



CORE LINEPIPE

910, 736 - 8th Avenue SW
 Calgary, AB, T2P 1H4
 Office: (587) 333-6685

CORE Liner® Qualification Testing Summary

SR#	Test Description	Reference Standard	6"			8"		
			Requirement	Result	Report	Requirement	Result	Report
1	Tensile Strength of ClickWeld®	CSA Z662-15 Sec. 4.5.4.4	Resist 102,000 lbf	Pass, 262,000 lbf	C-FER File No. F098	Resist 155,000 lbf	Pass, 278,000 lbf	C-FER File No. F175
2	Compressive Strength of ClickWeld®	CSA Z662-15 Sec. 4.5.4.4	Resist 166,000 lbf	Pass, 256,000 lbf	C-FER File No. F098	-	-	-
3	Bending Strength of ClickWeld®	CSA Z662-15 Sec. 4.5.4.4	Resist 10,294 lbf	Pass, 21,720 lbf	C-FER File No. F098	Resist 20,664 lbf	Pass, 36,902 lbf	C-FER File No. F175
4	Torsional Strength of ClickWeld®	CSA Z662-15 Sec. 4.5.4.4	-	-	-	-	42,000 lbf-ft	C-FER File No. F175
5	Electrofusion Evaluation	CSA Z662-15 Sec. 12.7.9.1	Min 85% ductility	Pass, 95% ductility	Electrofusion Validation Reports	Min 85% ductility	Pass, 95% ductility	Electrofusion Validation Reports
6	Gas Tightness	CORE Linepipe	No failure at 1800 psig for 4 hours	Pass	C-FER File No. F098	No failure at 1800 psig for 4 hours	Pass	C-FER File No. F175
7	Hydrostatic Pressure	CSA Z662-15 Sec. 4.5.3.2	No failure at 1800 psig for 12 hours	Pass	6" Qualification Report	No failure at 1800 psig for 12 hours	Pass	8" Qualification Report
8	Hydrostatic Burst Pressure	CSA Z662-15 Sec. 4.5.3.2	No failure below 2969 psig.	Average burst at ~4779 psig	C-FER File No. F098	No failure below 2661 psig	Pass	-
9	Cyclic Pressure	CSA Z662-15 Sec. 4.5.3.2	No failure at 100,000 cycles from 500 to 1800 psig	Pass	C-FER File No. F098	No failure at 100,000 cycles from 500 to 1800 psig	Pass	C-FER File No. F175



CORE LINEPIPE

910, 736 - 8th Avenue SW
 Calgary, AB, T2P 1H4
 Office: (587) 333-6685

SR#	Test Description	Reference Standard	6"			8"		
			Requirement	Result	Report	Requirement	Result	Report
10	High Frequency Pressure Pulsations	CSA Z662-15 Sec. 4.5.3.2	No failure at 1,000,000 cycles from 1300 to 1480 psig	Pass	C-FER File No. F098	No failure at 1,000,000 cycles from 1300 to 1480 psig	Pass	C-FER File No. F175
11	Thermal Cycling	CSA Z662-15 Sec. 4.5.3.2	No Failure at 0-1800 psig & 0-800C for 10 cycles	Pass	6" Qualification Report	-	-	-
12	Vacuum	CORE Linepipe	<0.5 psia, 5 min at 800C	Pass for 30 min	6" Qualification Report	<0.5 psia, 5 min at 800C	Pass	8" Qualification Report
13	Field Trials	CORE Linepipe	Field construction of a 200 m pipeline	Pass	6" Qualification Report	Field construction of a pipeline	Pass	Several projects executed
14	Hydrogen Induced Cracking	CSA Z662-15 Sec. 16.4.2.2 / NACE MR0175 / NACE TM0284	No cracks	No cracks on welded steel, expanded steel or base steel in a solution A saturated with H2S.	HIC Report 3-Feb-2015	-	-	-
15	Sulfide Stress Cracking	CSA Z662-15 Sec. 16.4.2.2 / NACE MR0175 / NACE TM0177 Method C	No cracks	No cracks on welded & expanded steel in a solution A saturated with H2S at a stress of 40% x AYS.	Corrmat report 1504-9459	-	-	-
16	Sulfide Stress Cracking	CSA Z662-15 Sec. 16.4.2.2 / NACE MR0175 / NACE TM0177 Four Point Bend Test	No cracks	No cracks on welded & expanded steel in a solution A saturated with H2S at a stress of 40% x AYS.	Corrmat report 1504-9460	-	-	-



SR#	Test Description	Reference Standard	6"			8"		
			Requirement	Result	Report	Requirement	Result	Report
17	Sulfide Stress Cracking	CSA Z662-15 Sec. 16.4.2.2 / NACE MR0175 / NACE TM0177 Method C	-	-	-	No cracks	No cracks on welded & expanded steel in a solution with a pH=5.5 and an H2S partial pressure of 100 kPa(a) at a stress of 100% x SMYS.	Element report dated 28-June-2017
18	Sulfide Stress Cracking	CSA Z662-15 Sec. 16.4.2.2 / NACE MR0175 / NACE TM0177 Method C	-	-	-	No cracks	No cracks on welded & expanded steel in a solution with a pH=4.5 and an H2S partial pressure of 10 kPa(a) at a stress of 100% x SMYS.	Element report dated 28-June-2017