## Weld Requirements

These weld procedures are indicators only. Actual details are needed from the WPS sheets. Either supplied by the company or supplied by the fabricator and approved by the company.

Process: GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.

Notes: Test

Position Welder Qualification Notes Description Certificate Notes	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
De P	Pipe at 45 deg angle, weld deposited in vertical plane i angles to pipe
Position	99
Material	P8 / P8
Approved Thickness	1/16" to 0.86"
Filler Group	F5
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
Process	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or SMAW (stick) fill and cap.
Weld Procedure	WP DELETE

Process: GTAW (Tig) root, fill and cap.

Notes	
Welder Qualification Certificate Notes	
Position Description	Pipe at 45 degree angle, weld deposited in
Position	99
Material	P8 / P8
Approved Thickness	1/16" to 0.86"
Filler Group	F5
Weld Filler	Sandvik 25-22-2L Mn / San
Process	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or
Weld Procedure	WP DELETE

Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
99
P1 / P1
1/16" to 2.6"
F4
E7018-1
GTAW (TIG) root, SMAW (stick) fill and cap.
WP305

Process: GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.

Notes: None

Notes		
Welder Qualification Certificate Notes		
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe vertical, weld deposited in horizontal plane.
Position	99	2G
Material	P1 / P1	P1 / P1
Approved Thickness	1/16" to 0.43"	1/16" to 1.5"
Filler Group	F6	F5
Weld Filler	ER70S-2	ER316L / E316L
Process	GTAW (Tig) root, fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.
Weld Procedure	WP309	WP333

Process: GTAW (Tig) root, fill and cap.

Notes: 250 F Preheat required

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Welder Qualification	Certificate Notes
Position	Description
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Motorial	אמתומו
Approved	Thickness
Filler	Group
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Drocos	20000
Weld	Procedure

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Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
99	99	99
P1 / P1	P8 / P8	P8 / P8
1/16" to 0.43"	1/16" to 0.75"	1/16" to 0.86"
9	Root - F6   1/16" to / Fill - F5   0.75"	Root - F6 1/16" to
ER70S-2	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
GTAW (Tig) root, fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.
WP309	WP345	WP334

Process: GTAW (Tig) root, fill and cap.

Notes: None

Notes		
Welder Qualification Certificate Notes		
Position Description	Pipe horizontal, weld deposited in vertical plane	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
Position	5G	99
Material	P45 / P45	P8 / P8
Approved Thickness	1/16" to 0.75"	1/16" to 0.86"
Filler Group	Root - F6   1/16" to / Fill - F5   0.75"	F5
Weld Filler	E316L	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
Process	GTAW (TIG) root, SMAW (stick) fill and cap.	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or SMAW (stick) fill and cap.
Weld Procedure	WP337	WP DELETE

Process: GTAW (TIG) root, SMAW (stick) fill and cap.

Notes: Delete after test

Notes		
Welder Qualification Certificate Notes		
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
Position	99	99
Material	P8 / P8	P8 / P8
Approved Thickness	1/16" to 0.86"	1/16" to 0.86"
Filler Group	F5	F5
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
Process	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.
Weld Procedure	WP DELETE	WP9000

Process: GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.

	Process	Weld Filler	Filler Group	Approved Thickness	Material	Position	Position Description	Welder Qualification Certificate Notes	Notes
	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	F5	1/16" to 0.86"	P8 / P8	99	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe		
· ·	GTAW (Tig) root, fill and cap.	E320	F5	1/16" to 0.86"	P45 / P45	99	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe		

Process: GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.

Notes: None

Weld Procedure	Process	Weld Filler	Filler Group	Approved Thickness	Material	Position	Position Description	Welder Qualification Certificate Notes	Notes
WP386	GTAW (Tig) root, fill and cap.	Sandvik 25-22-2L Mn	F5	1/16" to 0.75"	P8 / P8	99	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe		

Process: GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.

Notes: None

Notes		
Welder Qualification Certificate Notes		
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
Position	99	99
Material	P8 / P8	P1 / P1
Approved Thickness	1/16" to 0.86"	1/16" to 0.43"
Filler Group	F5	F6
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	ER70S-2
Process	MP DELETE GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (Tig) root, fill and cap.
Weld	WP DELETE	WP309

Process: GTAW (Tig) root, fill and cap.

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Welder Qualification	Certificate Notes
Position	Description
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Approved	Thickness
Filler	Group
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Drococo	00000L
Weld	Procedure

Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
99
P1 / P1
1/16" to 2.6"
F4
E7018-1
GTAW (TIG) root, SMAW (stick) fill and cap.
WP305

Process: GTAW (TIG) or SMAW (stick) root, SMAW (stick) fill and cap.

Notes: None

Notes							
Welder Qualification Certificate Notes							
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe				
Position	99	99	99				
Material	P8 / P8	P1 / P1	P8 / P8				
Approved Thickness	1/16" to 0.86"	1/16" to 0.43"	1/16" to 0.86"				
Filler Group	F5	F6	Root - F6 1/16" to / Fill - F5 0.86"				
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	ER70S-2	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB				
Process	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (Tig) root, fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.				
Weld Procedure	WP DELETE	WP309	WP334				

Process: GTAW (TIG) root, SMAW (stick) fill and cap.

Notes								
Welder Qualification Certificate Notes								
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe						
Position	99	99						
Material	P8 / P8	P8 / P8						
Approved Thickness	1/16" to 0.86"	1/16" to 0.86"						
Filler Group	F5	F5						
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB						
Process	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.						
Weld Procedure	WP DELETE	WP9000						

Process: GTAW (Tig) root, fill and cap.

Notes: None

Notes	
Welder Qualification Certificate Notes	
Position Description	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
Position	99
Material	P8 / P8
Approved Thickness	1/16" to 0.86"
Filler Group	F5
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
Process	GTAW (TIG) or SMAW (stick) root, WP DELETE GTAW (TIG) or SMAW (stick) fill and cap.
Weld Procedure	WP DELETE

Process: GTAW (Tig) root, fill and cap.

Notes								
Welder Qualification	Certificate Notes							
Position	Description							
Position								
Material	Material							
Approved	Thickness							
Filler	Group							
Weld Filler								
Process Weld Filler Ap								
Weld	Procedure							

Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe
99
P8 / P8
1/16" to 0.86"
F5
Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB
MP DELETE SMAW (TIG) or SMAW (Stick) root, GTAW (TIG) or SMAW (stick) fill and cap.
WP DELETE

Process: GTAW (Tig) root, fill and cap.

Pipe at 45 degree	Pipe at 45 degree	angle, weld	deposited in	vertical plane right	angles to pipe		· · ·	Pipe vertical, weld	Pipe vertical, weld deposited in	Pipe vertical, weld deposited in horizontal plane.	Pipe vertical, weld deposited in horizontal plane.	Pipe vertical, weld deposited in horizontal plane.	Pipe vertical, weld deposited in horizontal plane. Pipe at 45 degree angle, weld	Pipe vertical, weld deposited in horizontal plane. Pipe at 45 degree angle, weld deposited in	Pipe vertical, weld deposited in horizontal plane. Pipe at 45 degree angle, weld deposited in vertical plane right
			99						2G	26	26	26	2G	9G 2G	2G 6G
Weld Filler Approved Material Position Sandvik 25-22-2L Mn / San F5 0 86"									P1 / P1	P1 / P1	P1 / P1	P1 / P1	P1 / P1	P1 / P1	P1 / P1
			01 "30"	0.80				1/16" +0	1/16" to	1/16" to 1.5"	1/16" to 1.5"	1/16" to	1.5" to	1.5" to 1.16" to 1.16	1/16" to 1.5" 1/16" to 0.86"
			F5					_	F5	F5	F5	£	F5	ۍ ت	55 55
Sandvik	Sandvik	25-22-2L	Mn / San	dvik25-2	2-2LMnB		ED316  /		E2461	E316L	E316L	E316L E316L Sandvik	E316L E316L Sandvik 25-22-2L	E316L E316L Sandvik 25-22-2L Mn / San	E316L E316L Sandvik 25-22-2L Mn / San
GTAW (TIG) or	GTAW (TIG) or	SMAW (stick) root,	WP DELETE   GTAW (TIG) or	SMAW (stick) fill	and cap.	GTAW (TIG) or	SMAW (stick) root,	-	GTAW (TIG) or	GTAW (TIG) or SMAW (stick) fill	GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (TIG) or SMAW (stick) fill and cap. GTAW (TIG) or	GTAW (TIG) or SMAW (stick) fill and cap. GTAW (TIG) or SMAW (stick) root,	GTAW (TIG) or SMAW (stick) fill and cap. GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or	GTAW (TIG) or SMAW (stick) fill and cap. GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill
			WP DELETE					_	WP333						