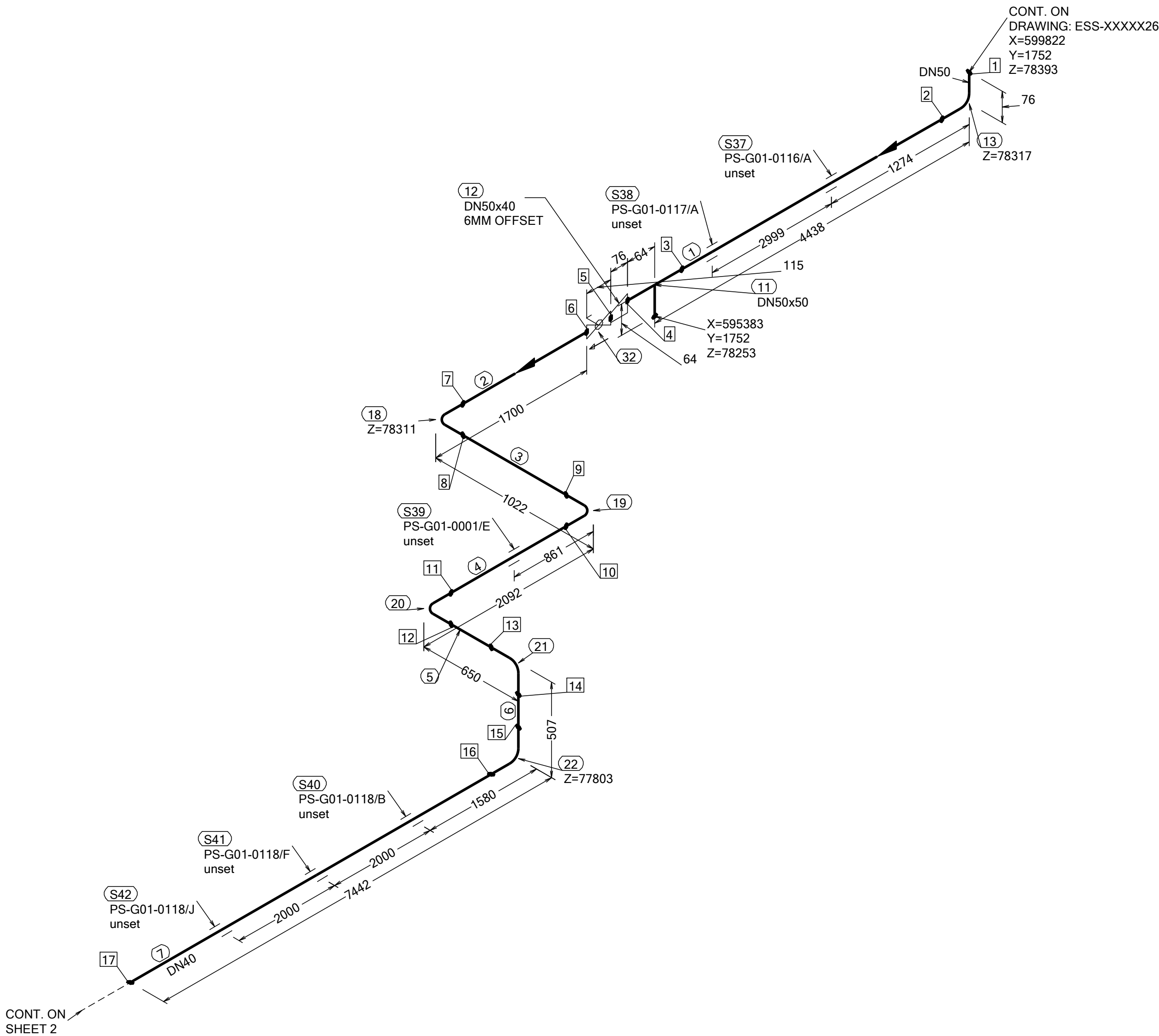


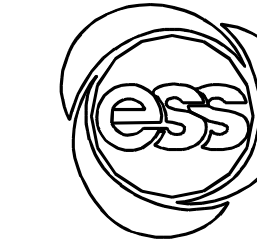
N (Y)



WELD	WPS
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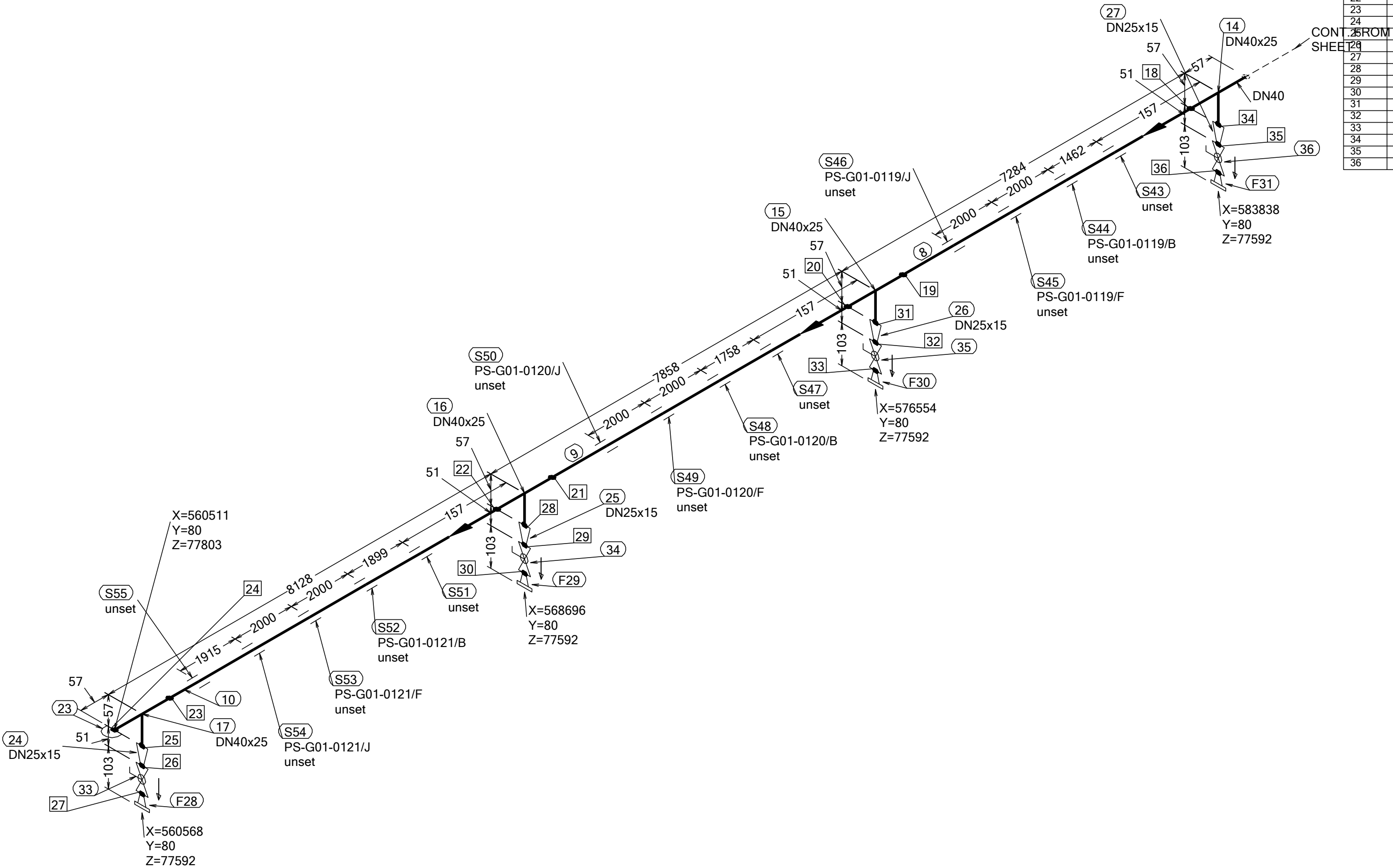
FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
PIPE					
1	PIPE, SS-EN 10217-7, TC1, 60.3x2.0	50	EN 1.4404	4298	
2	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	1643	
3	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	908	
4	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	1978	
5	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	536	
6	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	393	
7	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7385	
FITTINGS					
11	TEE EQUAL, SS-EN 10253-4, TYPE A, 60.3x2.0 / 60.3x2.0	50 x 50	EN 1.4404	1	
12	REDUCER ECC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 48.3x2.0	50 x 40	EN 1.4404	1	
13	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 60.3x2.0	50	EN 1.4404	1	
18	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1	
19	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 48.3x2.0	40	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	
VALVES / IN-LINE ITEMS					
32	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN40	40	EN 1.4404	1	

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
37	ESS Atta	50		1	
38	ESS Atta	50		1	
39	ESS Atta	40		1	
40	ESS Atta	40		1	
41	ESS Atta	40		1	
42	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.WP0005	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-XXXXX30	Revision A1

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

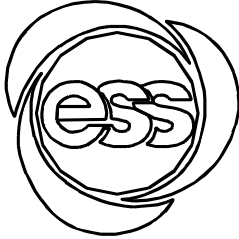
N (Y)



WELD	WPS
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FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
PIPE					
8	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7170	
9	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	7744	
10	PIPE, SS-EN 10217-7, TC1, 48.3x2.0	40	EN 1.4404	8014	
FITTINGS					
14	TEE REDUCED, SS-EN 10253-4, TYPE A, 48.3x2.0 / 33.7x2.0	40 x 25	EN 1.4404	1	
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	
23	CAP, SS-EN 10253-4, TYPE A, 48.3x2.0	40	EN 1.4404	1	
24	REDUCER CONC. SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	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					
28	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	15		1	
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					
33	BALL VALVE, WORCESTER A44, SHORT, BW	15		1	
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					
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	
54	ESS Atta	40		1	
55	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
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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.WP0005		Scale -
Elevation (z) Acc To BCS	Quality Class MQC4-C	Insulation Thickness N/A					Format A2
	Media CWM	Allowance For Corrosion 0					Sheet 2 of 2
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A			Document Number ESS-XXXXX30	Revision A1	

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