



VXD Services



Purpose:

Count of all cables and CO₂ / water lines coming out of the VXD volume at the end flanges

All these lines have to be accommodated within the space between the CDC inner walls and the QCS.

The FWD region is most critical

Services for VXD and Beampipe

20.6.15

compiled by C. Kiesling /

VXD up to Dock boxes

checked by T. Ackermann

Service Nr.	Component	Name	Material / shape	Diameter (mm)	# (BWD)	# (FWD)
1	Beampipe					
1.1	Be part	paraffine cooling lines	stainless steel, round	6.0	1	1
1.2	croched part	water cooling	stainless steel, round	6.0	4	4
1.3	croched part	BPMonitors	coax	3.2	8	8
1.4	Bellows	water cooling	stainless steel, round	6	8	8
1.5	PT 100	temp sensor	coax	2.0	8	8
1.6	Radiation monit.	diamonds	lemo coax	1.6	8	8
	total				37	37
2	PXD					
2.1	20 Half ladder	Power cables	multiwire + cover	9.6	20	20
2.21	20 Half ladder	Signal cables	multiwire + cover	9.4	20	20
2.22	20 Half ladder	CAT 7	multiwire + cover	5.9	20	20
2.31	3 FOS (position)	fiber optic cable	cladded fibre, round	1.0	4	4
2.32	4 FOS (environm.)	fiber optic cable	cladded fibre, round	1.0	8	0
2.41	1 Cooling Block	CO2 pipe (in)	ss (with insulation)	2.6	2	2
2.42	1 Cooling Block	CO2 pipe (out)	ss (with insulation)	4.0	2	2
2.5	1 Cooling Block	Air cooling pipes	ss (with insulation)	2.6	4	4
2.6	PT100	Temp. Probes	lemo coax	0.8	24	24
	suction pipe		ss (with insulation)	6.5	1	1
	total				105	97

3	SVD					
3.1	ladders	signal/power cables	ribbon	32.0 x 1.0	222	122
3.2	6 Radiation monit.	diamonds	lemo coax	1.6	12	12
3.3	End rings	CO2 pipe (in)	ss (with insulation)	2.6	6	2
3.4	End rings	CO2 pipe (out)	ss (with insulation)	4.0	6	2
3.51	SVD volume	Air cooling pipes	ss (with insulation)	2.6	0	4
3.52	Dry N2 in	cold dry vol.	ss (with insulation)	6.0	0	2
3.53	sniffing pipe	humidity measurement	ss (with insulation)	6.0	1	1
3.6	1 Suction pipe	suction pipe	ss (with insulation)	6.5	1	1
3.7	1 Suction pipe	suction pipe (on end flange)	ss (with insulation)	6.5	1	1
3.8	64 NTCs	temperature	twisted pair (ribbon)	32.0 x 1.0	4	2
3.9	FOS	temp.		1.0	38	0
	total				291	149

4	VXD					
4.1	Ground bus		Cu (with insulation)	20.0 x 2.0 (?)	1	0
4.2	FOS	temp. (outer cover)		1.0	6	0
	total				7	0
5	RVC					
5.1	2 pressure lines			6.0	2	2
5.2	operation handle			8.0	2	2
5.3	EDI hooks			4.0	0	2
5.4	leak search pipes			3.0	2	2
5.5	endoscope channel			10.0	2	2
	total				8	10
6	QCS					
6.1	Gap sensor			?	4	4
6.2	BG sensors			2.5	8	8
	total				12	12
	Grand Total				460	305