



PIPING SPEC B
DATE 11-20-78
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STEAM
CONDENSATE
180 PSIG @ 400F
275 PSIG @ 100F ~~70-550F~~

ITEM	SIZE	DESCRIPTION
PIPE		
P-283	1/4 THRU 1 1/2	ASTM A-106 GR B, EX STRONG SEAMLESS STEEL PIPE.
P-273	2 THRU 14	ASTM A-106 GR E, STD WEIGHT SEAMLESS STEEL PIPE.
P-323	16 THRU 20	ASTM A-53 OR API-5L GR B, 0.375 WALL SEAMLESS OR ELEC WELD STEEL PIPE.
FITTINGS		
E=90 DEG ELL, L=45 DEG ELL, T=TEE, X=CROSS, R=REDUCER C=COUPLING, S=STUB END, U=UNION, FC=PIPE CAP		
ELT-5	1/4 THRU 1 1/2	3000-LB THREADED FORGED STEEL FITTINGS, ASTM A-105, ANSI B16.11.
R-22	1/4 THRU 1 1/2	EX STRONG STEEL SWAGED NIPPLE, ASTM A-106 OR A-53 GR B, OR ASTM A-696 GR B OR C BARSTOCK, THREADED, BEVELED, PLAIN, OR ANY COMBINATION OF ENDS.
C-3C	1/4 THRU 1 1/2	3000-LB THREADED FORGED STEEL COUPLING, ASTM A-105, ANSI B16.11.
C-3T	1/4 THRU 1 1/2	3000-LB FORGED STEEL THREDCLET, ASTM A-105.
PC-27	1/4 THRU 1 1/2	3000-LB SOCKET WELD FORGED STEEL CAP, ASTM A-105.
PC-12	1/4 THRU 1 1/2	THREADED SOLID STEEL HEX BULL PLUG, ASTM A-696 GR B OR C BARSTOCK, NORRIS.
U-2	1/4 THRU 1 1/2	3000-LB THREADED FORGED STEEL UNION, ASTM A-105, AAR DIMENSIONS, STEEL TO STEEL SEAT, PETRO AAR OR VCGT 1931.
ELTR-15B	2 THRU 20	STD WEIGHT SEAMLESS STEEL WELDING FITTINGS, ASTM A-234 GR WPE, ANSI B16.9.
PC-51B	2 THRU 12	STD WEIGHT SEAMLESS STEEL WELDING CAP, ASTM A-234 GR WPE, ANSI B16.9.

BHL

PIPING SPEC B

PA4380

11-20-78

ST0408275

ST0408275

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ITEM	SIZE	DESCRIPTION
PC-7	14 THRU 20	ASME FLANGED AND DISHED STEEL HEAD WITH 1 1/2 INCH STRAIGHT FLANGE, 0.375 INCH WALL, O.D. TO CONFORM WITH PIPE SIZE, ASTM A-285, GRADE B OR C.
FLANGES		
F-24-RF	2 THRU 20	150-LB RAISED FACE WELDING NECK FLANGE, ASTM A-105, ANSI B16.5, BORE TO MATCH WELDING FITTINGS.
F-1-RF	2 THRU 20	150-LB RAISED FACE SLIP-ON FLANGE, ASTM A-105, ANSI B16.5.
F-3-RF	2 THRU 20	150-LB RAISED FACE BLIND FLANGE, ASTM A-105, ANSI B16.5.
N-60		FLAT FACE FLANGES SHALL BE USED WHEN BOLTING TO FLAT FACE CI FLANGES ON VALVES AND EQUIPMENT.
N-66A		REDUCING FLANGES SHALL BE SLIP-ON TYPE.
N-S7300		NO THREADED FITTINGS TO BE USED BETWEEN FLANGED VALVES AND PROCESS PIPING.
BRANCH CONNECTIONS		
BC-2S	1/4 THRU 1 1/2	FOR THREADED PIPING, USE STRAIGHT SIZE OR REDUCING TEE. WHEN BRANCH IS SMALLER THAN HEADER, A NIPPLE AND REDUCING COUPLING OR SWAGED NIPPLE MAY BE USED.
BC-72W	2 THRU 20	FOR WELDED PIPING, USE TEE WHEN BRANCH IS SAME SIZE AS HEADER, USE SADDLE WELD WITHOUT REINFORCEMENT WHEN BRANCH IS SMALLER THAN HEADER. FOR THREADED BRANCH CONNECTION, USE 3000-LB FULL COUPLING, THREDOLET, OR NIPOLET WELDED TO HEADER.
GASKETS		
G-9A	2 THRU 20	STD FLAT RING GASKET, 1/8 INCH THICK ASBESTOS WITH SILICON RELEASING AGENT, JM-60, GARLOCK 7021 OR NICOLET 225 CR 245.
JOINT COMPOUND		
JC-23		JET-LUBE SS-30 COPPER ANTI-SEIZE COMPOUND.

ITEM	SIZE	DESCRIPTION
FLANGE BOLTS		
B-A307BG	2 THRU 20	ASTM A-307 GR B HEAVY HEX OR SQUARE HEAD GALV MACHINE BOLTS WITH HEAVY HEX GALV NUTS.
BOLT LUBRICANT		
BL-5		JET-LUBE SS-30 COPPER ANTI-SEIZE COMPOUND.
VALVES		
V-367	1/4 THRU 1 1/2	800-LB SCREWED OS/Y SOLID WEDGE <u>GATE</u> VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM WITH HARD-FACED SEAT RINGS, BOLTED BONNET. BONNEY FORGE HL113/F HANCOCK 950S JENKINS 8800 LUNK 1111-W RPEC F56DE SMITH 800 TRIANGLE 8522V VELAN S-2054B-C2TY VOGT 12111
V-55	2 THRU 20	150-LB FLANGED WEDGE GATE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM WITH STELLITED SEAT RINGS. CRANE 47XU JENKINS 1009B2 KITZ 150SCLS MALBRANCUE 123AXS PACIFIC 150-U POWELL 1503-P140 SELLA 1111-F-2 TRIANGLE 1822V VOGT 6068 WALWORTH 5202-F-UT
V-104	1/4 THRU 1 1/2	600-LB SCREWED OS/Y <u>GLOBE</u> VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM WITH HARD-FACED SEAT, BOLTED BONNET. BONNEY FORGE HL313/F HANCOCK 5500-S JENKINS 8G80 LUNK 1711-W RPEC F80DE SMITH 680 TRIANGLE 8712V

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ITEM	SIZE	DESCRIPTION
		VELAN S-20748-02TY VOGT 12141
V-36	2 THRU 8	150-LB FLANGED DS/Y GLOBE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM. CRANE 143X FSVC 2501.1A JENKINS 1040-B2 KITZ 150SCJ LUNK 1532-C MALBRANQUE 523AX NEWCO (VITAS) 21F-CB1 PACIFIC 160-1 POWELL 1531-P-140 SELLA 3111-F STOCKHAM 15-GPF-1 TRIANGLE 1812 VELAN F-0074C-02TY VOGT 473 WALWORTH 5275-F-AA
V-475	1/4 THRU 1 1/2	200-LB SCREWED HORIZONTAL SWING CHECK VALVE, ALL BRONZE, SCREWED CAP. CRANE 36 FAIRBANKS 0642 HAMMOND 13-949 JENKINS 762-A LUNK 554Y POWELL 560Y STOCKHAM B-345 WALWORTH 420
V-46	2	150-LB FLANGED HORIZONTAL SWING CHECK VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM, BOLTED CAP. ANDERSON GREENWOOD CV2-15-SCM-14-17 CRANE 147X FSVC 6561.1A JENKINS 1025-B2 KITZ 150SC0 LUNK 1572-C MALBRANQUE 823AX NEWCO (VITAS) 31F-CB1 PACIFIC 180-U POWELL 1561A-P140 SELLA 7111-F STOCKHAM 15-SF-U TRIANGLE 1842 VELAN F-00114C-02TY WALWORTH 5341-F-AA

ITEM	SIZE	DESCRIPTION
V-7576	3 THRU 20	150-LB WAFER CHECK VALVE, DUCTILE IRON BODY BRONZE DISC. SILICON SEAL, STAINLESS STEEL SPRING. GULF MB15-3055SR
V-5169	4 THRU 18	150-LB FLGD 3-WAY, 2-PORT, 90 DEG TURN, TEFLON SLEEVED, TRANSFLOW PLUG VALVE. CARBON STEEL BODY, DUCTILE IRON PLUG, WEATHERPROOF GEAR OPERATOR. DURCO 150FG-AR1 TUFLINE 037EG-AX
N-1		ALL 1/2 NPT NIPPLES USED FOR INSTRUMENT, AND TEST CONNECTIONS SHALL BE HEAVY HEX BAR STOCK WITH A MINIMUM WALL THICKNESS OF 0.151 INCH. (0.400 I.D.).
N-213		PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ENGR SPEC 47-110.
N-100		INSTRUMENTATION
N-101		THE FOLLOWING SPECIFICATIONS ARE TO BE USED FOR INSTRUMENTATION. FOR ITEMS NOT LISTED, THE PRECEDING PIPING SPECIFICATION IS TO BE USED WHERE APPLICABLE.
PIPE		
P-105	1/4 THRU 1/2	ASTM B-165 ANNEALED MONEL SEAMLESS TUBING, 1/4 OD, 3/8 OD OR 1/2 OD BY 0.035 WALL, AS SPECIFIED.
FITTINGS		
E=90 DEG ELL, L=45 DEG ELL, T=TEE, X=CROSS, R=REDUCER C=COUPLING, S=STUB END, U=UNION, PC=PIPE CAP		
ELTR-105	1/4 THRU 3/8	MONEL SWAGelok TUBING FITTINGS.
VALVES		
V-776	3/4 THRU 1/2	VALVE AND SIPHON ASSEMBLY FOR STEAM PRESSURE GAUGE. ANDERSON-GREENWOOD M7HC-46
V-653A	3/4 THRU 1/2	1500-LB SCREWED, MALE AND FEMALE, CARBON STEEL PRESSURE GAUGE VALVE. 303 STAINLESS STEM, 316 STAINLESS SEAT, HI-TEMP PACKING.

ITEM	SIZE	DESCRIPTION
		ANDERSON-GREENWOOD M5HC-46
V-650	1/2	3000-LB SCREWED, MALE AND FEMALE, EAR STOCK OR FORGED STEEL NEEDLE VALVE. CRANE 222 1/2H DRAGON 10-M-51 EDWARD 152J RPEC 1040A-M-F
V-692	1/2	1500-LB SCREWED, MALE AND FEMALE, STEEL BAR STOCK PLUG VALVE, 303 STAINLESS TRIM, HI-TEMP PACKING. ANDERSON-GREENWOOD H7HC-44 DRAGON 10-M-51
V-699	1/4	3000-LB NEEDLE VALVE, 316 STAINLESS BODY, TEFLON PACKING, 1/4 INCH MALE PIPE THREAD BY 1/4 INCH SWAGELCK ENDS. WHITEY 1VM4-S4-316

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