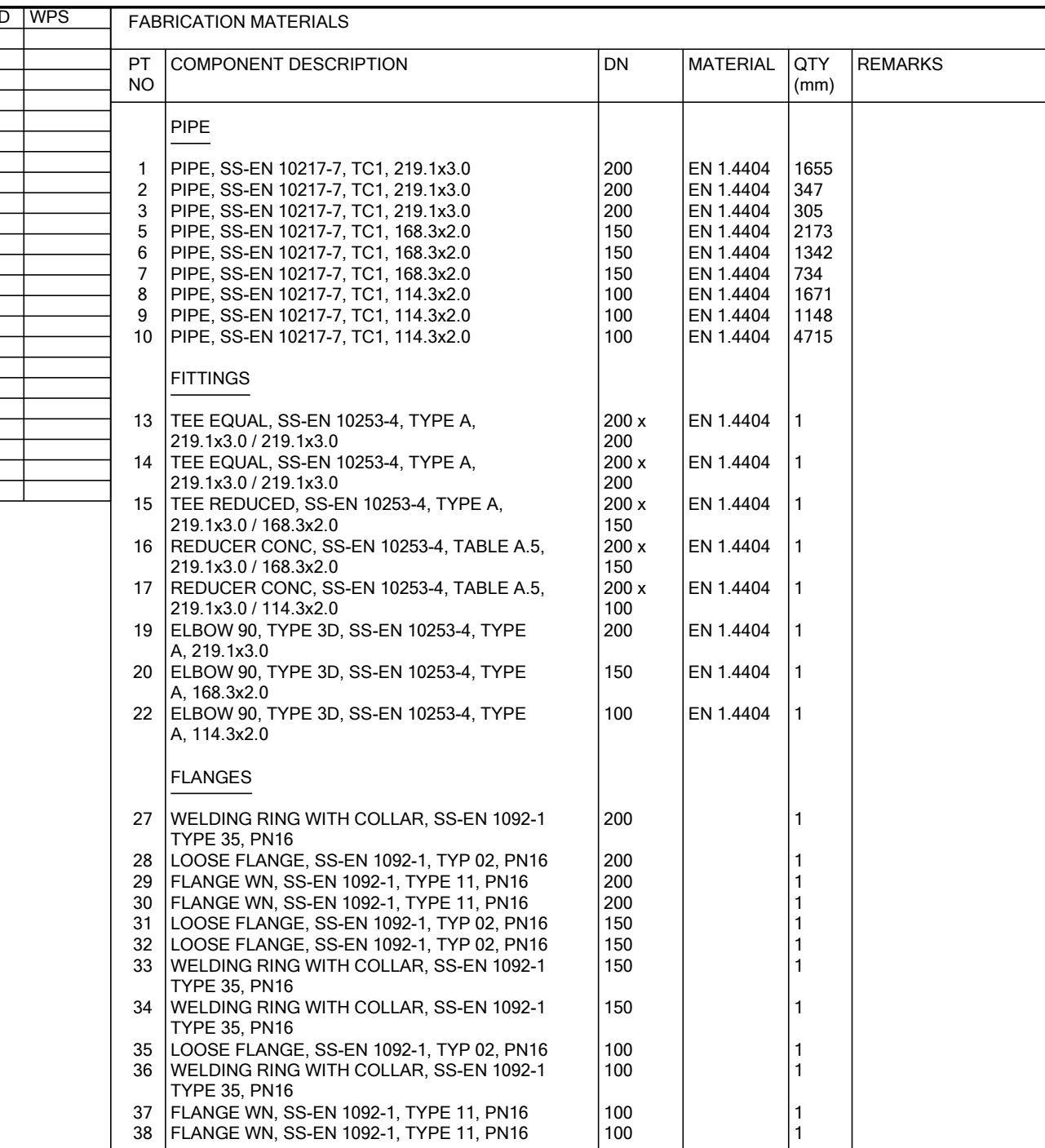



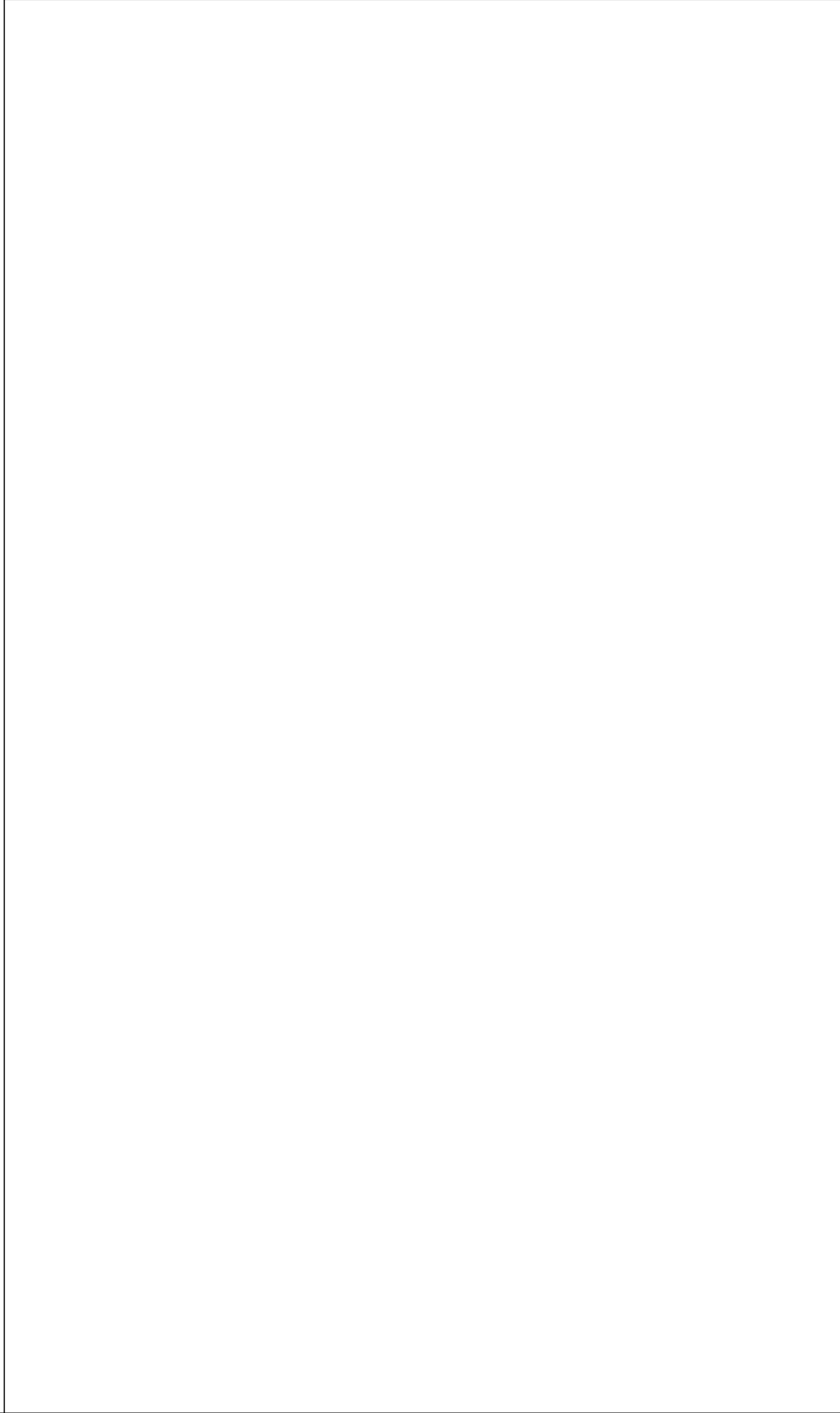
Printed: 22 MAY 2017

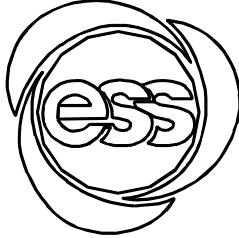
* CONT. ON SHEET 1A *

WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0060416	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G02
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 DIW SUPPLY FOR FEB ESS.ACC.E02.WP0002		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-XXXXXX2		Revision A1



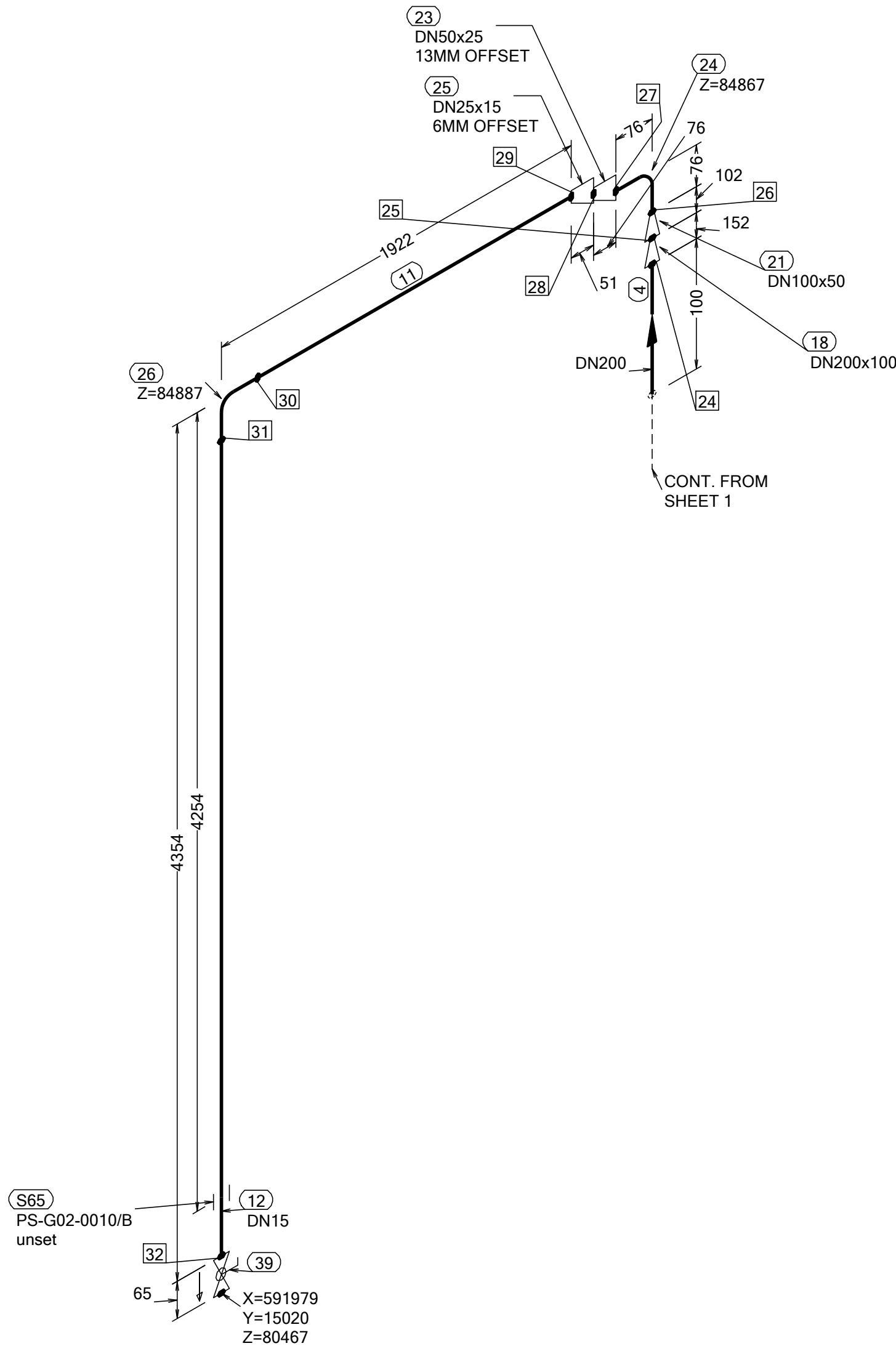
***** * CONT. FROM SHEET 1 * *****					
54	90 mm HEXAGONAL BOLT, M6S, ISO 4017	20	EN 1515-4, A4-70	8	
55	HEXAGONAL NUT, M6M, ISO 4032	16	EN 1515-4, A4	8	
56	WASHER, BRB, ISO 7089	16	A4, HV≥250	16	
57	80 mm HEXAGONAL BOLT, M6S, ISO 4017	16	EN 1515-4, A4-70	8	
61	HEXAGONAL NUT, M6M, ISO 4032	16	EN 1515-4, A4	8	
62	WASHER, BRB, ISO 7089	16	A4, HV≥250	16	
63	70 mm HEXAGONAL BOLT, M6S, ISO 4017	16	EN 1515-4, A4-70	8	
<u>SUPPORTS</u>					
64	ESS Atta	100		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-0060416	TBN	ESS-0058702	TBN	G02
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 DIW SUPPLY FOR FEB ESS.ACC.E02.WP0002		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-XXXXXX2		Sheet
	CWM	0					1 of 1
	Pipe Specification	Surface Treatment					Revision
	MQC4-W-PN16	N/A					A1

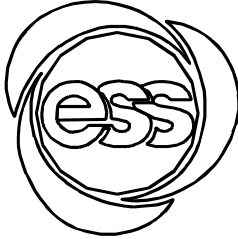
Rev	Description	Date	Drawn	Designed	Reviewed	Verified	Quality	Approved
A1	ISSUED FOR CDR	170522	FRPE	FRPE	AKCO	ANLU		

N (Y)



WELD	WPS	FABRICATION MATERIALS					
24		PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
25			PIPE				
26		4	PIPE, SS-EN 10217-7, TC1, 219.1x3.0	200	EN 1.4404	100	
27		11	PIPE, SS-EN 10217-7, TC1, 21.3x2.0	15	EN 1.4404	1894	
28		12	PIPE, SS-EN 10217-7, TC1, 21.3x2.0	15	EN 1.4404	4326	
29			FITTINGS				
30		18	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 219.1x3.0 / 114.3x2.0	200 x 100	EN 1.4404	1	
31		21	REDUCER CONC, SS-EN 10253-4, TABLE A.5, 114.3x2.0 / 60.3x2.0	100 x 50	EN 1.4404	1	
32		23	REDUCER ECC, SS-EN 10253-4, TABLE A.5, 60.3x2.0 / 33.7x2.0	50 x 25	EN 1.4404	1	
		24	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 60.3x2.0	50	EN 1.4404	1	
		25	REDUCER ECC, SS-EN 10253-4, TABLE A.5, 33.7x2.0 / 21.3x2.0	25 x 15	EN 1.4404	1	
		26	ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 21.3x2.0	15	EN 1.4404	1	
			VALVES / IN-LINE ITEMS				
		39	BALL VALVE, WORCESTER A44, SHORT, BW	15		1	

ERECTION MATERIALS					
PT NO	COMPONENT DESCRIPTION	DN	MATERIAL	QTY (mm)	REMARKS
SUPPORTS					
65	ESS Atta	15		1	

WPS See Weldlist TBN	Design Temperature 50degC	Tightening Torque For Flange Joints TBN	P&ID Drawing Number ESS-0060416	General Layout Drawing Number TBN	Calculation Report ESS-0058702	Inspection Plan TBN	Area Code G02
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 DIW SUPPLY FOR FEB ESS.ACC.E02.WP0002		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-XXXXXX2		Revision A1

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