STATIC 152.4 mm 34.474 MPa 2500 m WAG INJECTION FLOWLINE (TEC < 4)
Structure Number: WSI 152.2510-DR-4041-4 R1

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Inside Diameter	152.4 mm	**Service**	Static	**Max. Fluid Temp.**	90 °C
Design Pressure	34.474 MPa	**Conveyed Fluid**	oil/gas/water	**Water Depth**	2500 m

Layer	Material	I.D. [mm]	Thick [mm]	O.D. [mm]	Weight [kg/m]
Flexbody	Duplex 2205	152.40	10.35	173.10	22.730
Flexbarrier	PA 12 Natural	173.10	10.00	193.10	5.867
Flexlok	Steel 110ksi UTS	193.10	10.01	213.12	43.503
Flextape	Polypropylene	213.12	0.30	213.71	0.184
Flextensile 1	Steel 190ksi UTS	213.71	5.00	223.71	22.903
Flextape	Polypropylene	223.71	0.30	224.31	0.193
Flextape	High Strength Glass Filmnt 3M 890SR	224.31	1.63	227.56	1.500
Flextape	Polypropylene	227.56	0.30	228.15	0.196
Flextensile 2	Steel 190ksi UTS	228.15	5.00	238.16	24.562
Flextape	Polypropylene	238.16	0.30	238.75	0.206
Flextape	High Strength Glass Filmnt 3M 890SR	238.75	1.63	242.00	1.596
Flextape	Polypropylene	242.00	0.30	242.59	0.209
Flextape	Tape Polyester Fabric S-439	242.59	0.41	243.41	0.207
Flexshield	HDPE Yellow	243.41	7.00	257.41	5.154
Flexinsul	PT7000 Insulation	257.41	7.00	271.41	4.169
Flexinsul	PT7000 Insulation	271.41	7.00	285.41	4.390
Flextape	Tape Polyester Fabric S-439	285.41	0.41	286.22	0.244
Abrasion	HDPE Yellow	286.22	10.00	306.22	8.710

Layer	Raw Material Dimensions		Mfg Pitch	Wires	Angle	Filled
Flexbody	68.0mm x 1.8mm	2.677in x 0.071in			87.6	90.24%
Flexlok	22.1mm x 10.0mm	0.869in x 0.394in			88.6	92.30%
Flextensile 1	10.0mm x 5.0mm	0.394in x 0.197in	911.8mm	50	37.0	93.32%
Flextensile 2	10.0mm x 5.0mm	0.394in x 0.197in	1046.1mm	55	35.0	93.75%
Flexinsul	50.8mm x 7.0mm	2.000in x 0.276in				90.76%

Outside Diameter	306.22 mm	**Volume (at OD)**	72.543 l/m
Storage Radius, SBR	2.09 m	**Volume (at ID)**	20.652 l/m
Operating Radius, OBR	2.09 m	**Wt, Empty in Air**	146.52 kg/m
TDP Radius, TDPR (Dry Bore)	4.30 m	**S/W filled in Air**	167.70 kg/m
TDP Radius, TDPR (Flooded Bore)	2.40 m	**Air filled in S/W**	72.14 kg/m
Pipe bending stiffness at 23 °C, EI	38.983 kNm²	**S/W filled in S/W**	93.32 kg/m
Spooling Tension	8884 N	**Burst Pressure**	98.43 MPa
Therm. Cond./Length, C/L	3.92 w/m°C	**Burst/Design**	2.86
Effective Thermal Cond, ke	0.44 w/m°C	**Collapse Pressure (Wet Flexlok)**	35.81 MPa
OHTC, Uo (based on ID)	8.19 w/m²°C	**Collapse Depth (Wet Flexlok)**	3561 m
SWDR with bore empty	2.31 N/m mm	**Collapse/Design (Wet Flexlok)**	1.42
SWDR with bore filled by SW	2.99 N/m mm	**Failure Tension**	4681.3 kN
Pipe torsional stiffness (GJ) at 23 °C:			
Limp direction	1204 kNm²		
Stiff direction	2543 kNm²		
Axial Stiffness	310730 kN		

Notes

Derived structure from WSI 152.2510-RD-4041-X with TEC ≤ 4

90°C specified temperature allowed for intermittent use only

TDPR: Minimum Installation / Operation radius at the maximum design water depth