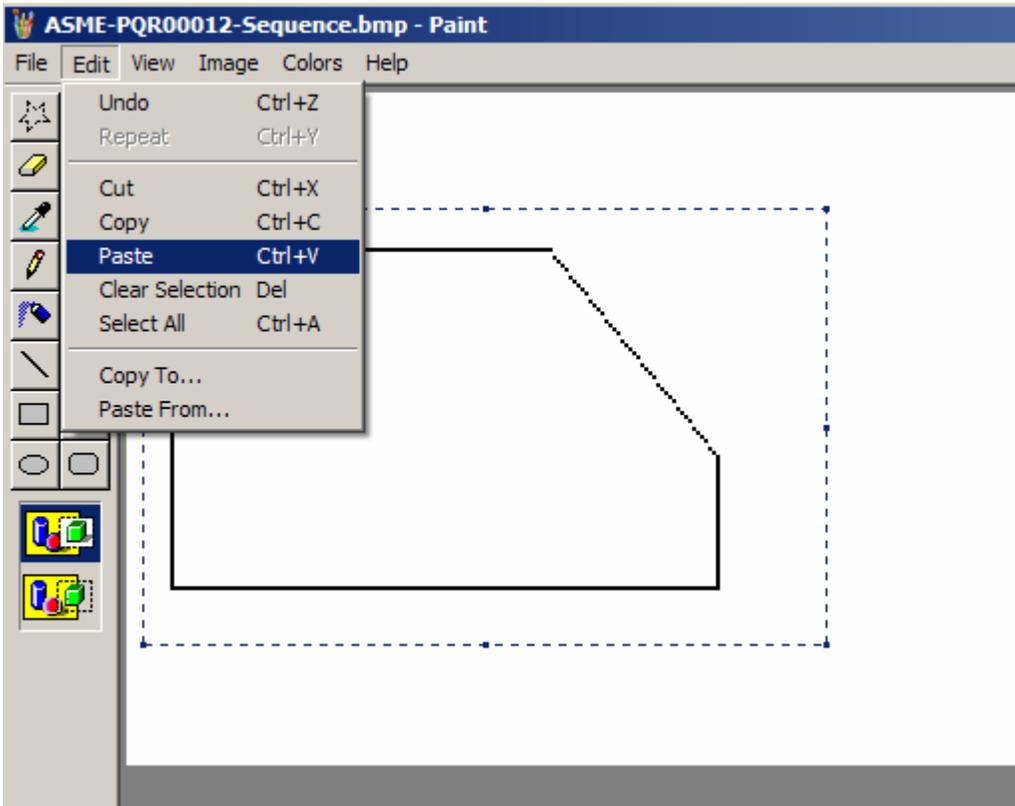
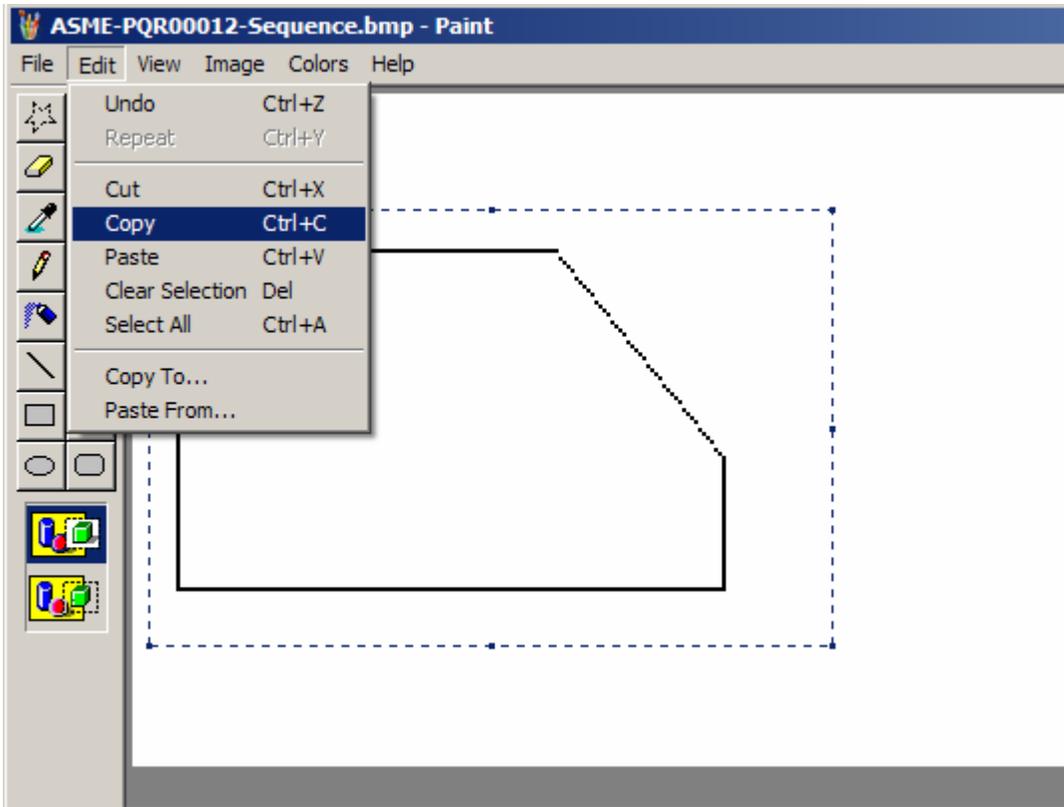


8. Next, make a copy of the left-hand side of the weld and flip this horizontally, to represent the other side of the joint.

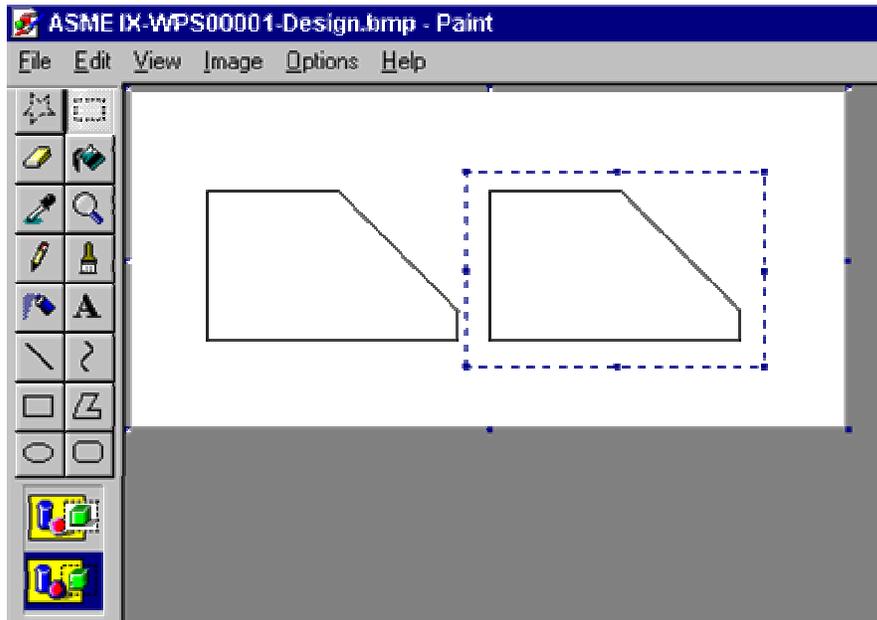
Click on the **select tool**. First, highlight the left-hand side of the joint by using the Select tool (see below) and draw a box around the drawn box, as shown below (press and drag the box as described in using the box tool, above).



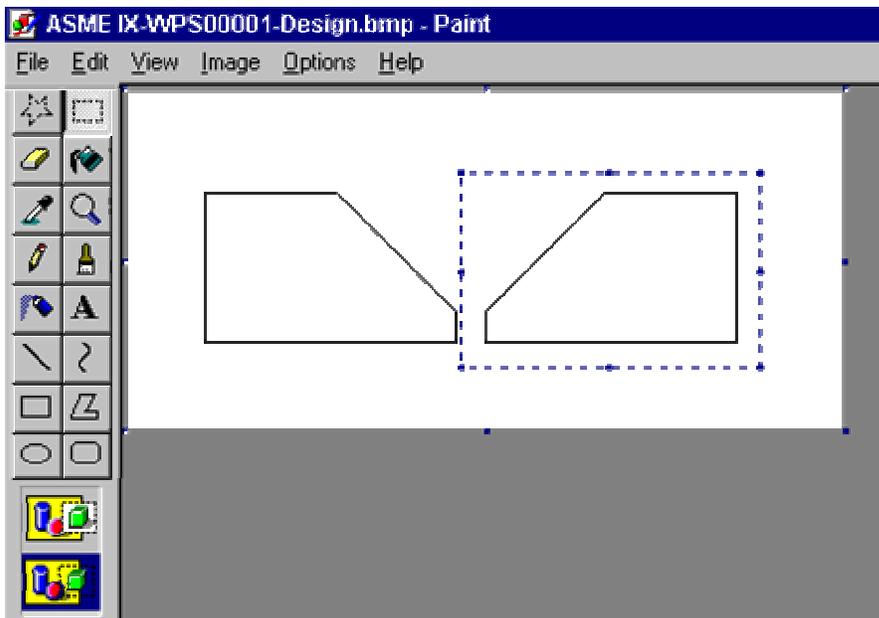
9. To make a copy of the selection, click on **Edit** and then **Copy**. Then click on **Edit** and then **Paste** to paste the selection.



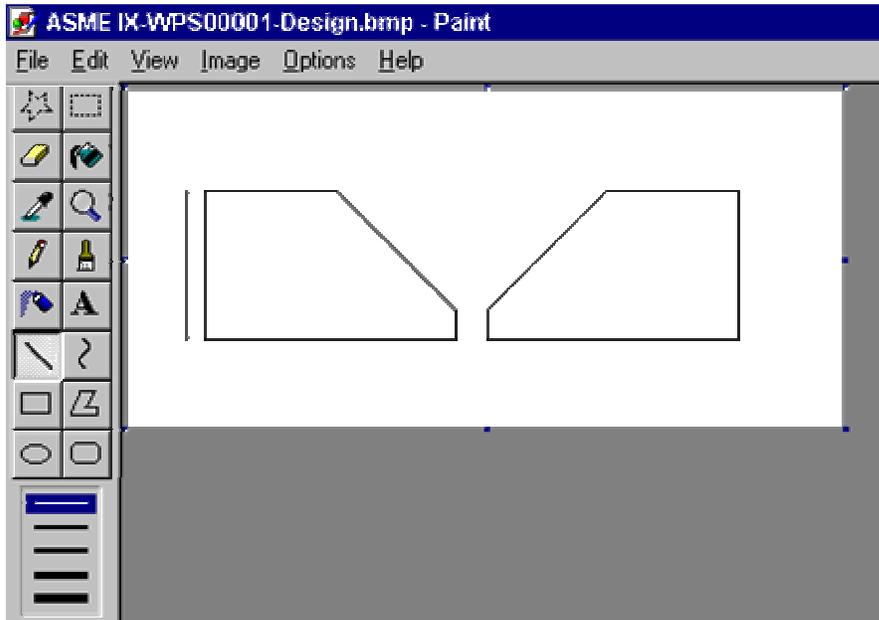
10. Move the cursor within the box of the pasted box. The cursor will change to a four pointed cursor indicating that the selected area can be moved. When the new selection has been positioned, release the mouse button. Make sure there is no part of the left side of the joint within the highlighting box as it will be hidden or unseen by the user.



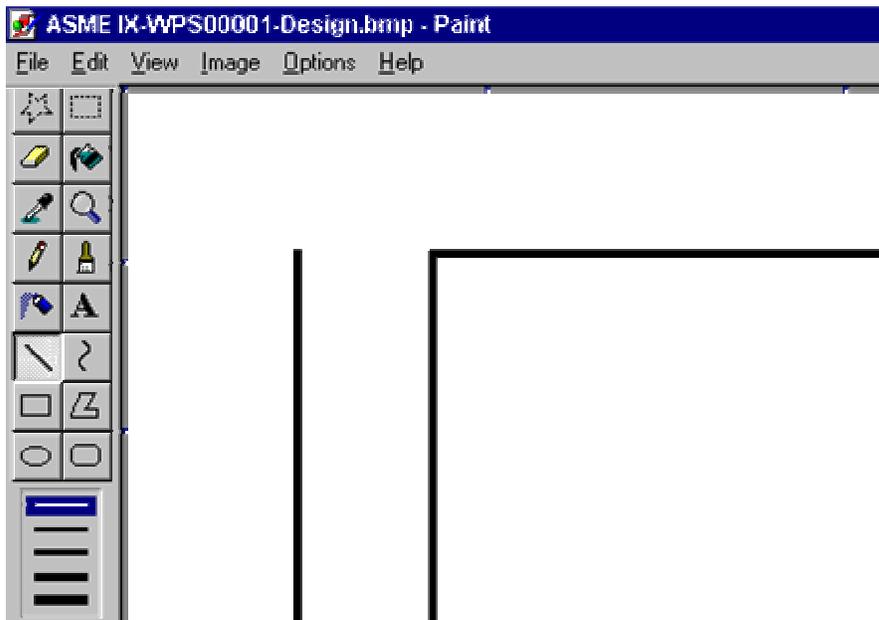
11. With the right side of the joint still highlighted, click on **Image**, then **Flip/Rotate**, then **Flip horizontal** and finally **OK**. The sketch now looks as follows.



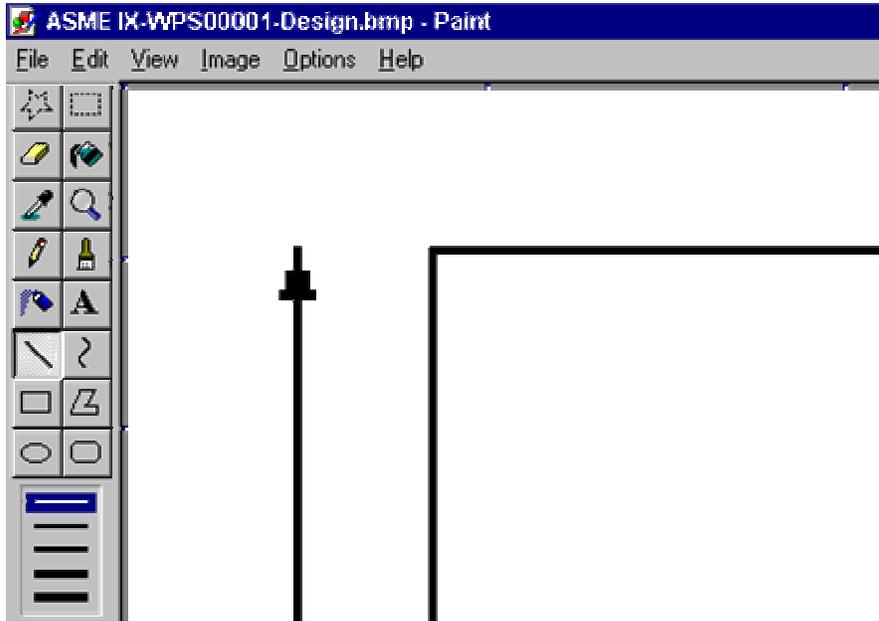
12. To dimension the thickness of the base material, a double-headed arrow is needed to the left of the left-hand preparation. As there is no arrow drawing tool in Paint, draw a line first as shown below.



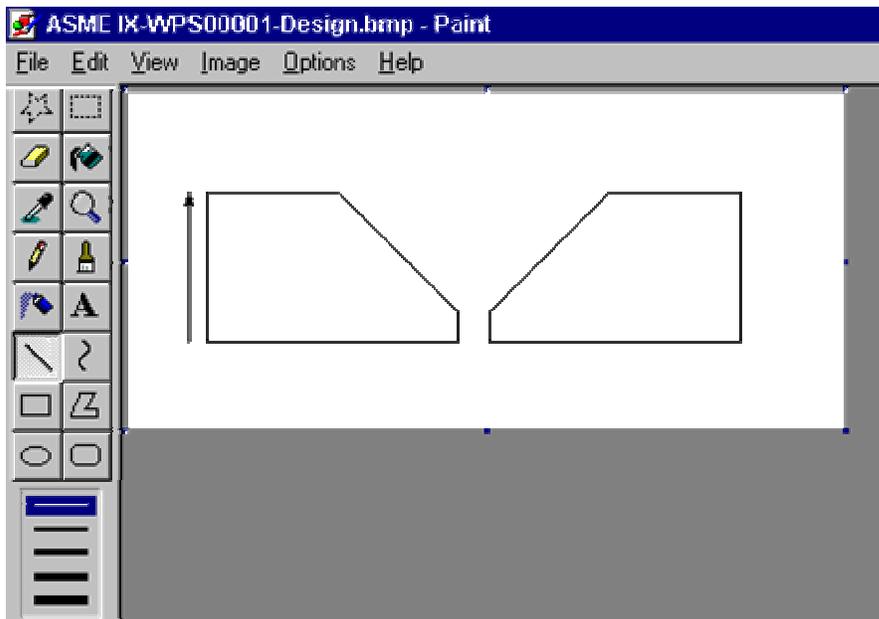
13. To add the arrowheads, click on **View**, then **Zoom** and then **Large size** to show a magnified view of the sketch. Move the scroll bars so the top left of the sketch is shown. Click on **View-Zoom-Show grid**.



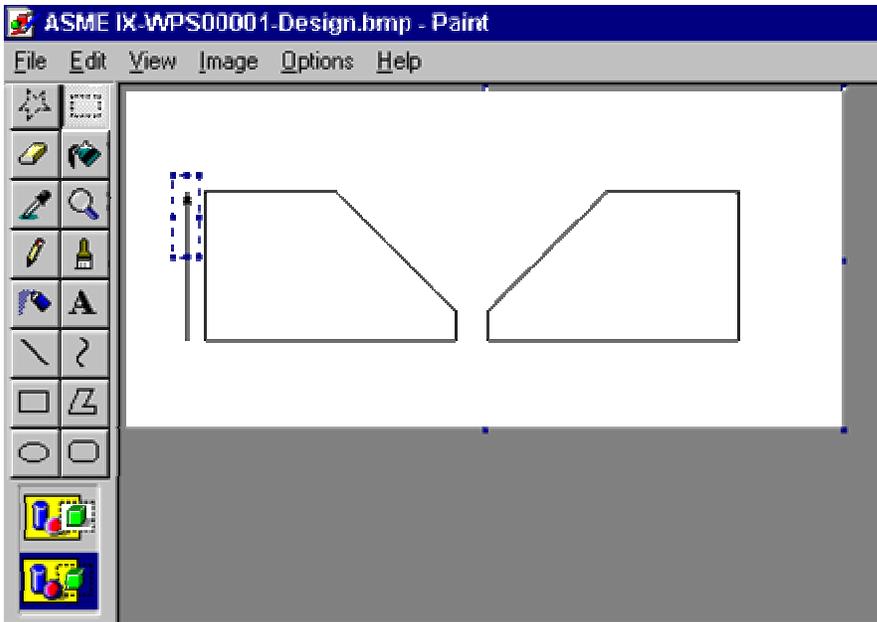
14. Use the line tool to draw one vertical/diagonal line each side of the main vertical line and then a horizontal line under these to represent the arrowhead, as shown below.



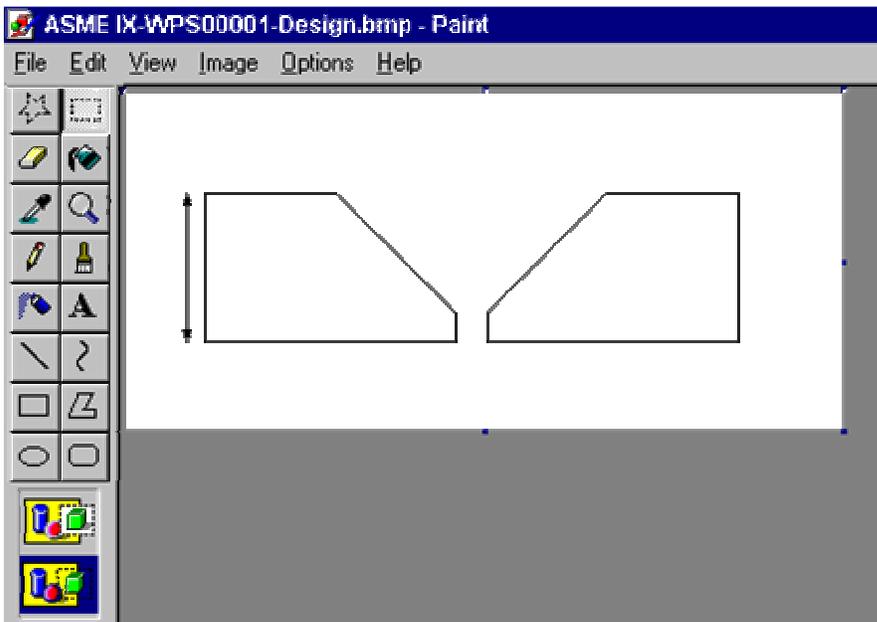
15. Click on View-Zoom-Normal size to see the whole sketch.



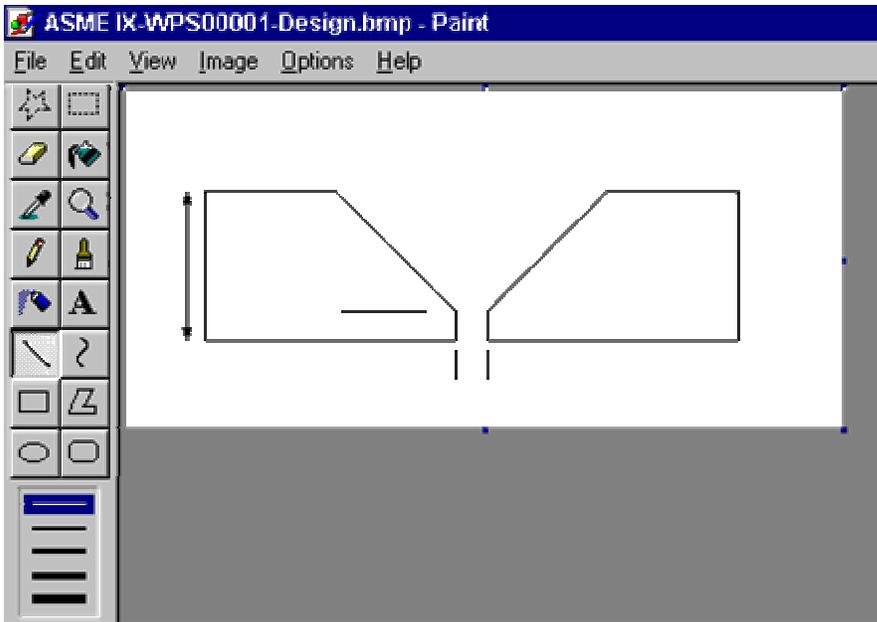
16. To draw the lower arrowhead, use the copy and flip routines, as described above. First highlight the top side of the line, including the existing arrowhead.



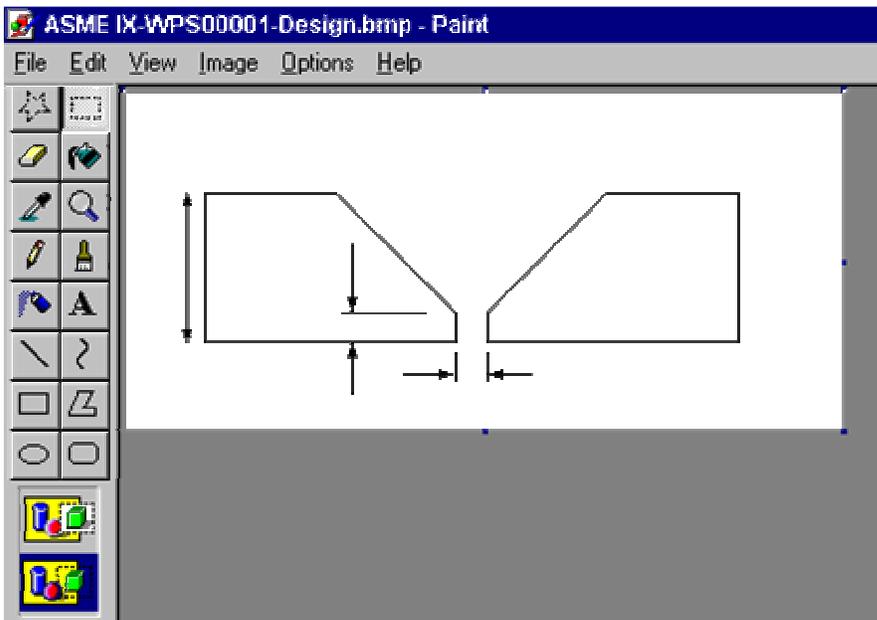
17. Flip the selection vertically by going to Image, then **Flip/Rotate**, then **Flip horizontal** and finally **OK**. Move the downward pointing arrow into position as shown below.



18. To dimension the root gap and land (root face), first draw lines as shown below.



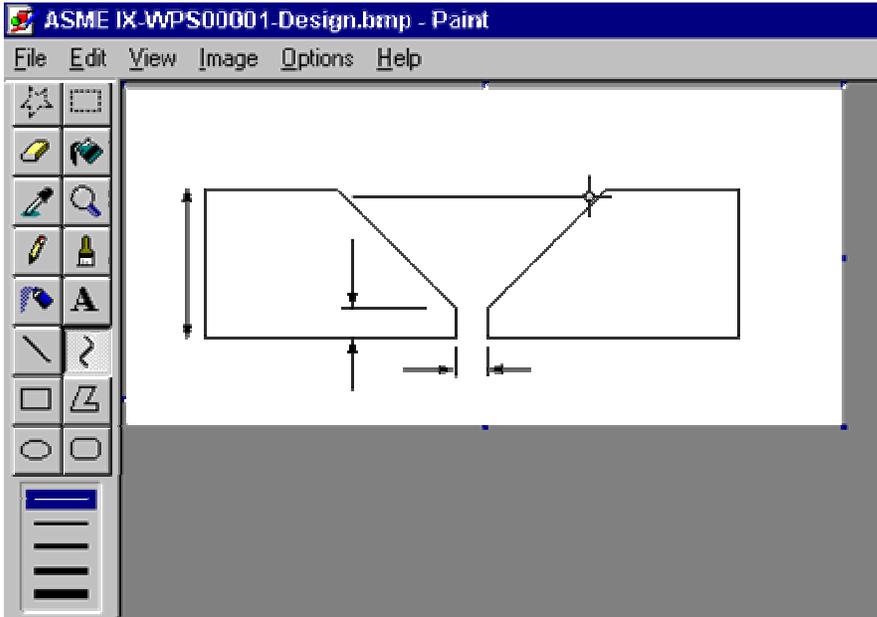
19. Draw arrowheads as described previously. Note that the user can copy the existing vertical arrows and use **Image-Flip/Rotate/Rotate by 90°** to draw horizontal arrowheads.



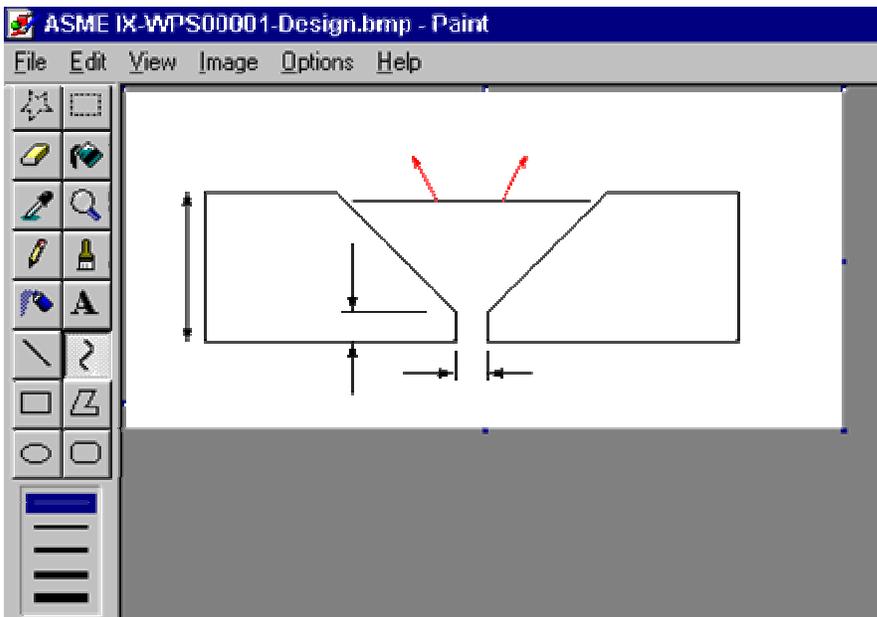
20. To dimension the included angle, a curved line is needed, to which arrowheads can be added.

To draw a curved line, click on the curve tool, shown below. The first stage is to draw a line from close to one edge to close to the other edge, as shown. Release

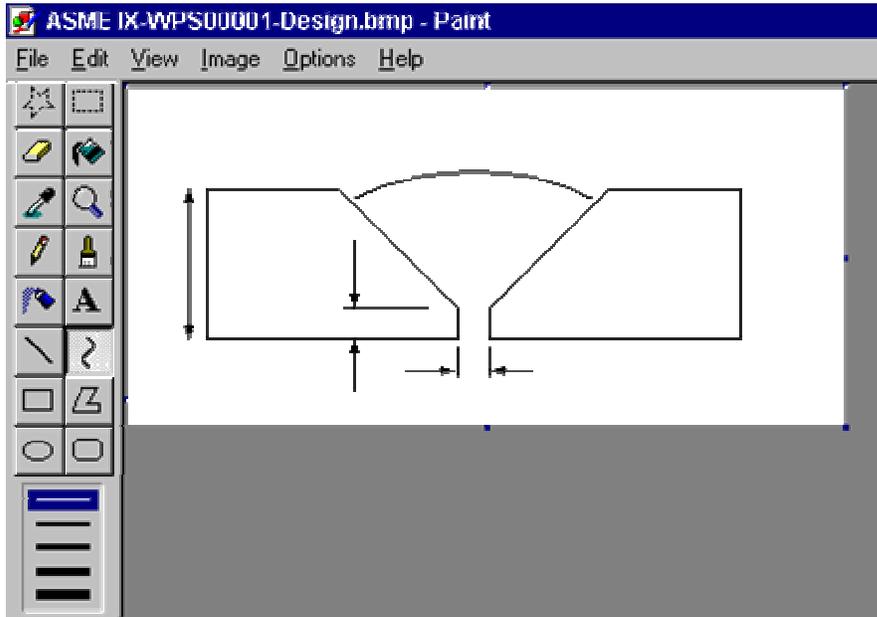
the mouse button.



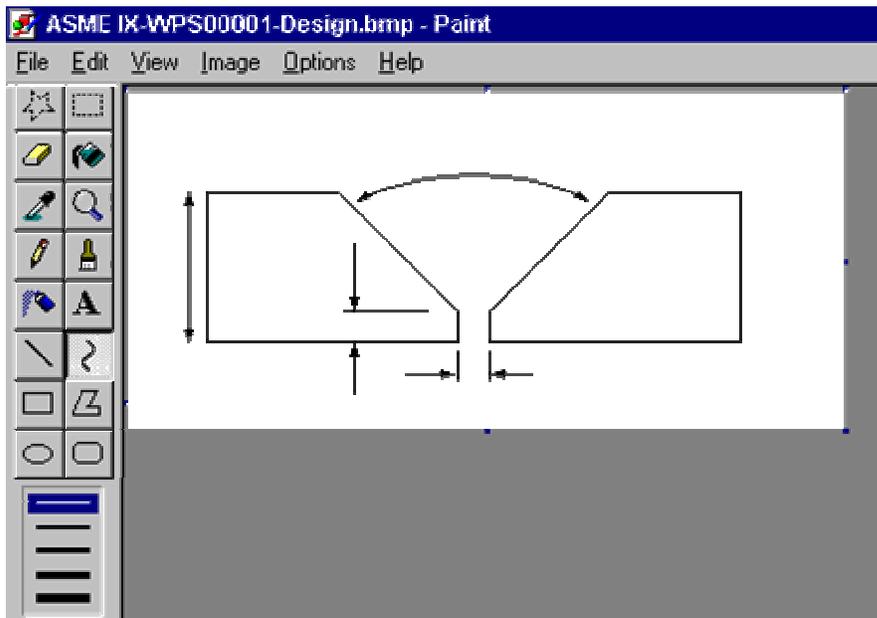
21. Now 'drag' two points on the line upwards in the directions shown below to curve the line. Drag the points by clicking on the line and dragging upwards. Do this twice to get a more uniform curve. This step will take a little practice.



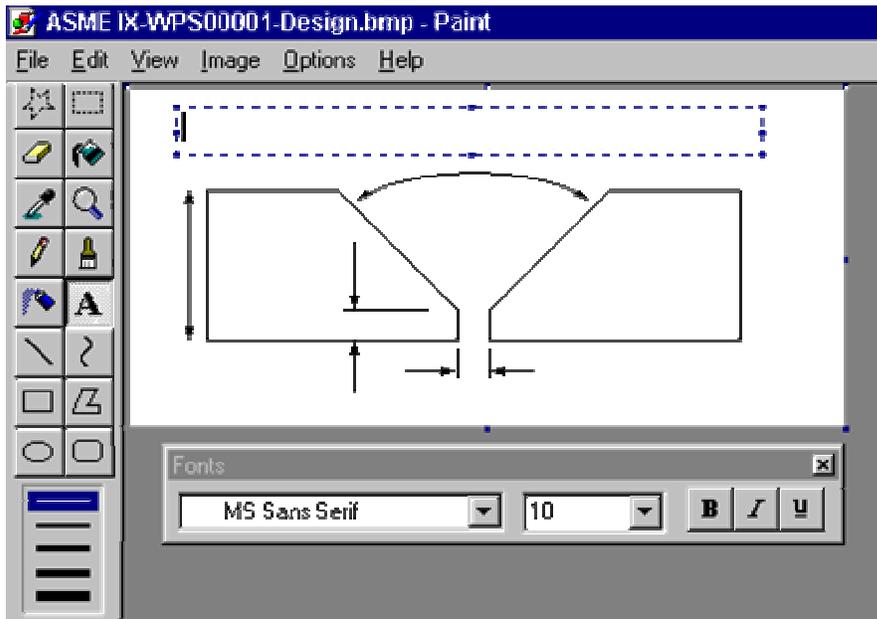
22. The completed curved line should look as follows.



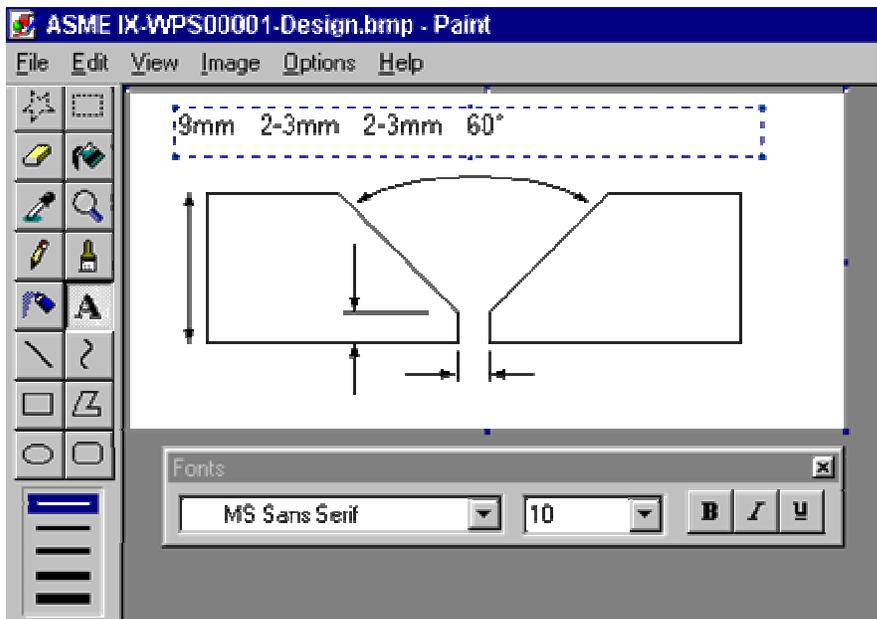
23. Now, add arrowheads to the curved line by using the operations listed in steps 13 - 18. NOTE: Due to the resolution of the screen, this will look very jagged when in the magnified view. Using this requires some practice. The completed arrowheads should look as shown below.



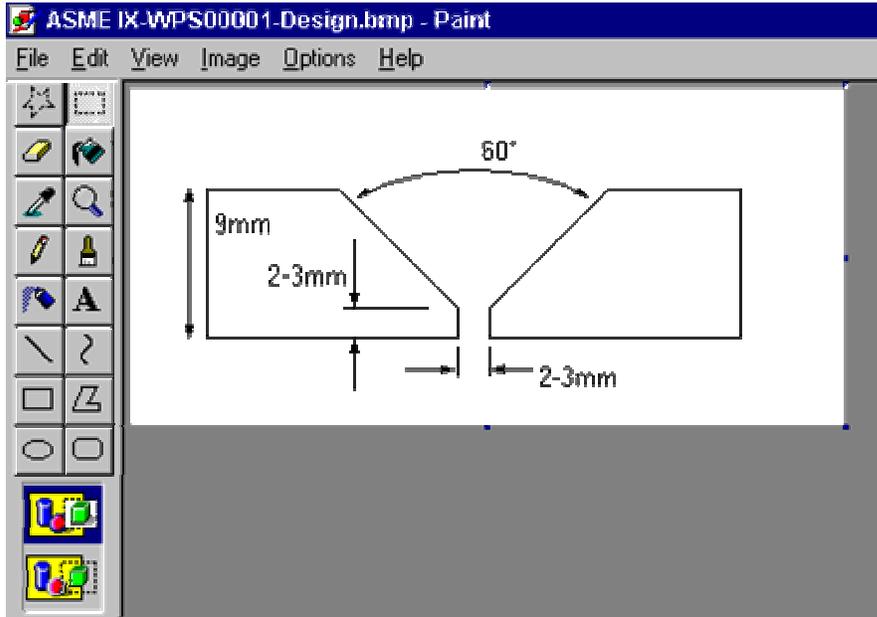
24. To add text to the sketch, click on the text icon (highlighted below) and then draw a box within which the text can be placed, also as shown below. NOTE: It is easier to write the text on screen away from its final position and then move it, than to place it directly using the text tool. The graphic below also shows the text toolbar, which the user can use to define the font, font type and font size.



25. Put the text into the box, separating each entry by a few 'spaces'.



26. Use the select and move tool to move the text to the required positions.



27. Click on File, then Exit. Click on Yes when the system asks if the sketch is to be saved.

28. To draw the sequence of passes for the above sketch, use the Weld preparation as the basis, erase the text and dimensioning arrows and use the curve tool to represent the passes.

5 Technical Support

Please feel free to contact C-spec by:

Website: www.cspec.com

Email: support@cspec.com

Telephone: 1-888-673-9777 (toll free)

FAX: 1-925-889-4490

Mail: P.O. Box 27604
Concord, California 94527
U.S.A.

6 Troubleshooting

There are several questions that are asked quite frequently. The answers to those questions are listed below. Feel free to contact C-spec support if your question is not answered below.

Q. I've changed computers and my registration details don't work.

A. A registration code will only work on the same computer on which the license code was generated. If you change computers or get a new harddrive, you must register again.

Q. I've used the registration code you supplied but the program will not register properly.

A. There are two main reasons why the software may not register properly:

- The most common reason is that a mistake has been made in typing in the license code, or the registration code. Please be careful when doing this. In particular, the license code generated by the software may have one **or two** dashes separating the first and second groups of digits.
- Windows allows you to specify the characters you use for decimal separators and digit groupings. In the US and UK, these are the stop character '.' and comma ',' respectively. However, in Europe these are often swapped. If you think you are using the correct registration code and the program will not activate properly, try using a comma instead of a stop character in the registration code. This is particularly true if, but not restricted to, cases where the license code has been generated with a comma.

Q. The header block on my documents keeps changing. Why is this ?

A. WeldOffice®WPQ allows you to configure document headers in two ways :

- The first will always display the same header information, irrespective of what company name is in the main body of the document.
- The second will vary the header if different company names are specified.

This configuration is set in two places. The default setting for all new documents is set in Tools-Options-Default settings-Initial record settings where the option Use selected company banner may be turned on or off. If turned on (i.e. with a red cross) the default header (set in Tools-Options-Default settings-Initial record settings) will be overwritten by the header of the selected company. If this is not desired, this option should be turned off. See Initial record settings for more information, 3.1.2.

As well as configuring this item for new documents, it is also possible to override this setting for individual documents. This is done by using the document properties tab when the document is open. See Navigation Bar properties for more information, 3.4.3.5.

Q. I have quite a few ‘blank’ documents on my system. Why is this ?

A. As soon as you create a new blank document, this is part of the database, even if you close the document without saving it. If you create a document, but then decide you don't want it, you should click on File then delete the current document (before closing the document). The menu item has the form 'Delete [ASME IX] WPQ00XXX'. If you have a number of blank documents, click File, then Delete. You can now delete multiple blank documents in one operation.

See Deleting documents for more information, 3.4.1.

Q. I cannot see the document properties even though I've clicked on the third tab from the left on the Navigation bar. Why not ?

To see the document properties settings, the Navigation bar must be visible before you open a document for editing. If you can't see the Document properties, close the document, make sure the Navigation bar is displayed (click on View, then Navigation bar), then open the document again.

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