Structure 152.54918

INTERNAL DIAMETER	6.00"	SOUR SERVICE
DESIGN PRESSURE	6004 psi	414 bars
DESIGN TEMPERATURE	130 °C	
FACTORY TEST PRESSURE	9006 psi	621 bars
FTP/DP 1.50		

N°	LAYER DESCRIPTION	UTS (MPa)	MYS (MPa)	Mass (Kg/m)	I.D. (mm)	Th. (mm)	SDP (MPa)
1	INTERLOCKED CARCASS 48.0 x 1.2 x 6.0 DUPLEX (FE 04)	660	-	14.38	152.40	6.00	
2	PRESSURE SHEATH Coflon XD® TP29 - (PVDF)			4.94	164.40	5.00	
3	ZETA WIRE 6.2 FI 09	850	750	23.48	174.40	6.20	369
4	SPIRAL FI 09 2 Flat wires: 15 x 5	850	750	20.04	186.80	5.00	346
5	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.43	196.80	1.50	
6	FIRST ARMOUR LAY. FI42 37 Flat wires: 15 x 7.5 at 25 deg.	1200	1080	33.27	199.80	7.50	141
7	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.56	214.80	1.50	
8	SECOND ARMOUR LAY FI42 40 Flat wires: 15 x 7.5 at -25 deg.	1200	1080	35.96	217.80	7.50	126
9	HIGH STRENGTH TAPE TECH/TECH			1.54	232.80	2.70	
10	EXTERNAL SHEATH HD-FLEX (TP26+TP28) Yellow			6.26	238.20	8.50	
11	FABRIC TAPE			0.24	255.20	0.80	
12	PROTECTIVE SHEATH HD-FLEX (TP26+TP28) Yellow			8.39	256.80	10.50	

THEORETICAL CHARACTERISTICS	IMPERIAL	METRIC
DIAMETER inside	6.00 in	152.40 mm
DIAMETER outside	10.94 in	277.80 mm
VOLUME internal	0.209 cf/ft	19.38 l/m
VOLUME external	0.652 cf/ft	60.61 l/m
WEIGHT in air empty	101.79 lbf/ft	151.47 kgf/m
WEIGHT in air full of seawater	115.14 lbf/ft	171.34 kgf/m
WEIGHT in seawater empty	60.04 lbf/ft	89.35 kgf/m
WEIGHT in seawater full of seawater	73.39 lbf/ft	109.22 kgf/m
SPECIFIC GRAVITY in sea water empty	2.44	2.44
PRESSURE Nominal bursting	12516 psi	863 bars
HYDROSTATIC collapse pressure lay 2	2726 psi	188 bars
DAMAGING PULL in straight line	1638414 lbf	7288.03 kN
MINIMUM BENDING RADIUS for STORAGE	5.92 ft	1.80 m
BENDING STIFFNESS at 20°C	147885 lbf.ft2	61.11 kN.m2
RELATIVE ELONGATION at design pressure	0.050 %	0.050 %
RELATIVE ELONGATION for 100 kN	0.008761 %	0.008761 %
THERMAL EXCHANGE COEFFICIENT at 20°C	7.30 Btu/hftF	3.90 W/(m.K)

Structure 152.54917

INTERNAL DIAMETER	6.00"	SOUR SERVICE
DESIGN PRESSURE	6004 psi	414 bars
DESIGN TEMPERATURE	130 °C	
FACTORY TEST PRESSURE	9006 psi	621 bars
FTP/DP 1.50		

N°	LAYER DESCRIPTION	UTS (MPa)	MYS (MPa)	Mass (Kg/m)	I.D. (mm)	Th. (mm)	SDP (MPa)
1	INTERLOCKED CARCASS 72.0 x 1.8 x 9.0 DUPLEX (FE 04)	660	-	21.99	152.40	9.00	
2	PRESSURE SHEATH Coflon XD® TP29 - (PVDF)			6.34	170.40	6.00	
3	ZETA WIRE 6.2 FI 09	850	750	24.52	182.40	6.20	373
4	SPIRAL FI 09 2 Flat wires: 15 x 5	850	750	20.87	194.80	5.00	351
5	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.48	204.80	1.50	
6	FIRST ARMOUR LAY. FI 09 40 Flat wires: 14 x 6 at 28 deg.	850	750	28.01	207.80	6.00	192
7	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.59	219.80	1.50	
8	SECOND ARMOUR LAY FI 09 43 Flat wires: 14 x 6 at -28 deg.	850	750	30.11	222.80	6.00	175
9	HIGH STRENGTH TAPE TECH/TECH/TECH			2.30	234.80	3.88	
10	INTERMED.SHEATH TP-FLEX TP26 Yellow			5.96	242.56	8.00	
11	INSULATION MO09 4 Strips: 50 x 5.5			16.41	258.56	22.00	
12	FABRIC TAPE			0.36	302.56	0.30	
13	INSULATION MO03 4 Strips: 50 x 5.5			14.29	303.16	22.00	
14	FABRIC TAPE			0.92	347.16	1.20	
15	EXTERNAL SHEATH HD-FLEX (TP26+TP28) Yellow			10.74	349.56	10.00	

THEORETICAL CHARACTERISTICS	IMPERIAL	METRIC
DIAMETER inside	6.00 in	152.40 mm
DIAMETER outside	14.55 in	369.56 mm
VOLUME internal	0.215 cf/ft	19.99 l/m
VOLUME external	1.155 cf/ft	107.27 l/m
WEIGHT in air empty	124.92 lbf/ft	185.91 kgf/m
WEIGHT in air full of seawater	138.69 lbf/ft	206.39 kgf/m
WEIGHT in seawater empty	51.04 lbf/ft	75.96 kgf/m
WEIGHT in seawater full of seawater	64.81 lbf/ft	96.44 kgf/m
SPECIFIC GRAVITY in sea water empty	1.69	1.69
PRESSURE Nominal bursting	12386 psi	854 bars
HYDROSTATIC collapse pressure lay 2	4133 psi	285 bars
DAMAGING PULL in straight line	919418 lbf	4089.78 kN
MINIMUM BENDING RADIUS for STORAGE	7.87 ft	2.40 m
BENDING STIFFNESS at 20°C	250838 lbf.ft2	103.66 kN.m2
RELATIVE ELONGATION at design pressure	0.075 %	0.075 %
RELATIVE ELONGATION for 100 kN	0.011644 %	0.011644 %
THERMAL EXCHANGE COEFFICIENT at 20°C	3.35 Btu/hftF	1.79 W/(m.K)

Structure 152.54941

INTERNAL DIAMETER	6.00"	SOUR SERVICE
DESIGN PRESSURE	6004 psi	414 bars
DESIGN TEMPERATURE	130 °C	
FACTORY TEST PRESSURE	9006 psi	621 bars

FTP/DP 1.50

N°	LAYER DESCRIPTION	UTS (MPa)	MYS (MPa)	Mass (Kg/m)	I.D. (mm)	Th. (mm)	SDP (MPa)
1	INTERLOCKED CARCASS 60.0 x 1.5 x 7.5 DUPLEX 2205 (FE 04)	660	-	18.15	152.40	7.50	
2	PRESSURE SHEATH Coflon XD® TP29 - (PVDF)			6.63	167.40	6.50	
3	ZETA WIRE 6.2 FI 09	850	750	24.26	180.40	6.20	366
4	SPIRAL FI 09 2 Flat wires: 15 x 5	850	750	20.66	192.80	5.00	344
5	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.47	202.80	1.50	
6	FIRST ARMOUR LAY. FI 09 39 Flat wires: 14 x 6 at 29 deg.	850	750	27.49	205.80	6.00	193
7	ANTI-WEAR TAPE 75.0 x 1.5 (BF 01)			1.58	217.80	1.50	
8	SECOND ARMOUR LAY FI 09 42 Flat wires: 14 x 6 at -29 deg.	850	750	29.61	220.80	6.00	175
9	HIGH STRENGTH TAPE TECH/TECH			1.54	232.80	2.70	
10	INTERMED.SHEATH HD-FLEX (TP26+TP28) Yellow			11.35	238.20	15.00	
11	INSULATION MO03 4 Strips: 50 x 5.5			12.75	268.20	22.00	
12	FABRIC TAPE			0.37	312.20	0.30	
13	INSULATION MO03 3 Strips: 50 x 5.5			10.85	312.80	16.50	
14	FABRIC TAPE ESTER/ESTER			0.91	345.80	1.20	
15	EXTERNAL SHEATH HD-FLEX (TP26+TP28) Yellow			10.48	348.20	9.80	

THEORETICAL CHARACTERISTICS	IMPERIAL	METRIC
DIAMETER inside	6.00 in	152.40 mm
DIAMETER outside	14.48 in	367.80 mm
VOLUME internal	0.212 cf/ft	19.68 l/m
VOLUME external	1.144 cf/ft	106.25 l/m
WEIGHT in air empty	119.69 lbf/ft	178.12 kgf/m
WEIGHT in air full of seawater	133.25 lbf/ft	198.29 kgf/m
WEIGHT in seawater empty	46.51 lbf/ft	69.22 kgf/m
WEIGHT in seawater full of seawater	60.07 lbf/ft	89.39 kgf/m
SPECIFIC GRAVITY in sea water empty	1.64	1.64
PRESSURE Nominal bursting	12632 psi	871 bars
HYDROSTATIC collapse pressure lay 2	3350 psi	231 bars
DAMAGING PULL in straight line	893218 lbf	3973.23 kN
MINIMUM BENDING RADIUS for STORAGE	7.84 ft	2.39 m
BENDING STIFFNESS at 20°C	293605 lbf.ft2	121.33 kN.m2
RELATIVE ELONGATION at design pressure	0.076 %	0.076 %
RELATIVE ELONGATION for 100 kN	0.012196 %	0.012196 %
THERMAL EXCHANGE COEFFICIENT at 20°C	3.29 Btu/hftF	1.76 W/(m.K)

Structure 152.54903

INTERNAL DIAMETER	6.00"	SOUR SERVICE
DESIGN PRESSURE	6004 psi	414 bars
DESIGN TEMPERATURE	130 °C	
FACTORY TEST PRESSURE	7803 psi	538 bars
FTP/DP 1.30		

N°	LAYER DESCRIPTION	UTS (MPa)	MYS (MPa)	Mass (Kg/m)	I.D. (mm)	Th. (mm)	SDP (MPa)
1	INTERLOCKED CARCASS 80.0 x 2.0 x 10.0 DUPLEX 2205 (FE 04)	660	-	24.59	152.40	10.00	
2	SACRIFICIAL SHEATH GAMMAFLEX - (PVDF)			4.36	172.40	4.00	
3	PRESSURE SHEATH GAMMAFLEX - (PVDF)			8.58	180.40	8.50	
4	ZETA WIRE 10.0 FI 09	850	700	43.60	197.40	10.00	451
5	FABRIC TAPE			0.20	217.40	0.80	
6	FIRST ARMOUR LAY. FI 09 43 Flat wires: 14 x 6 at -25 deg.	850	750	29.31	219.00	6.00	168
7	FABRIC TAPE			0.22	231.00	0.80	
8	SECOND ARMOUR LAY FI 09 46 Flat wires: 14 x 6 at 25 deg.	850	750	31.35	232.60	6.00	215
9	HIGH STRENGTH TAPE TECH/TECH/TECH/TECH			0.99	244.60	3.00	
10	INTERMED.SHEATH TP-FLEX TP26 Yellow			6.15	250.60	8.00	
11	INSULATION MO09 4 Strips: 50 x 5.5			16.88	266.60	22.00	
12	FABRIC TAPE			0.37	310.60	0.30	
13	INSULATION MO03 4 Strips: 50 x 5.5			14.64	311.20	22.00	
14	FABRIC TAPE			0.94	355.20	1.20	
15	EXTERNAL SHEATH HD-FLEX (TP26+TP28) Yellow			11.10	357.60	10.10	

THEORETICAL CHARACTERISTICS	IMPERIAL	METRIC
DIAMETER inside	6.00 in	152.40 mm
DIAMETER outside	14.87 in	377.80 mm
VOLUME internal	0.217 cf/ft	20.19 l/m
VOLUME external	1.207 cf/ft	112.10 l/m
WEIGHT in air empty	129.87 lbf/ft	193.26 kgf/m
WEIGHT in air full of seawater	143.77 lbf/ft	213.96 kgf/m
WEIGHT in seawater empty	52.65 lbf/ft	78.36 kgf/m
WEIGHT in seawater full of seawater	66.56 lbf/ft	99.05 kgf/m
SPECIFIC GRAVITY in sea water empty	1.68	1.68
PRESSURE Nominal bursting	9296 psi	641 bars
HYDROSTATIC collapse pressure lay 3	5322 psi	367 bars
DAMAGING PULL in straight line	1007847 lbf	4483.13 kN
MINIMUM BENDING RADIUS for STORAGE	8.05 ft	2.45 m
BENDING STIFFNESS at 20°C	358838 lbf.ft2	148.29 kN.m2
RELATIVE ELONGATION at design pressure	0.073 %	0.073 %
RELATIVE ELONGATION for 100 kN	0.009815 %	0.009815 %
THERMAL EXCHANGE COEFFICIENT at 20°C	3.30 Btu/hftF	1.76 W/(m.K)