



Fort Saskatchewan Nitrogen Operations
PIPING MATERIAL SPECIFICATION

Line Class
9S1DU
REV
3

Item	Notes	Size (NPS)	Sch/Rating	Ends	Description	COMM CODE	REV
FITTINGS (CONT.)	223						
TEE (RED)		3 - 24		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-S,ASME B16.9	DQ3004*	2
CAP		3 - 30		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-S,ASME B16.9	DQ3005	2
90 ELL		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.9	DQ3101	2
90 ELL (SR)	428	26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.28	DQ3102	2
45 ELL		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.9	DQ3103	2
TEE		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.9	DQ3104	2
TEE (RED)		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11W,W/100% X-RAY,B16.9	DQ3104*	2
REDUCER (ECC)		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.9	DQ3106	2
REDUCER (CONC)		26 - 48		WELD	1-1/4CR-1/2MO,ASME SA234-WP11-W,W/100% X-RAY,B16.9	DQ3107	2
ELLIPTICAL HEAD	401	32 - 48		WELD	1-1/4CR-1/2MO,ASME SA387-11,CL.1,(2:1 AXIS RATIO)	DQ3401	2
VALVES							
GLOBE	900, 935	1/2 - 2	1500	T/SW	1 1/4CR BODY W/ FULL H.F. TRIM	V6FAJC87	2
GATE	510	1/2 - 2	1500	RF	1 1/4CR BODY W/ FULL H.F. TRIM	VAFGJCP7	
GATE	499	1/2 - 2	1500	SOCW	1 1/4CR BODY W/ FULL H.F. TRIM ,F.P.	VDFBJCX7	
GATE		1/2 - 2	1500	SOCW	1 1/4CR BODY W/ FULL H.F. TRIM	VDFGJCX7	
GATE	501, 935	1/2 - 2	1500	T/SW	1 1/4CR BODY W/ FULL H.F. TRIM	VEFGJC87	2
GATE		3 - 24	900	WELD	1 1/4CR BODY W/ FULL H.F. TRIM ,PSB	VCEUJCMW	
GLOBE		1/2 - 2	1500	SOCW	1 1/4CR BODY W/ FULL H.F. TRIM ,NEEDLE	VJF4JCX7	
GLOBE		1/2 - 2	1500	SOCW	1 1/4CR BODY W/ FULL H.F. TRIM	VJFAJCX7	
GLOBE		3 - 3	900	WELD	1 1/4CR BODY W/ FULL H.F. TRIM ,PSB	VHEUJCMW	
GLOBE		4 - 8	900	WELD	1 1/4CR BODY W/ FULL H.F. TRIM ,G.O. ,PSB	VHEUJC1W	
CHECK		1/2 - 2	1500	SOCW	1 1/4CR BODY W/ FULL H.F. TRIM ,SWING,H OR V	V5FAJCU7	
CHECK		3 - 24	900	WELD	1 1/4CR BODY W/ FULL H.F. TRIM ,TILT,H/V,PSC	VREJCYD	
FLANGES							
SOCKET WELD	612	1/2 - 2	1500	RF	1-1/4CR-1/2MO,ASME SA182-F11,ASME B16.5,STD FIN	DQ2405	2
BLIND		1/2 - 2	1500	RF	1-1/4CR-1/2MO,ASME SA182-F11,ASME B16.5,STD FIN	DQ2705	2
PAIR WN ORIFICE	637	2 - 2	1500	RF	1-1/4CR,ASME SA182-F11,B16.36,3/4" SW TAPS,STD FIN	DQ2805	2
WELD NECK		3 - 24	900	RF	1-1/4CR-1/2MO,ASME SA182-F11,ASME B16.5,STD FIN	DQ2004	2
BLIND		3 - 24	900	RF	1-1/4CR-1/2MO,ASME SA182-F11,ASME B16.5,STD FIN	DQ2704	2
PAIR WN ORIFICE	637	3 - 24	900	RF	1-1/4CR,ASME SA182-F11,B16.36,3/4" SW TAPS,STD FIN	DQ2804	2
WELD NECK		26 - 48	900	RF	1 1/4CR-1/2MO,ASME SA182-F11,API 605,STD FIN	DQ2104	2
BLIND		26 - 48	900	RF	1 1/4CR-1/2MO,ASME SA182-F11,API 605,STD FIN	DQ2774	2
GASKETS							
SPIRAL WOUND	701	1/2 - 24			1/8" 316 SS WINDING W/FLEX GRAPH FILLER, B16.47-B	R4DF1	
SPIRAL WOUND		26 - 48			1/8" 316 SS WINDING W/FLEX GRAPH FILLER	R4PF1	
BOLTING							
STUD BOLTS	605	1/2 - 48			ASME SA193 GR B16 STUD W/ ASME SA194 GR 4 NUTS	CB7015	2
MISCELLANEOUS							
STEAM TRAP	S33	1/2 - 1	6000	SOCW	1-1/4 CHROME BODY, SARCO TD62, 981 PSIG @ 842F	DQ8993	
SPACER		1/2 - 2	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8214	
CIRCULAR BLANK		1/2 - 2	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8213	
FIGURE 8	861	1/2 - 2	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8215	
Y-STRAINER	860	1/2 - 2	1500	SOCW	1-1/4CR BODY W/304 SS SCREEN "L",TECH STD P25-2TS	DQ8612	
Y-STRAINER		1/2 - 2	1500	SOCW	1-1/4CR BODY W/304 SS SCREEN "G",TECH STD P25-2TS	DQ8611	
BRANCH WELD		1/2 - 48			BRANCH WELD W/PAD-ALLOY	CB9820	
BRANCH WELD		1/2 - 48			BRANCH WELD-ALLOY	CB9812	
SHOP/FIELD BW		1/2 - 48			BUTT WELD-ALLOY	CB9811	
FIGURE 8		3 - 12	900	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8212	
SPACER		3 - 24	900	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8211	
CIRCULAR BLANK		3 - 24	900	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8210	
NON-STANDARD							
SWAGE (CONC)	II, 922, 935	1/4 - 3/8	XS		1-1/4CR-1/2MO,SMLS,ASME SA335-P11	DQ1001	2
SWAGE (ECC)	II, 922, 935	1/4 - 3/8	XS		1-1/4CR-1/2MO,ASME SA234-WP11-S,MSS SP-95	DQ1603	2
PLUG	II, 922, 935	1/4 - 3/8	XS		1-1/4CR-1/2MO,ASME SA234-WP11-S,MSS SP-95	DQ1604	2
WELD NECK	II, 311, 935	1/4 - 3/8		THRD	1-1/4CR-1/2MO,ASME SA182-F11,ROUND HEAD,ASME B16.11	DQ5001	2
		1/2 - 24	1500	RF	1-1/4CR-1/2MO,ASME SA182-F11,ASME B16.5,STD FIN	DQ2005	2
		2 1/2 - 2 1/2	160	PE	1-1/4CR-1/2MO,SMLS,ASME SA335-P11	DQ1001	2
FIGURE 8	II	3 - 12	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8215	
CIRCULAR BLANK	II	3 - 24	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8213	
SPACER	II	3 - 24	1500	RF	1-1/4CR-1/2MO,PER TECH STD P36-1TS,STD FIN	DQ8214	

3	31-May-2024	Revised Code Year ASME B31.1-2022	S.Sarkar	T. King	9S1DU	Page 2 of 3
2	5-Apr-2023	Add Notes 922/925/935/936, Rev Code Yr, CA, P/T Tbl, Str Rlf, SA Mat'l, Pipe Sch, Err Fix	K. Kang	T. King		
1	16-Jun-2016	Added FP Valve Note, General Cleanup	J. Tomkins	J. Tomkins		
0	22-Feb-2016	Initial Issue as Agrium Spec	H. Qureshi	J. Tomkins		
Rev	Date	Description	By	Appv'd		



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Branch Connection Legend, Notes & Chart		REV	Chart																PT RATING TABLE		REV		
Legend B - BRANCH WELD C - COUPLING D - THREDOLET E - REDUCING TEE M - TEE WITH REDUCING INSERT N - NIPOLET P - BRANCH WELD WITH REINFORCING PAD S - SOCKOLET T - TEE W - WELDOLET X - DO NOT USE F - FIL WND REINF BRANCH G - FIL WND W OR W/O RED L - ANG BRANCH/LATERAL Y - TEE W/RED. BUSHING Z - TEE W/BUTTWELD RED. R - SADDLE REDUCING TEE Q - TEE W/2 OR MORE RED.		813																	ASME B16.5 (2020) - SEE NOTES 001/936		2		
																			Temperature			Pressure	
																			-29C (-20F)				
																			TO 38C (100F)			158.18 (2250)	
																			93C (200F)			158.18 (2250)	
																			149C (300F)			152.22 (2165)	
																			204C (400F)			146.23 (2080)	
																			260C (500F)			140.27 (1995)	
																			316C (600F)			127.59 (1815)	
																			343C (650F)			124.07 (1765)	
																			371C (700F)			119.86 (1705)	
																			399C (750F)			112.13 (1595)	
																			427C (800F)			107.21 (1525)	
																			454C (850F)			102.64 (1460)	
																			482C (900F)			94.91 (1350)	
																			510C (950F)			67.15 (955)	
																			538C (1000F)			45.7 (650)	
566C (1050F)		30.23 (430)																					
593C (1100F)		20.39 (290)																					
621C (1150F)																							
649C (1200F)																							
Specific Piping Notes																							

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