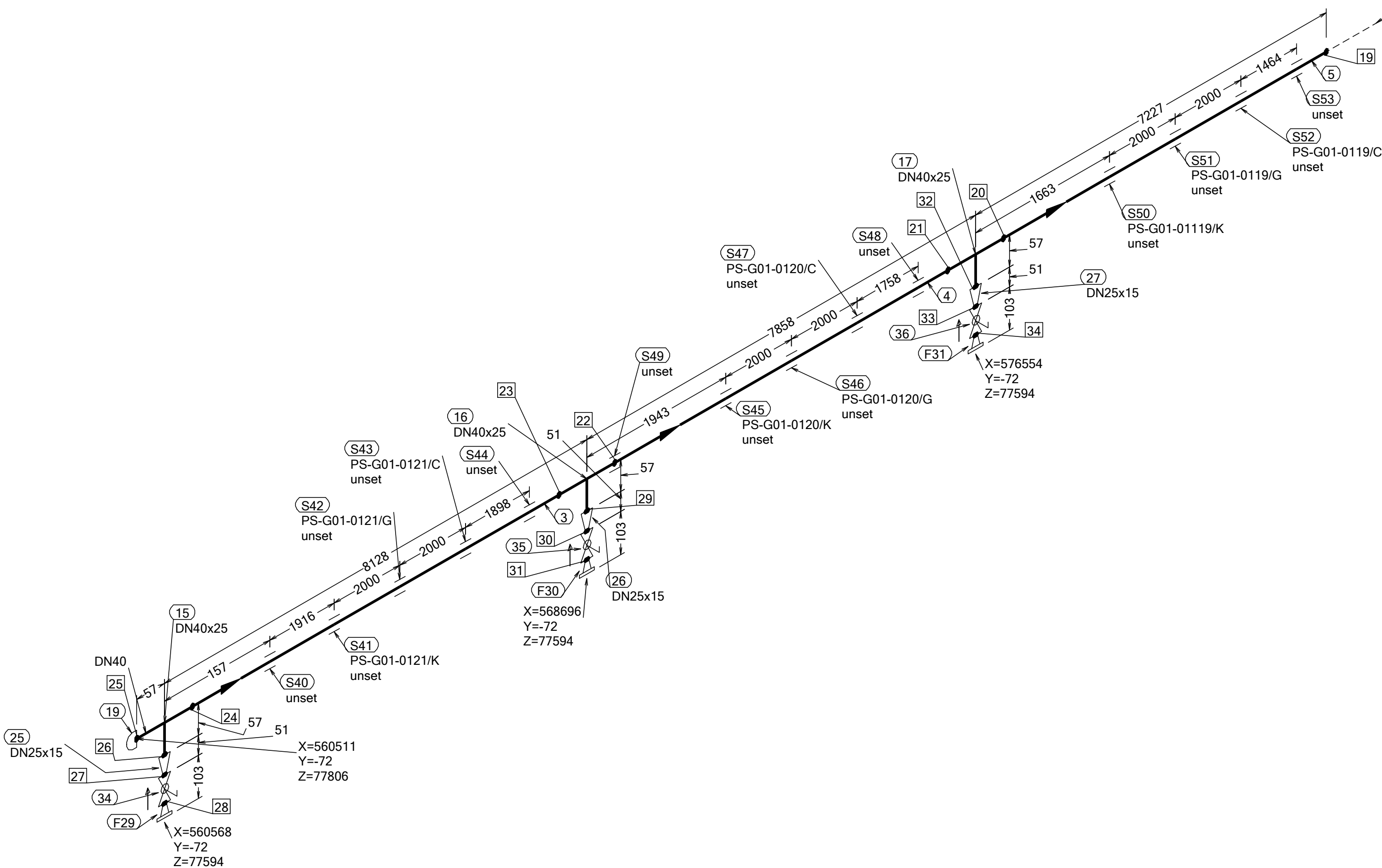


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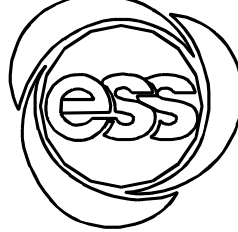


WELD	WPS
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CONT. ON
SHEET 2

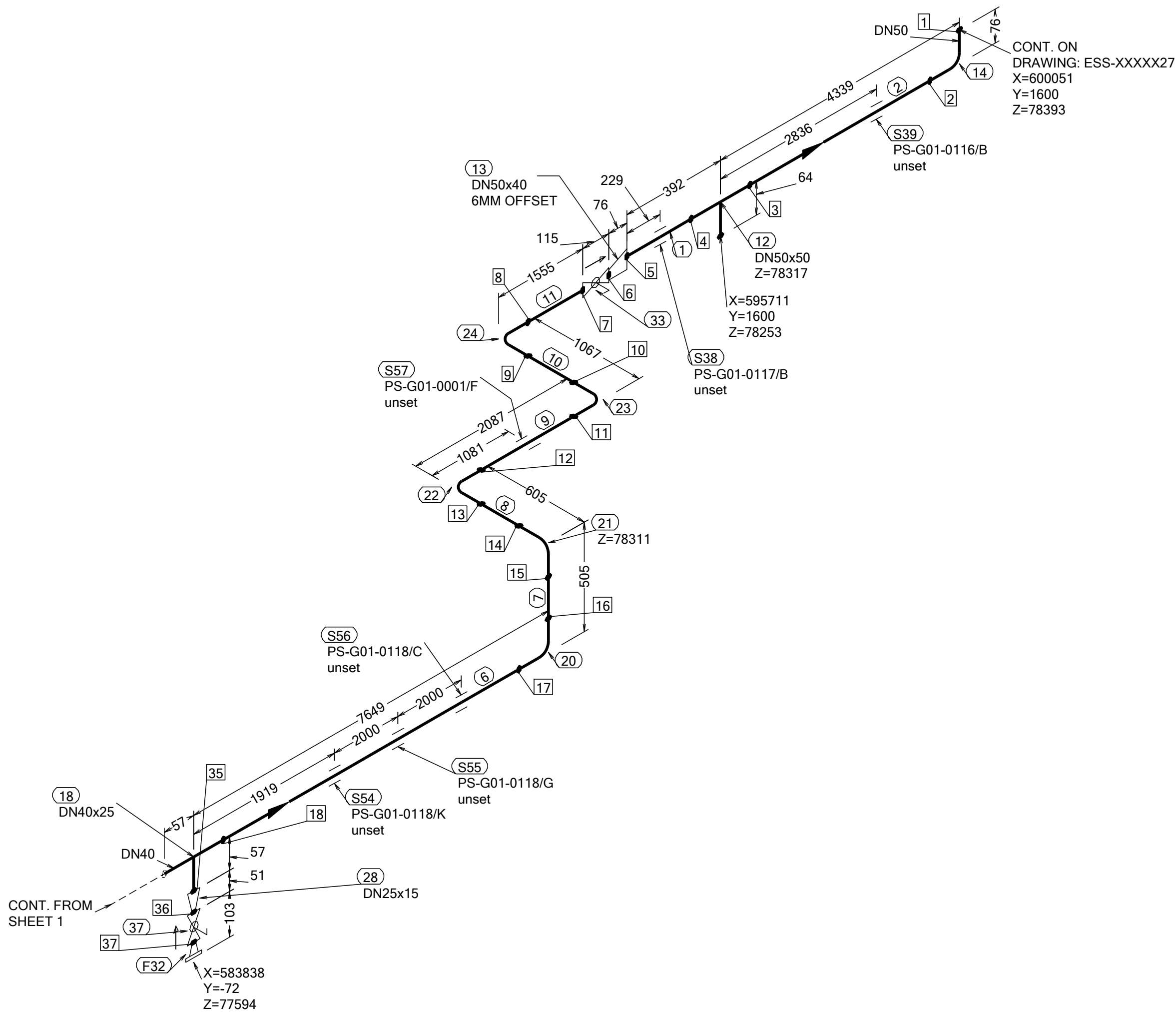
FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
PIPE					
3	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	8014	
4	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7744	
5	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7170	
FITTINGS					
15	TEE REDUCED, SS-EN 10253-4, TYPE A, 48.3x2.0 / 33.7x2.0	40 x 25	EN 1.4404	1	
16	TEE REDUCED, SS-EN 10253-4, TYPE A, 48.3x2.0 / 33.7x2.0	40 x 25	EN 1.4404	1	
17	TEE REDUCED, SS-EN 10253-4, TYPE A, 48.3x2.0 / 33.7x2.0	40 x 25	EN 1.4404	1	
19	CAP, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1	
25	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	EN 1.4404	1	
26	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	EN 1.4404	1	
27	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	EN 1.4404	1	
FLANGES					
29	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	15		1	
30	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	15		1	
31	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	15		1	
VALVES / IN-LINE ITEMS					
34	BALL VALVE, WORCESTER A44, SHORT, BW	15		1	
35	BALL VALVE, WORCESTER A44, SHORT, BW	15		1	
36	BALL VALVE, WORCESTER A44, SHORT, BW	15		1	

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
40	ESS Atta	40		1	
41	ESS Atta	40		1	
42	ESS Atta	40		1	
43	ESS Atta	40		1	
44	ESS Atta	40		1	
45	ESS Atta	40		1	
46	ESS Atta	40		1	
47	ESS Atta	40		1	
48	ESS Atta	40		1	
49	ESS Atta	40		1	
50	ESS Atta	40		1	
51	ESS Atta	40		1	
52	ESS Atta	40		1	
53	ESS Atta	40		1	

WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0059672	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G01-NCL
Quality Level For Weldign Acc To TBN	Design Pressure 10bar (g)	Bend Radius N/A	Bending Procedure N/A	Coupling Installation Procedure TBN	Pressure Test Program TBN	Alternate System Tag	Date (First Issue) 170522
Weld Joint Efficiency Factor (Longitudinal) 1,0	Test Pressure 14.3bar (g)	Insulation Specification N/A			Title/Name EUROPEAN SPALLATION SOURCE ERIC WATER COOLING SYSTEM CWL-CWS01 OVERVIEW ESS.ACC.E02.E01.WP0006		Scale -
Elevation (z) Acc To BCS	Quality Class MQC4-C	Insulation Thickness N/A					Format A2
	Media CWM	Allowance For Corrosion 0					Sheet 1 of 2
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A			Document Number ESS-XXXXX31		Revision A1

Rev	Description	Date	Drawn	Designed	Reviewed	Verified	Quality	Approved
A1	ISSUED FOR CDR	170522	FRPE	FRPE	AKCO	ANLU		

N (Y)



WELD	WPS	FABRICATION MATERIALS					
1		PT	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
2		NO					
3							
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37							
			PIPE				
	1	PIPE, SS-EN 10217-7, TC1, 60.3x2.0	50	EN 1.4404	328		
	2	PIPE, SS-EN 10217-7, TC1, 60.3x2.0	50	EN 1.4404	4199		
	6	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7535		
	7	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	391		
	8	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	491		
	9	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	1973		
	10	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	953		
	11	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	1498		
		FITTINGS					
	12	TEE EQUAL, SS-EN 10253-4, TYPE A, 60.3x2.0 / 60.3x2.0	50 x 50	EN 1.4404	1		
	13	REDUCER ECC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 48.3x2.0	50 x 40	EN 1.4404	1		
	14	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 60.3x2.0	50	EN 1.4404	1		
	18	TEE REDUCED, SS-EN 10253-4, TYPE A, 48.3x2.0 / 33.7x2.0	40 x 25	EN 1.4404	1		
	20	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1		
	21	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1		
	22	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1		
	23	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1		
	24	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1		
	28	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	EN 1.4404	1		
		FLANGES					
	32	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	15		1		
		VALVES / IN-LINE ITEMS					
	33	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN40	40	EN 1.4404	1		
	37	BALL VALVE, WORCESTER A44, SHORT, BW	15		1		

PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
31	SUPPORTS				
32	ESS Atta	50		1	
33	ESS Atta	50		1	
34	ESS Atta	40		1	
35	ESS Atta	40		1	
36	ESS Atta	40		1	
37	ESS Atta	40		1	

WPS See Weldlist	Design Temperature	Tightening Torque For Flange Joints	P&ID Drawing Number	General Layout Drawing Number	Calculation Report	Inspection Plan	Area Code
TBN	50degC	TBN	ESS-0059672	TBN	ESS-0058702	TBN	G01-NCL
Quality Level For Weldign Acc To	Design Pressure	Bend Radius	Bending Procedure	Coupling Installation Procedure	Pressure Test Program	Alternate System Tag	Date (First Issue)
TBN	10bar (g)	N/A	N/A	TBN	TBN		170522
Weld Joint Efficiency Factor (Longitudinal)	Test Pressure	Insulation Specification			Title/Name EUROPEAN SPALLATION SOURCE ERIC WATER COOLING SYSTEM CWL-CWS01 OVERVIEW ESS.ACC.E02.E01.WP0006		Scale
1,0	14.3bar (g)	N/A					-
Elevation (z) Acc To	Quality Class	Insulation Thickness					Format
BCS	MQC4-C	N/A					A2
	Media	Allowance For Corrosion			Document Number ESS-XXXXX31		Sheet
	CWM	0					2 of 2
	Pipe Specification	Surface Treatment					Revision
	MQC4-W-PN16	N/A					A1

Rev	Description	Date	Drawn	Designed	Reviewed	Verified	Quality	Approved
A1	ISSUED FOR CDR	170522	FRPE	FRPE	AKCO	ANLU		