## 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

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	WP DELETE

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	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 2.6"
Filler Group	F5	F4
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	E7018-1
Process	MP DELETE GTAW (TIG) or SMAW (stick) root, GTAW (TIG) or SMAW (stick) fill and cap.	GTAW (TIG) root, SMAW (stick) fill and cap.
Weld Procedure	WP DELETE	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	26
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

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"
F6	Root - F6 / Fill - F5	Root - F6 1/16" to / Fill - F5 0.86"
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
	GTAW (Tig) root, ER70S-2 F6 1/16" to P1 / P1 6G 0.43"	GTAW (Tig) root, ER70S-2 F6 1/16" to P1 / P1 6G 0.43"  GTAW (TIG) or Sandvik SMAW (stick) root, 25-22-2L Mn / San SMAW (stick) fill dvik25-2 and cap.

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

Notes: None

Weld Procedure	Process	Weld Filler	Filler Group	Approved Thickness	Material	Position	Position Description	Welder Qualification Certificate Notes	Notes
WP337	GTAW (TIG) root, SMAW (stick) fill and cap.	E316L	Root - F6   1/16" to / Fill - F5   0.75"	1/16" to 0.75"	P45 / P45	5G	Pipe horizontal, weld deposited in vertical plane		
WP DELETE	GTAW (TIG) or SMAW (stick) root, WP DELETE 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		

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	MP DELETE 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.
Weld Procedure	WP DELETE	WP9000

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	P45 / P45
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	E320
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	WP555

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 Procedure	WP DELETE	WP309

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

Notes: None

Weld Procedure	Process	Weld Filler	Filler Group	Approved Thickness	Material	Position	Position Description	Welder Qualification Certificate Notes	Notes
WP305	GTAW (TIG) root, SMAW (stick) fill and cap.	E7018-1	F4	1/16" to 2.6"	P1 / P1	99	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe		

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 / Fill - F5
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, WP DELETE 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: 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	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"		
App	1/		
Filler App Group Thic	F5 0.		
Filler Group	F5		

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"		
App	1/		
Filler App Group Thic	F5 0.		
Filler Group	F5		

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	Pipe vertical, weld deposited in horizontal plane.	Pipe at 45 degree angle, weld deposited in vertical plane right angles to pipe	
Position	99	2G	99	
Material	P8 / P8	P1 / P1	P8 / P8	
Approved Thickness	1/16" to 0.86" 1/16" to 1.5"		1/16" to 0.86"	
Filler Group	F5	F5	F5	
Weld Filler	Sandvik 25-22-2L Mn / San dvik25-2 2-2LMnB	ER316L / E316L	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) 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.	
Weld	WP DELETE	WP333	WP9000	