



ENVENTURE SET® Solid Expandable System

11.750 in. OD 47.00 lb/ft x 13.375 in. OD 68.00 lb/ft ESeal Liner



Var Energi AS Ringhorne Phase III Preliminary

External Base Casing

Nominal OD	13.375 in.
Weight	68.00 lb/ft
Nominal ID	12.415 in.
API Drift	12.259 in.
Connection Type	BTC
Connection ID	12.415 in.
Other ID Restriction	12.415 in.

Launcher

Launcher OD - Pre Exp	12.191 in.
Launcher OD - Post Exp	12.250 in.

Connection Sleeves

Set in Base Casing - Pre Exp OD	11.948 in.
Set in Base Casing - Expanded OD	12.318 in.

XPC Pre-Expansion Connection Specifications

Tension Load Yield Rating	639,900 lb
Compressive Load Rating	639,900 lb
Minimum Parting Load	759,900 lb
Dogleg Severity Rating While Running	9.9 deg/100 ft

XPC Post-Expansion Connection Specifications

Tension Load Yield Rating	610,800 lb
Compression Load Rating	319,900 lb
Minimum Parting Load	734,000 lb
Dogleg Severity Rating During Expansion	8.7 deg/100 ft

Well Bore Conditions (1)

SET String Length	1,800 ft
Wellbore Maximum Dogleg Severity	0.0 deg/100 ft
Deviation	0°
Mud Weight	10.0 lb/gal
Bottomhole Temperature (BHT)	250 F

SET Liner Pre-Expansion (2)

SET Liner Grade	EX-80
Connection Type	GIIC
Nominal Yield Strength	80,000 psi
Minimum Ultimate Strength	95,000 psi
Nominal OD	11.750 in.
Nominal ID	11.000 in.
API Drift	10.844 in.
Nominal Wall Thickness	0.375 in.
Weight	47.00 lb/ft

SET Liner Post-Expansion (2,3)

Nominal OD	12.238 in.
Nominal ID	11.500 in.
Drift	11.385 in.
Nominal Wall Thickness	0.369 in.
Nominal Weight	46.83 lb/ft
Internal Yield	4,340 psi
Burst (4)	5,750 psi
Collapse Rating (5)	1,180 psi
Expansion Ratio	4.5%
Pipe Body Yield Strength	1,054,600 lb

Anchor Hanger

Set in Base Casing - Elastomer Thickness	0.180 in.
Pre-Exp Seal OD	12.110 in.
Clad in Base Casing (nominal)	49.3%

Limits while RIH

Max. Running OD	12.191 in.
Max. Pump Rate (unlimited time)	6.0 BPM

(1) Changes in wellbore conditions require design review.

(2) All the published liner ratings and strengths are based on room temperature (75F), and not adjusted for BHT.

(3) Liner ratings are based on standalone liner without any support from base or external parent casing

(4) Hill's Fully-Plastic Burst Limit - Hill, R., "The Mathematical Theory of Plasticity", Oxford University Press, 1950.

(5) Design collapse strength is calculated for 99.5% reliability (0.5% target reliability level) using post-expansion SET® collapse test data and ISO 10400 collapse calculation method G.4.1. All testing procedures followed API 5C3 / ISO 10400 guidelines.

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