

Attachment to Final Report of the project WELD-IT (262580)

LIST OF FIGURES:

FIGURE 1 - ANFIS ARCHITECTURE	2
FIGURE 2 - ANFIS TYPE 2 STRUCTURE	3
FIGURE 3 - WELD-IT ARCHITECTURE	4
FIGURE 4 - CAD MODULE SCREENSHOT	5
FIGURE 5 - CAD MODULE IN THE INTEGRATED GRAPHICAL USER INTERFACE SCREENSHOT	6
FIGURE 6 - DATABASE TOOLS SCREENSHOT	7
FIGURE 7 - ANFIS SPREADSHEET EXAMPLE	8
FIGURE 8 - WELD-IT MAIN WINDOW SCREENSHOT	9
FIGURE 9 - WELD-IT PRICE QUOTATION WINDOW SCREENSHOT	10
FIGURE 10 - WELD-IT STRUCTURE	11
FIGURE 11 - WELD-IT TASK TO BE CALCULATED AND TYPED MANUALLY	12

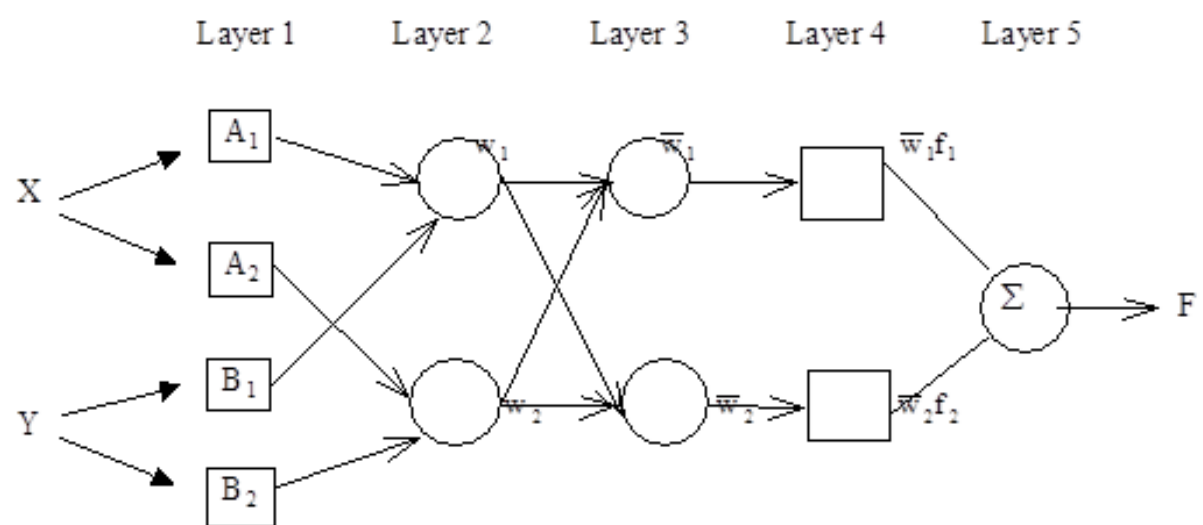


Figure 1 - ANFIS architecture

ANFIS Type 2 structure

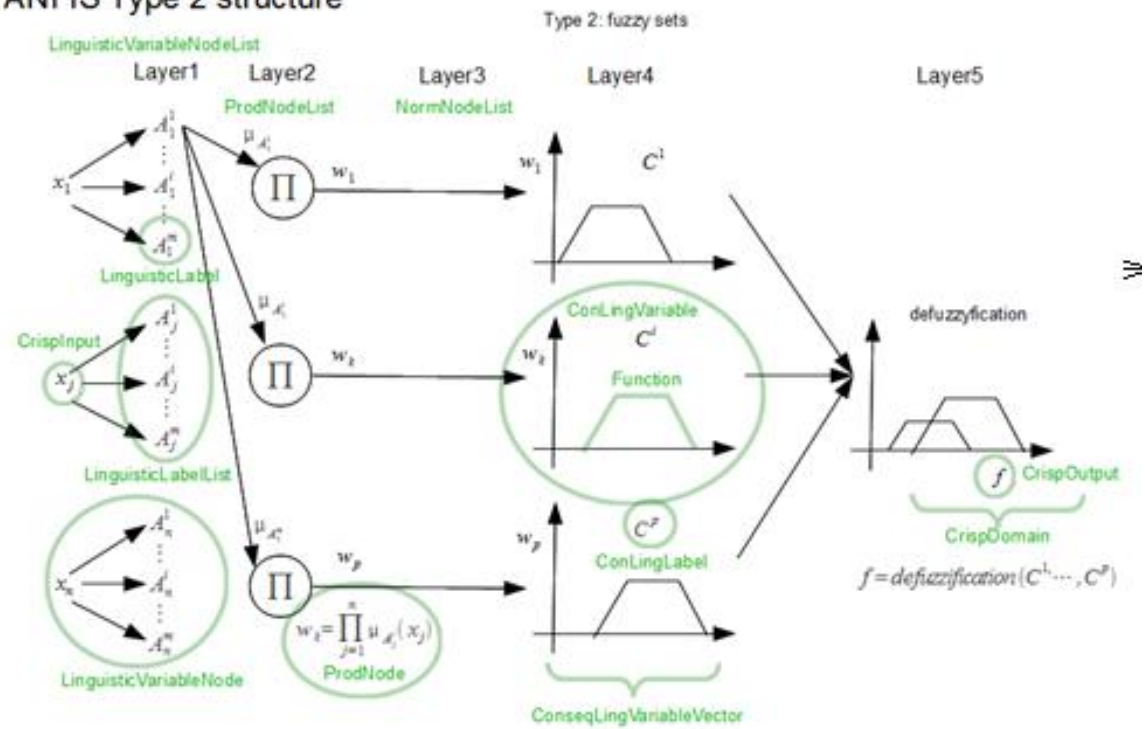


Figure 2 - ANFIS Type 2 structure

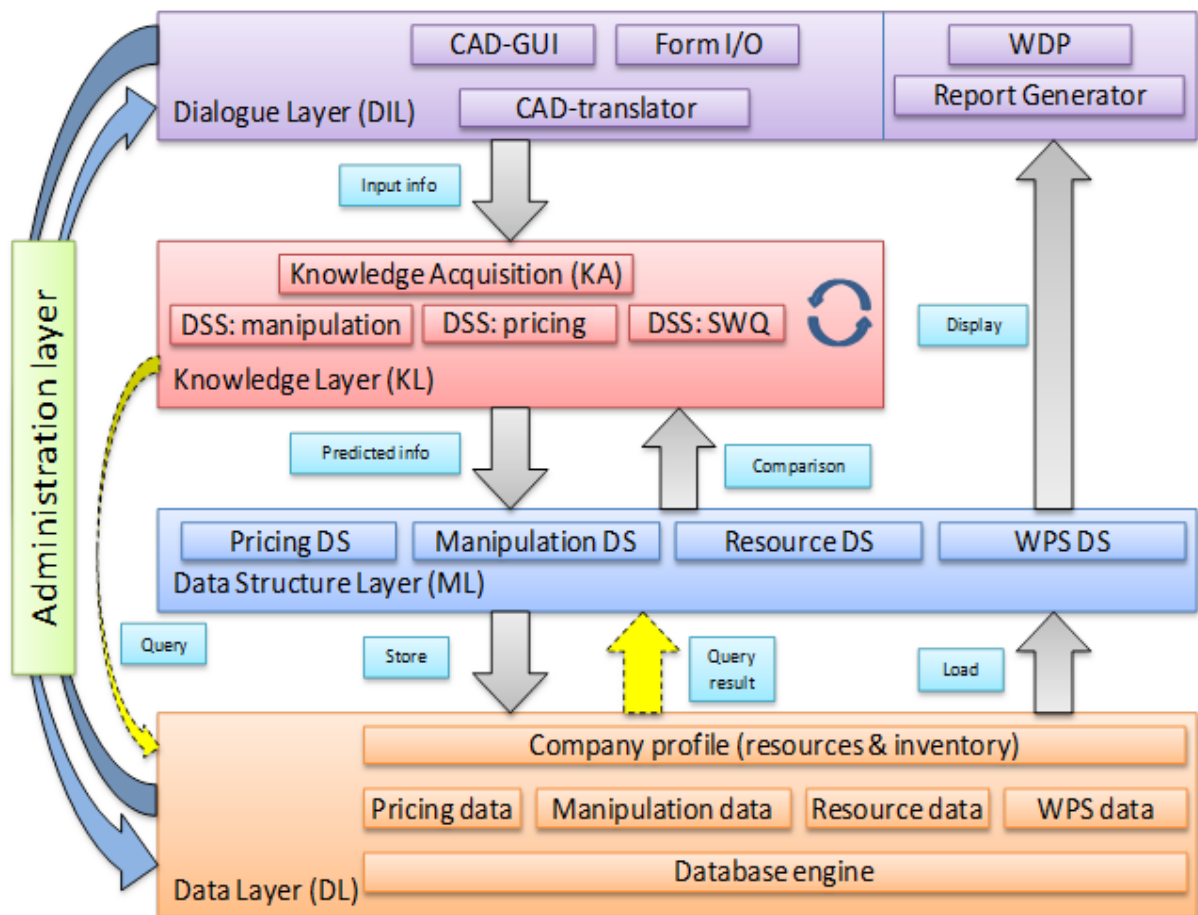


Figure 3 - WELD-IT architecture

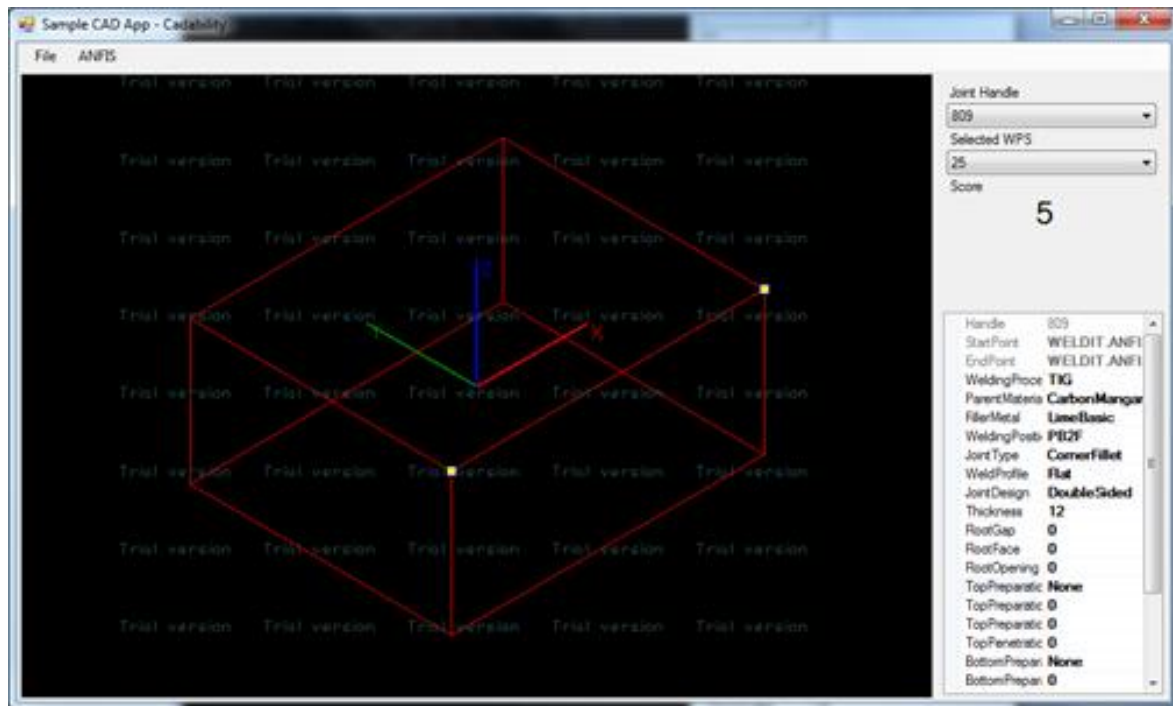


Figure 4 - CAD module screenshot

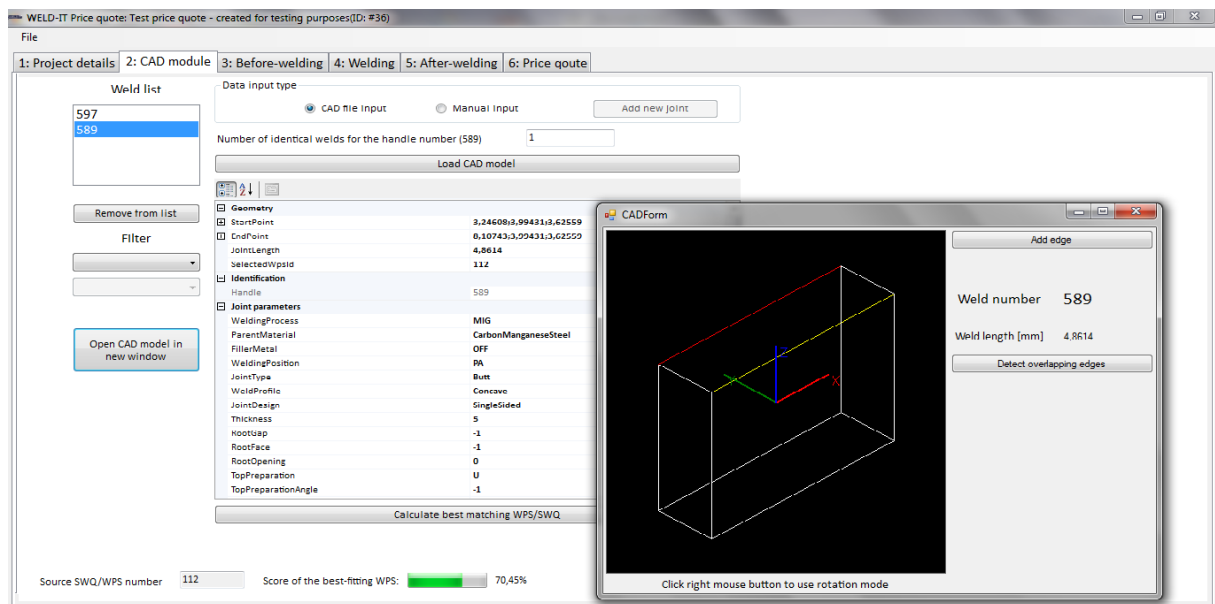


Figure 5 - CAD module in the integrated Graphical User Interface screenshot

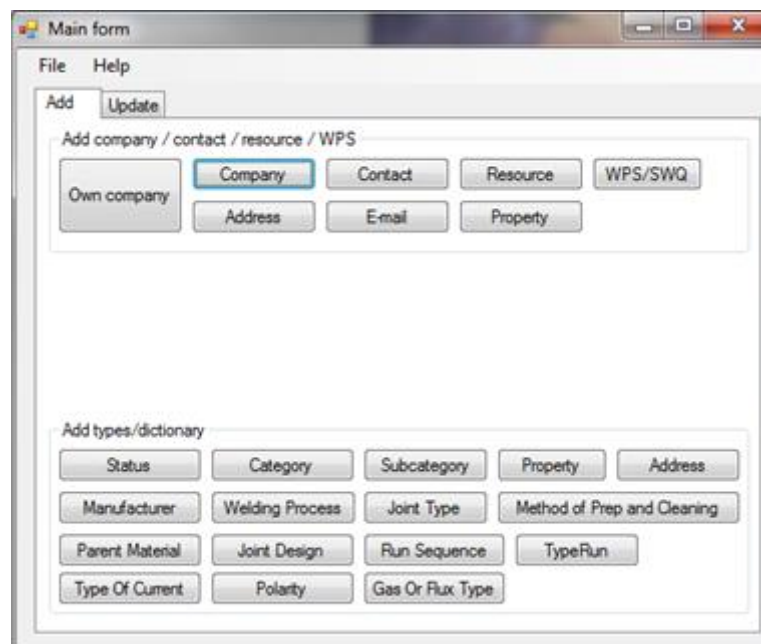


Figure 6 - Database tools screenshot

INPUT		OUTPUT S			
Welding Type	141-TIG	WPS(Points)	Actual	%	WPS(%)
Material	Carbon/manganese steels	WPS#1	11	55,00%	WPS#1
Welding position	Flat (PA)	WPS#2	10	50,00%	WPS#2
Types of Joint	In-Line Butt	WPS#3	15	75,00%	WPS#3
Root Face	1	WPS#4	14	70,00%	WPS#4
Total Plate Thickness	12,5	WPS#5	12	63,16%	WPS#5
Root Gap	3,5	WPS#6	11	55,00%	WPS#6
Top Preparation angle	50	WPS#7	7	36,84%	WPS#7
Top Preparation depth	OFF	WPS#8	7	36,84%	WPS#8
Bottom Preparation angle	OFF	WPS#9	7	36,84%	WPS#9
Top Preparation	V	WPS#10	7	36,84%	WPS#10
Bottom Preparation	V	WPS#11	12	63,16%	WPS#11
Filler metal type	Basic flux cored wire	WPS#12	14	73,68%	WPS#12
Profile	Concave	WPS#13	14	73,68%	WPS#13
Throat thickness	OFF	WPS#14	15	78,95%	WPS#14
Root Opening	OFF	WPS#15	15	78,95%	WPS#15
Land width	OFF	WPS#16	13	68,42%	WPS#16
Radius	OFF	WPS#17	13	68,42%	WPS#17
Joint Design	Double Sided	WPS#18	7	36,84%	WPS#18
Leg Length	OFF	WPS#19	7	36,84%	WPS#19
Top Penetration	OFF	WPS#20	7	36,84%	WPS#20
Bottom Penetration	OFF	WPS#21	8	42,11%	WPS#21
		WPS#22	7	36,84%	WPS#22
		WPS#23	8	42,11%	WPS#23
		WPS#24	13	65,00%	WPS#24
		WPS#25	6	33,33%	WPS#25
		WPS#26	8	44,44%	WPS#26
		WPS#27	3	75,00%	WPS#27
		Best WPS (%)	Max %	Avg %	Min %
		WPS#14	78,95%	54,45%	33,33%
		Best WPS (points)	Max	Avg	Min
		WPS#14	15	10,03703704	3

Figure 7 - ANFIS spreadsheet example

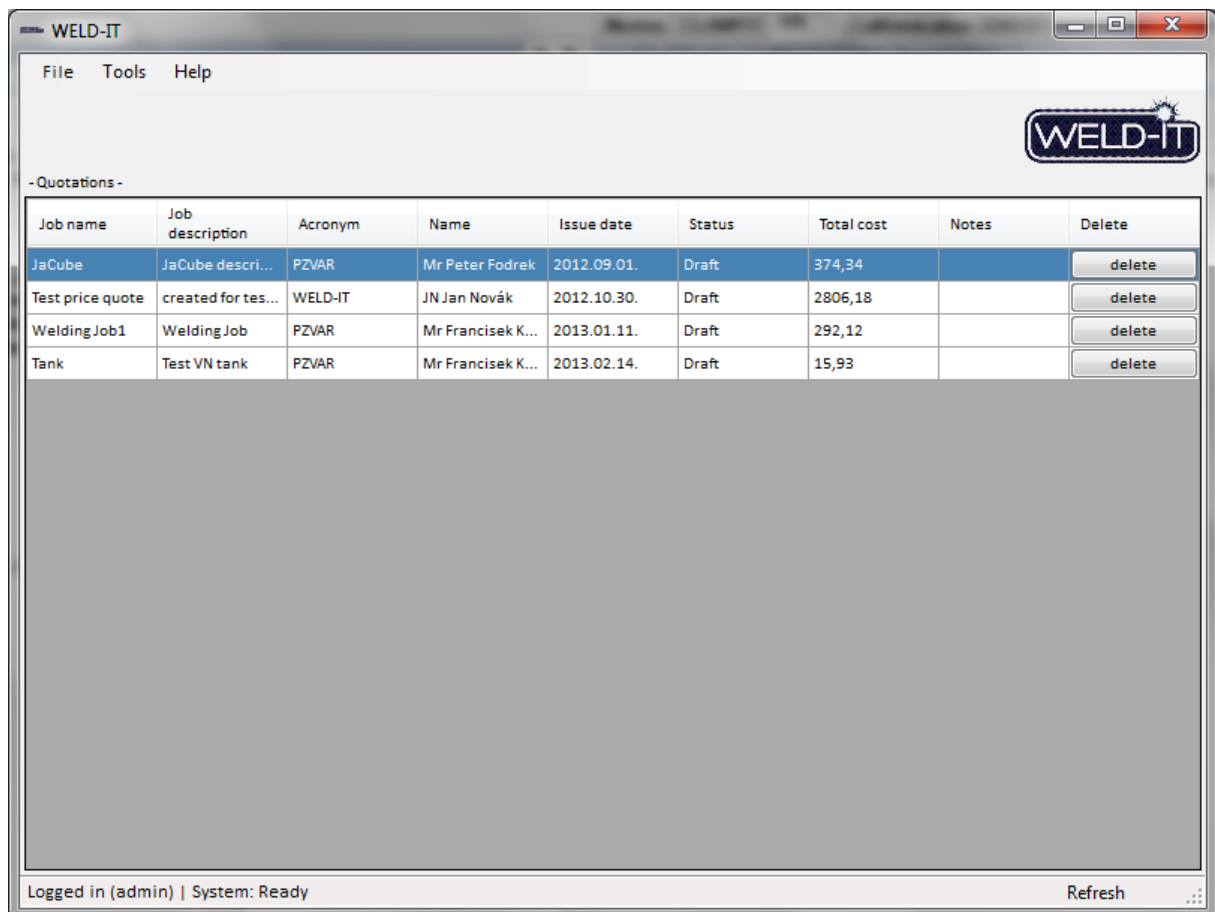


Figure 8 - WELD-IT main window screenshot

WELD-IT Price quote: Welding Job1 - Welding Job[ID: #39]

File

1: Project details | 2: CAD module | 3: Before-welding | 4: Welding | 5: After-welding | 6: Price quote

Job name / number: Welding Job1


Job description: Welding Job


Company name: First Welding Company [New]

Town/City: Bratislava

Contact name: Mr Francisek Kolenic [New]


Email address: kolenic.frantisek@pzvar.sk

Company logo: 

Contact person photo: 

Default welding technology: None

Default parent material: None

Attachment(s): 

Add Delete Open

Figure 9 - WELD-IT price quotation window screenshot

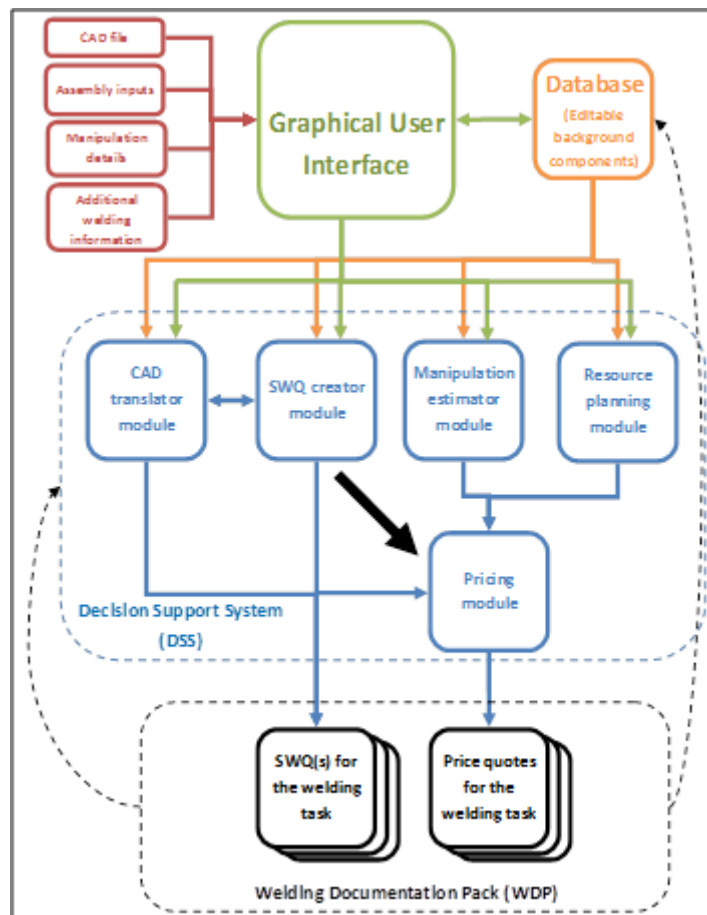


Figure 10 - WELD-IT structure

	User to enter a figure (eg as a % or estimated value)	WELD-IT software to include a default value or a rule
Cutting	X	
Machining		X
Forming		
Rolling		
Manipulation and handling (including fit-up)	X	
Preheat		X
Welding		X
Post weld heat treatment	X	
Pickling	X	
Shot blasting	X	
Painting	X	
Inspection (visual or non-destructive)	X	
Repair		X
Testing (eg hydrotest)	X	
Marking (requires a lot of time for large vessels)	X	

Figure 11 - WELD-IT Task to be calculated and typed manually