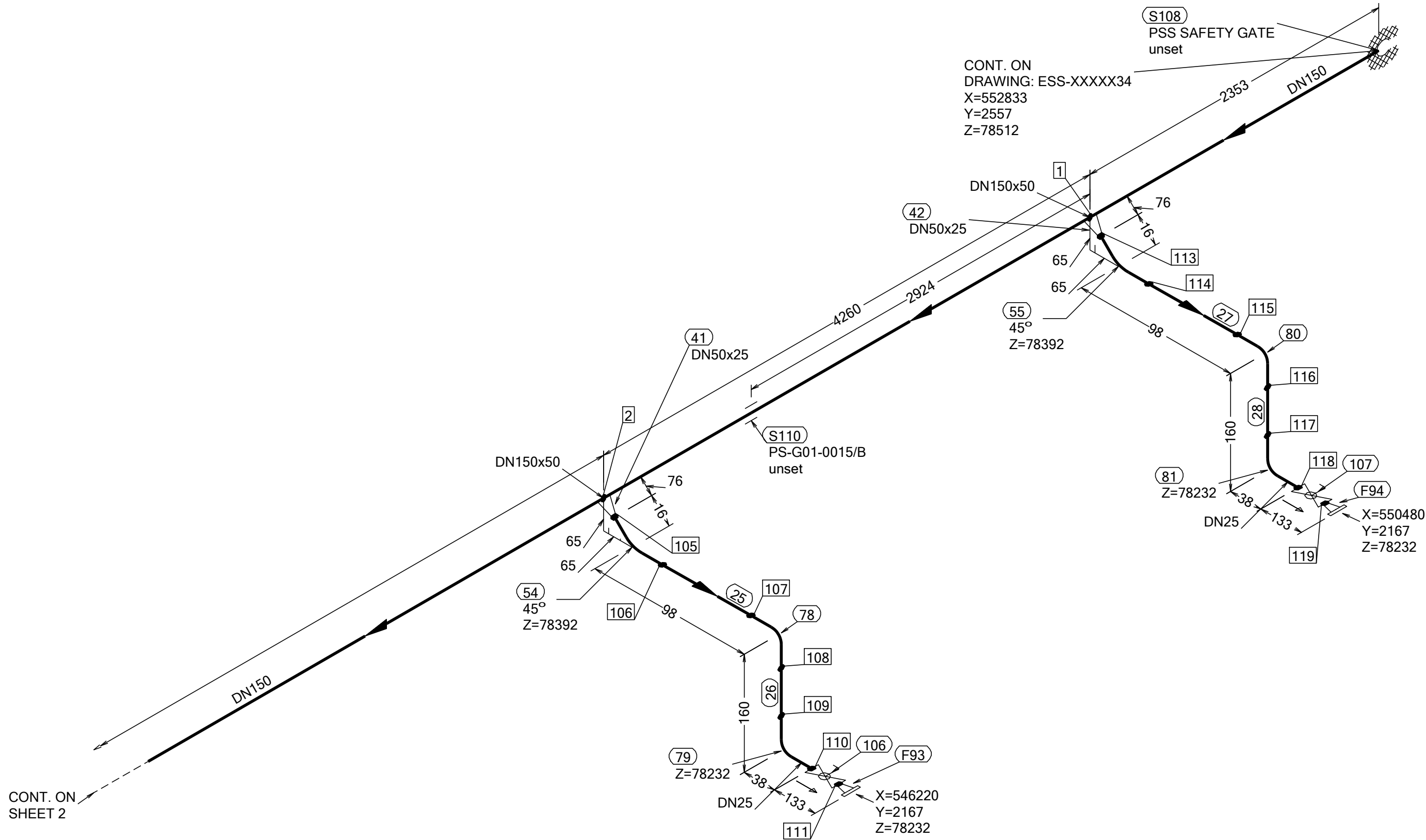
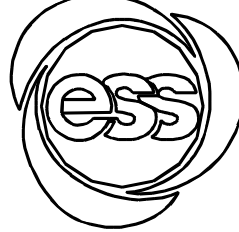
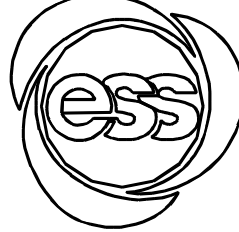
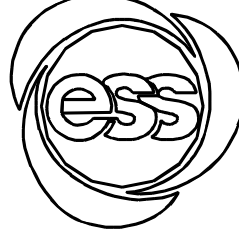


N (Y)



WELD	WPS	FABRICATION MATERIALS					
1							
2		PT	COMPONENT DESCRIPTION	DN	MATERIAL	QTY	REMARKS
104		NO				(mm)	
105							
106			PIPE				
107							
108		1	PIPE, SS-EN 10217-7, TC1, 168.3x2.0	150	EN 1.4404	10872	SETON TEE
109		25	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
110		26	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
111		27	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
112		28	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
113							
114			FITTINGS				
115							
116		41	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
117							
118		42	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
119							
		54	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
		55	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
		78	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
		79	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
		80	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
		81	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
			FLANGES				
		93	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
		94	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
			VALVES / IN-LINE ITEMS				
		106	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN25	25	EN 1.4404	1	
		107	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN25	25	EN 1.4404	1	

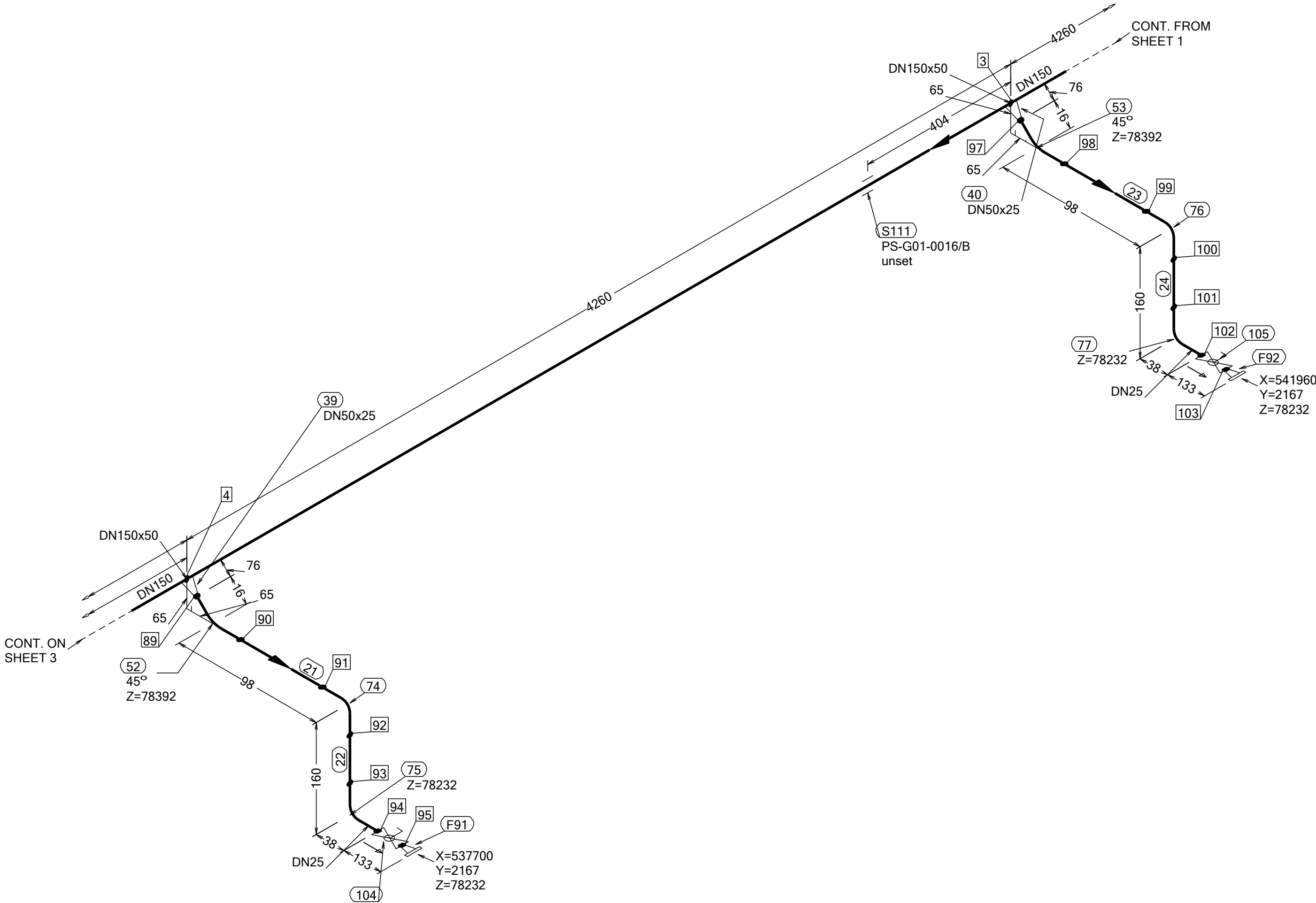
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
108	PENETRATION ATTA	150		1	
110	ESS Atta	150		1	

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-0059673	TBN	ESS-0058702	TBN	G01-SFK
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					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					Sheet
	CWM	0					1 of 7
	Pipe Specification	Surface Treatment					Revision
	MQC4-W-PN16	N/A					A1

Title/Name  
EUROPEAN SPALLATION SOURCE ERIC  
WATER COOLING SYSTEM  
CWM-CWS02 OVERVIEW  
ESS.ACC.E02.E02.WP0001  
Document Number  
ESS-XXXXX52

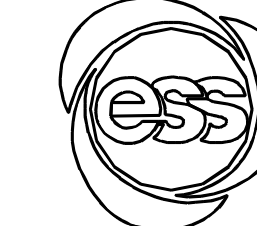
Rev	Description	Date	Drawn	Designed	Reviewed	Verified	Quality	Approved
A1	ISSUED FOR CDR	170522	FRPE	FRPE	AKCO	ANLU		

N (Y)



WELD	WPS	FABRICATION MATERIALS					
3		PT	COMPONENT DESCRIPTION	DN	MATERIAL	QTY	REMARKS
4		NO				(mm)	
88							
89							
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
111	ESS Atta	150		1	

WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0059673	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G01-SF
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	<div><div>Title/Name EUROPEAN SPALLATION SOURCE ERIC WATER COOLING SYSTEM CWM-CWS02 OVERVIEW ESS.ACC.E02.E02.WP0001  Document Number ESS-XXXXX52</div></div>				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 7
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A					Revision A1

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

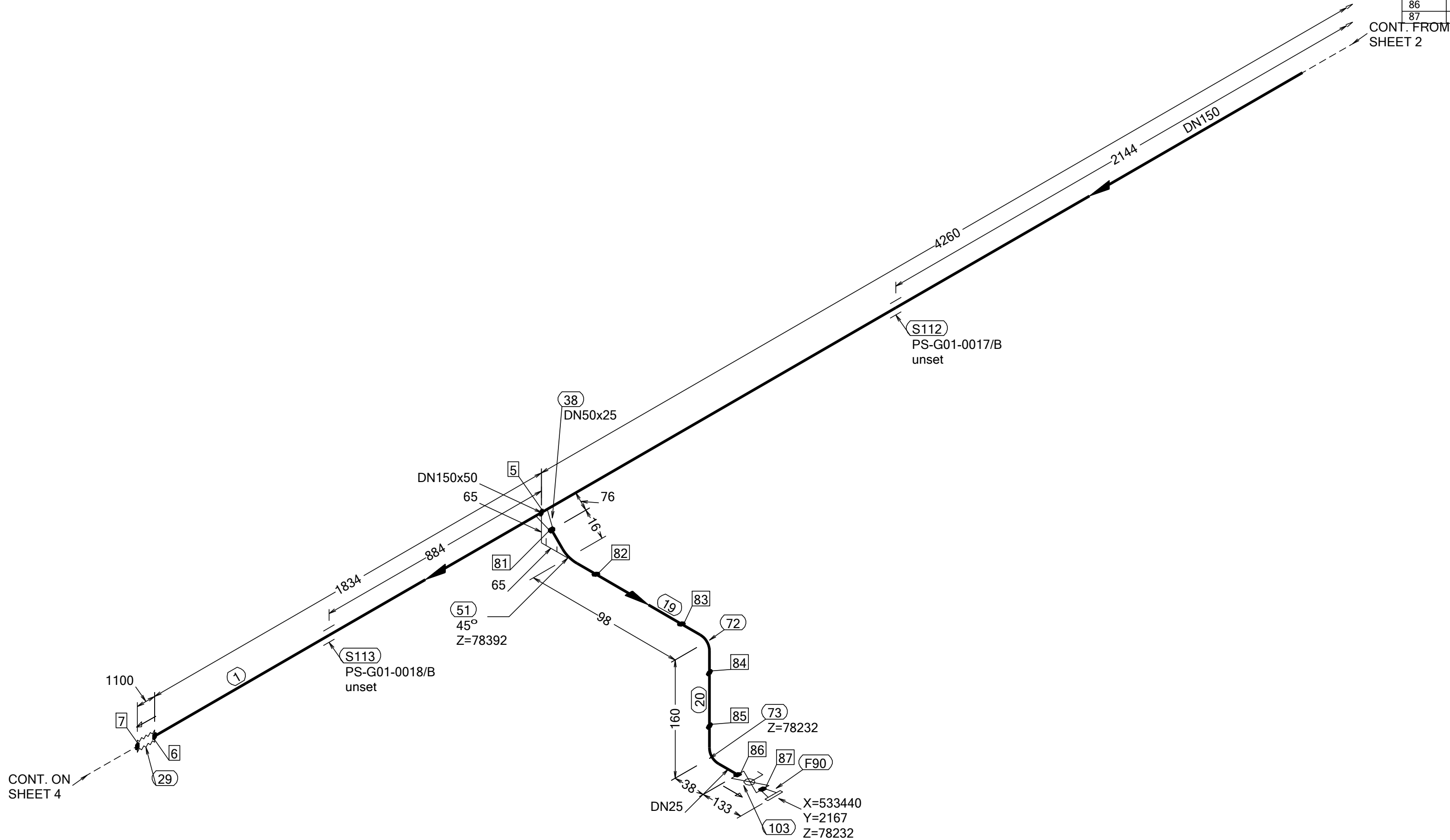
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PT	COMPONENT DESCRIPTION
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PT NO	COMPONENT DESCRIPTION
	<u>PIPE</u>
1	PIPE, SS-EN 10217-7, TC1, 16
19	PIPE, SS-EN 10217-7, TC1, 33
20	PIPE, SS-EN 10217-7, TC1, 33
	<u>FITTINGS</u>
29	ESS BELLOW
38	REDUCER CONC, SS-EN 10217-7, 60.3x2.0 / 33.7x2.0
51	ELBOW 45, TYPE 3D, SS-EN 10217-7, A. 33.7x2.0
72	ELBOW 90, TYPE 3D, SS-EN 10217-7, A. 33.7x2.0
73	ELBOW 90, TYPE 3D, SS-EN 10217-7, A. 33.7x2.0
	<u>FLANGES</u>
90	FLANGE WN, SS-EN 1092-1, 60.3x2.0
	<u>VALVES / IN-LINE ITEMS</u>
103	WORCESTER BALL VALVE B' DN25

PT	COMPONENT DESCRIPTION
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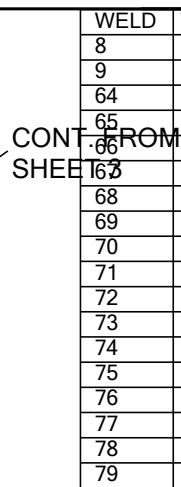
PT NO	COMPONENT DESCRIPTION
	<u>SUPPORTS</u>
112	ESS Atta
113	ESS Atta




WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0059673	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G01-SF
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 CWM-CWS02 OVERVIEW ESS.ACC.E02.E02.WP0001		Scale -
Elevation (z) Acc To BCS	Quality Class MQC4-C	Insulation Thickness N/A					Format A2
	Media CWM	Allowance For Corrosion 0					Sheet 3 of 7
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A			Document Number ESS-XXXXX52		Revision A1

Rev A1	Description ISSUED FOR CDR	Date 170522	Drawn FRPE	Designed FRPE	Reviewed AKCO	Verified ANLU	Quality	Approved
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Printed: 23 MAY 2017



ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
	<u>SUPPORTS</u>				
114	ESS Atta	150		1	

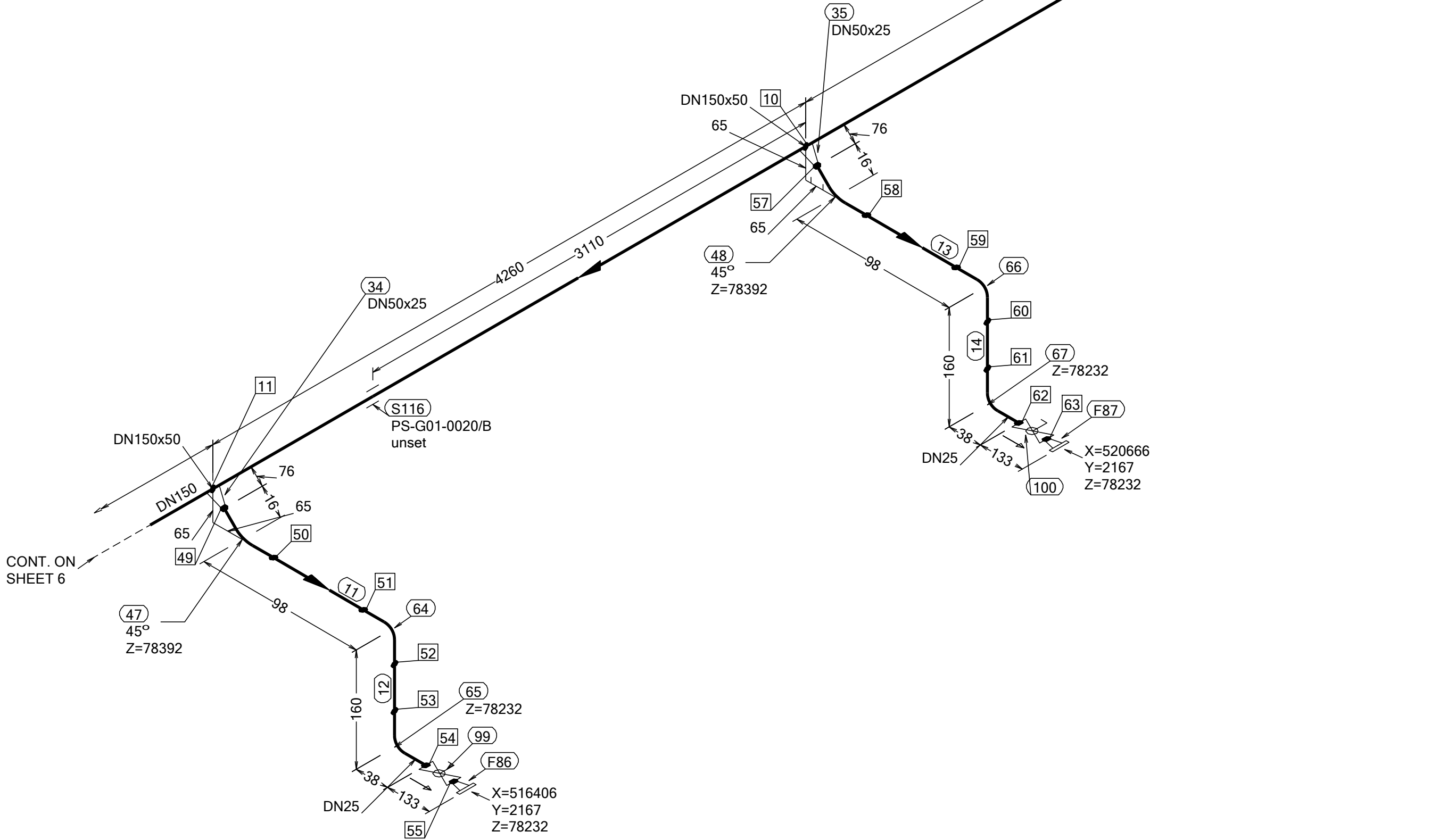


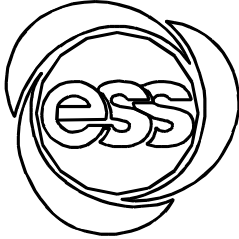
N (Y)

WELD	WPS
10	
11	
48	
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63	

FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
	PIPE				
2	PIPE, SS-EN 10217-7, TC1, 168.3x2.0	150	EN 1.4404	8520	SETON TEE
11	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
12	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
13	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
14	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
	FITTINGS				
34	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
35	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
47	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
48	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
64	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
65	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
66	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
67	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
	FLANGES				
86	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
87	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
	VALVES / IN-LINE ITEMS				
99	WORCESTER BALL VALVE BW, A59-666TT-BWJ DN25	25	EN 1.4404	1	
100	WORCESTER BALL VALVE BW, A59-666TT-BWJ DN25	25	EN 1.4404	1	

PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
115	ESS Atta	150		1	
116	ESS Atta	150		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-0059673	TBN	ESS-0058702	TBN	G01-SFK
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 CWM-CWS02 OVERVIEW ESS.ACC.E02.E02.WP0001		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-XXXXX52		Sheet
	CWM	0					5 of 7
	Pipe Specification	Surface Treatment					Revision
	MQC4-W-PN16	N/A					A1

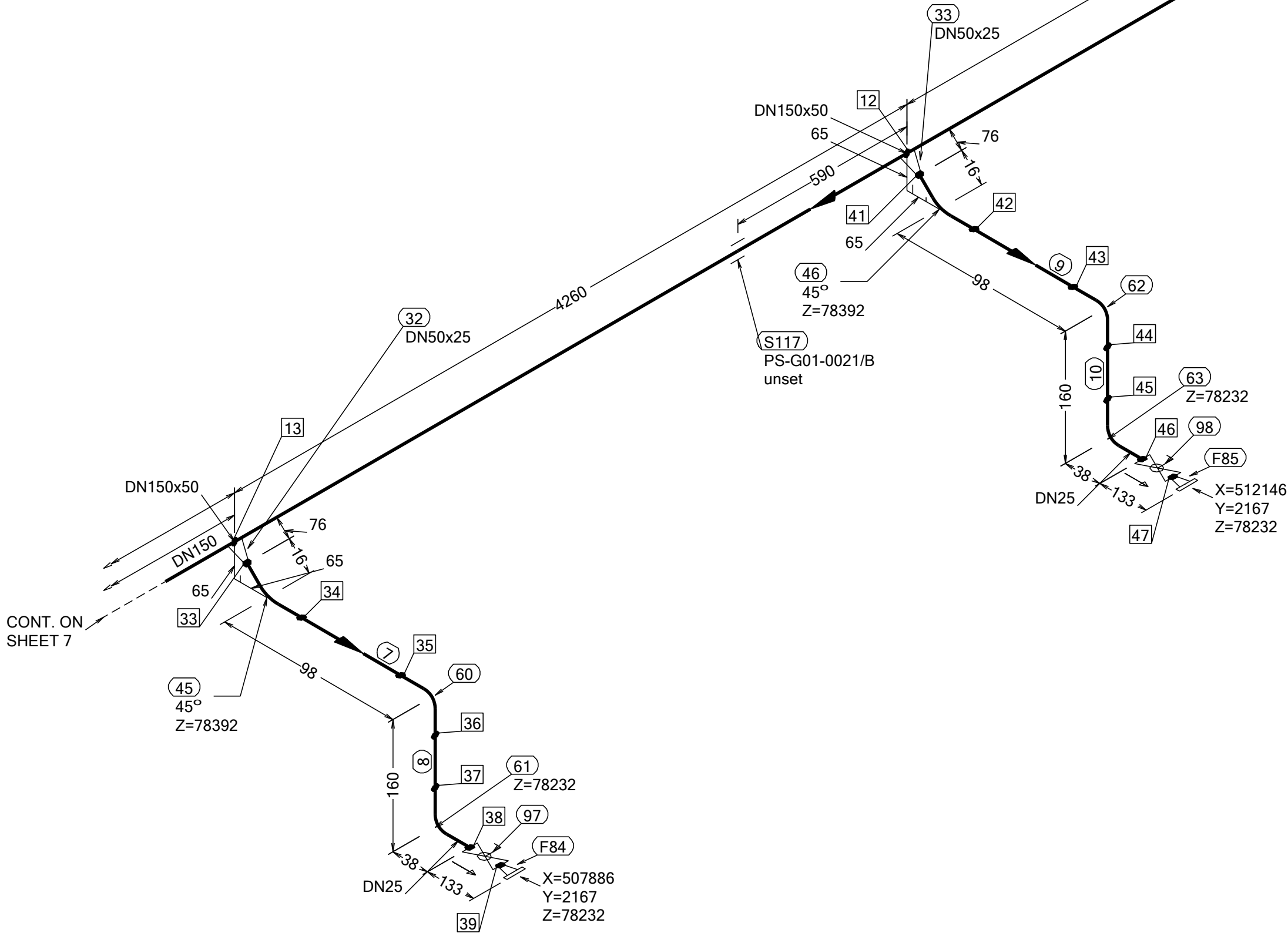
Rev	Description	Date	Drawn	Designed	Reviewed	Verified	Quality	Approved
A1	ISSUED FOR CDR	170522	FRPE	FRPE	AKCO	ANLU		

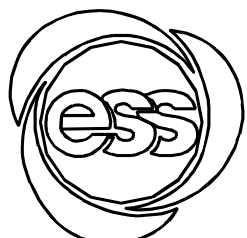
N (Y)

WELD	WPS
12	
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46	
47	

FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
	PIPE				
2	PIPE, SS-EN 10217-7, TC1, 168.3x2.0	150	EN 1.4404	8520	SETON TEE
7	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
8	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
9	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
10	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
	FITTINGS				
32	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
33	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
45	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
46	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
60	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
61	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
62	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
63	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
	FLANGES				
84	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
85	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
	VALVES / IN-LINE ITEMS				
97	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN25	25	EN 1.4404	1	
98	WORCESTER BALL VALVE BW, A59-6666TT-BWJ DN25	25	EN 1.4404	1	

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
117	ESS Atta	150		1	



WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0059673	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G01-SFK
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 CWM-CWS02 OVERVIEW ESS.ACC.E02.E02.WP0001		Scale -
Elevation (z) Acc To BCS	Quality Class MQC4-C	Insulation Thickness N/A					Format A2
	Media CWM	Allowance For Corrosion 0					Sheet 6 of 7
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A			Document Number ESS-XXXXX52		Revision A1

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

N (Y)

CONT. ON  
DRAWING: ESS-XXXXX54  
X=496975  
Y=2557  
Z=78512

S109  
PSS SAFETY GATE  
unset

S119  
PS-G01-0023/B  
unset

S118  
PS-G01-0022/B  
unset

43  
45°  
Z=78392

44  
45°  
Z=78392

X=499366  
Y=2167  
Z=78232

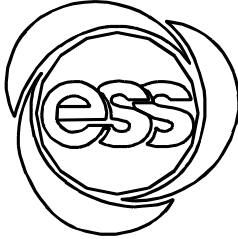
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Z=78232

CONT. FROM  
SHEET 26

WELD	WPS
14	
15	
16	
17	
18	
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31	

FABRICATION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
	PIPE				
2	PIPE, SS-EN 10217-7, TC1, 168.3x2.0	150	EN 1.4404	10910	SETON TEE
3	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
4	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
5	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	44	
6	PIPE, SS-EN 10217-7, TC1, 33.7x2.0	25	EN 1.4404	84	
	FITTINGS				
30	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
31	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
43	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
44	ELBOW 45, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
56	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
57	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
58	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
59	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 33.7x2.0	25	EN 1.4404	1	
	FLANGES				
82	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
83	FLANGE WN, SS-EN 1092-1, TYPE 11, PN40	25		1	
	VALVES / IN-LINE ITEMS				
95	WORCESTER BALL VALVE BW, A59-666TT-BWJ DN25	25	EN 1.4404	1	
96	WORCESTER BALL VALVE BW, A59-666TT-BWJ DN25	25	EN 1.4404	1	

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
109	PENETRATION ATTA	150		1	
118	ESS Atta	150		1	
119	ESS Atta	150		1	

WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0059673	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G01-SFK
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 CWM-CWS02 OVERVIEW ESS.ACC.E02.E02.WP0001		Scale -
Elevation (z) Acc To BCS	Quality Class MQC4-C	Insulation Thickness N/A					Format A2
	Media CWM	Allowance For Corrosion 0					Sheet 7 of 7
	Pipe Specification MQC4-W-PN16	Surface Treatment N/A					Revision A1
Rev A1	Description ISSUED FOR CDR	Date 170522	Drawn FRPE	Designed FRPE	Reviewed AKCO	Verified ANLU	Quality Approved