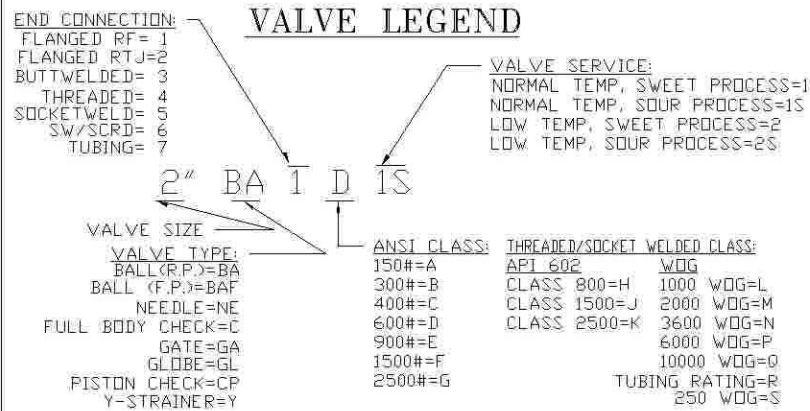


NOTES:

1. QUANTITIES IN B.O.M. ARE FOR ONE (1) UNIT.
2. ALL PIPING TO BE IN ACCORDANCE WITH THE LATEST EDITION OF ASME B31.3 PRESSURE PIPING CODE.
3. VESSEL TO BE FABRICATED TO THE LATEST EDITION OF ASME SECTION VIII, DIVISION 1 PRESSURE VESSELS.
4. THREADED PIPING TO BE: 2500# SA-106B SMLS SCH XXH, 900#/600# 2"-SCHJ60, 1" SCHJ60. ALL LOW PRESSURE FG PIPE(150#/300#/600#)TD BE SCH80
5. TUBING DETAILS: 3/8"(0.035"WT) 316 S.S. TUBING 1/6" & 1/2" (0.049"WT) FOR INSTRUMENTATION ON 600# & 900#
1/2" < 0.083"WT) FOR INSTRUMENTATION ON 2500#
c/w SWAGelok 316 S.S. FITTINGS AND FERRULES
6. PAINTING: PACKAGE TO BE CLEANED TO (SSPC-SP-6)
1st COAT PRIMER: DEVCO FAST DRY PRIMER
FINISH COAT: VESSEL, SKID TANK & PIPING TO BE GREY
LINEHEATER FACE PLATE & STACK: ONE (1)SHOP COAT OF HIGH HEAT FLAT BLACK ENAMEL
7. PROTECT ALL OPENINGS FOR SHIPMENT
8. BUILDING: SELF FRAMING GABLETYPE: 14'-0" WIDE x 24'-0" LONG
x 12'-0" LOW EAVE x 14'-4" HIGH GABLE
EXTERIOR: 22 GA GALVALUME, R-12 INSULATION RATING
INTERIOR: 24 GA FLUTED ALUMINUM INTERIOR c/w 6 mil VAPOR BARRIER
DOORS: TWO(2) 3'-0" WIDE x 7'-0" HIGH MAIN DOOR c/w IWG WINDOW, PANIC LOCK,
CHECK CHAINS & WEATHER STRIPPING
VENTILATION: TWO (2) 12" x 12" ADJUSTABLE LOUVERS
REMOVABLE PANEL: 92" WIDE x 10'-0"
WINDOW: TWO (2) 38"x 36" DOUBLE GLAZED SLIDING WINDOW c/w SCREEN AND CLOSURE
BASE FLASHING: OVER 2" DRIP LIP
ICERAKES: TWO (2) FULL LENGTH ICE RAKES
9. ALL PROCESS PIPING TO BE 100% X-RAY, PWHT ALL BUTTWELDED PROCESS PIPING, HYDROTEST PIPING TO 1.5 x MAWP,
ALL WELDED FUEL GAS PIPING TO BE 15% X-RAY. HYDROTEST PIPING TO 1.5 x MAWP.
10. SKID TO HAVE 2" DRIP LIP AND 2" CONTAINMENT INSIDE OF BUILDING
11. ALL 4"SCH.XXS WELDED FITTINGS TO BE SA-333-6/SA-420-WPL6/SA350-LF2 CL. 1FLANGES
12. MAWP OF 2" Sch. XXH PIPE c/w 2500# FLANGES @ 257°F IS 4785 PSig c/w 0.122" c.o.
MAWP OF 4" Sch.XXH PIPE c/w 2500# FLANGES @ 257°F IS 4785 PSig c/w 0.0983" c.o.
MAWP OF 4" Sch. 160 PIPE c/w 900# FLANGES @ 257°F IS 1993 PSig c/w 1/8" c.o.
MAWP OF 6" Sch. 160 PIPE c/w 900# FLANGES @ 257°F IS 1993 PSig c/w 1/8" c.o.
MAWP OF 2" Sch. 160 PIPE c/w 900# FLANGES @ 257°F IS 1993 PSig c/w 1/8" c.o.
MAWP OF 3" Sch. 160 PIPE c/w 900# FLANGES @ 257°F IS 1993 PSig c/w 1/8" c.o.
MAWP OF 6" Sch. 80 PIPE c/w 600# FLANGES @ 257°F IS 1330 PSig c/w 1/8" c.o.
MAWP OF 2" Sch. 80 PIPE c/w 600# FLANGES @ 257°F IS 1132 PSig c/w 1/8" c.o.
MAWP OF 2" Sch. 160 PIPE c/w 600# FLANGES @ 257°F IS 1330 PSig c/w 1/8" c.o.
13. VENT FY-7011/ SV-7010/ TY-7010 OUTSIDE INDIVIDUALLY, VENT ALL 627 REGULATORS WITH 3/4" TUBING
14. 3" SPRAY FOAM INSULATION ON UNDERSIDE OF SKID CHECKERPLATE
15. INSULATION NOTE: TUBING TO BE RUN FOR LSL-7011 TO BE RUN UNDERNEATH LINEHEATER SHELL INSULATION.

BLIND & TAPPED FLANGES

WCS CODE	QTY	DESCRIPTION
FLG-2500JHB2T05L	1	2"2500#RTJ FLANGE TAPPED 1/2"NPT, CS SA-350-LF2 CL.1
FLG-2500JTH20LT	1	2"2500#RTJ FLANGE THREADED 2"NPT, CS SA-350-LF2 CL.1
FLG-1500RTH20	1	2"900#RTJ FLANGE THREADED 2"NPT, CS SA-105N
FLG-3/600RHB20T10	2	2"600#RF FLANGE RF TAPPED 1"NPT, CS SA-105N
FLG-900RBL20	1	2"900#RF BLIND FLANGE CS SA-105N
FLG-150RHB20T10	1	2"150#RF FLANGE RF TAPPED 1"NPT, CS SA-105N
FLG-600RTH20	1	2"600# RF THREADED 2"
FLG-2500JHB2T15L	1	2"2500#RTJ FLANGE TAPPED 1 1/2"NPT, CS SA-350-LF2 CL.1



SHIPPED LOOSE ITEMS
(FOR INTERNAL USE ONLY)

- 1 - 2 PARTS MANUAL
1 - ROSEMOUNT TEMPERATURE TRANSMITTER
1 - CAULKING LEVEL SWITCH
1 - METER RUN HANDLE
1 - FIRESTACK
24 - NUTS & BOLTS FOR FIRESTACK
1 - GASKET FOR FIRESTACK
1 - AGL IGNITER

AS BUILT
Clatter

BILL OF MATERIALS

TAG	QTY.	MAKE	DESCRIPTION	TAG	QTY.	MAKE	DESCRIPTION
TV-7010	1	KIMRAY	MODEL 112-SMT-DAB MOTOR VALVE 1" FNPT, CAST IRON BODY, REDUCED INNER VALVE, 0-30 PSig INPUT, FAIL CLOSED (125 PSig MAWP)	PCV-7013	1	FISHER	MODEL 67CFR REGULATOR 1/4" FNPT 0-35 PSig RANGE, 250 PSig MAWP
PSL-7010	1	CCS	DUAL-SNAP ELECTRIC HI-PRESSURE SWITCH, MODEL 6900GE12, 3 TO 20 PSig RISING / 1 TO 18 FALLING SET @ ____ PSig RISING, EXPL. PROOF (ELEC. BY OTHERS)	PCV-7014	1	FISHER	MODEL 627 REGULATOR 1"FNPT, 0-20 PSig DUCTILE IRON BODY c/w ALUM.TRIM 3/8" DRIFICE, MAX.300 PSig INLET PRESS.,
PSH-7010	1	CCS	DUAL-SNAP ELECTRIC HI-PRESSURE SWITCH, MODEL 6900GE14, 9 TO 75 PSig RISING SET @ ____ PSig RISING, EXPL. PROOF (ELEC. BY OTHERS)	PRV-120/130 /140	3	FISHER	MODEL 67CFR REGULATOR 1/4"FNPT, 0-35 PSig STD. SERVICE TRIM, 250 PSig MAWP 3/16" DRIFICE VENTED BONNETS
EY-400	1	ASCO	24 VDC POWERED SOLENOID, CSA APPROVED, CLASS 1 DIV.1 < ELECTRICAL BY OTHERS>,LOW WATTAGE	PRV-110	1	FISHER	MODEL 67CFR REGULATOR 1/4"FNPT, 0-125 PSig STD. SERVICE TRIM, 250 PSig MAWP 3/16" DRIFICE VENTED BONNETS
PSV-2012	1	MERCER	RELIEF VALVE MODEL 9100, "C" DRIFICE, 1" NPT x 1" NPT STD.SERVICE TRIM, WCB BODY, SET @ 500 PSig	PSV-2011	1	MERCER	RELIEF VALVE MODEL 9100, "D" DRIFICE, 1" NPT x 1" NPT STD.SERVICE TRIM, WCB BODY, SET @ 115 PSig
PSV-120	1	MERCER	RELIEF VALVE MODEL 9100, "D" DRIFICE, 1" NPT x 1" NPT STD.SERVICE TRIM, WCB BODY, SET @ 29 PSig	PCV-2012	1	FISHER	MODEL 627H REGULATOR 1"FNPT, 240-500 PSig, 2000# STEEL BODY 1/8" DRIFICE, SET @ 406 PSIG.
FV-7011 FY-7011	1	WILLIS/ FISHER	MODEL M2 ANGLE BODY ACTUATED CHOKE VALVE, 4"2500#RTJ x 4"900#RF OUTLET, STYLE 'C', NACE SERVICE, TWO 3/4" TUNGSTEN CARBIDE TRIM, AND FISHER 667-60 ACTUATOR 6-30 PSIG RANGE, FAIL CLOSED c/w FISHER DVC 6010 FIELDVUE VALVE POSITIONER 4-20 mA INPUT/ 6-30 PSI OUTPUT	PI-7010	1	WIKA OR EQUAL	PRESSURE INDICATOR c/w 2 1/2" DIAL, 0-30 PSig DUAL SCALE, 1/4" NPT CONN, LIQ. FILLED
PCV-2011	1	FISHER	MODEL 627 REGULATOR 1"FNPT, 70-150 PSig, 2000# STEEL BODY NYLON DISK, 1/8" DRIFICE, SET @ 102 PSIG.	PI-7013	1	WIKA OR EQUAL	PRESSURE INDICATOR c/w 2 1/2" DIAL, 0-30 PSig DUAL SCALE, 1/4" NPT CONN, LIQ. FILLED
EY-7010	1	ASCO	PILOT SAFETY SHUTOFF VALVE, MODEL PF5926-0177, 24 VDC POWERED SOLENOID, CSA APPROVED, CLASS 1 DIV.1 < ELECTRICAL BY OTHERS>	PCV-400A	1	FISHER REG912-01	SECONDARY PRESSURE REGULATOR, MODEL 912N 1/4" NPT, SET @ 11" WC OUTLET PRESSURE,
FE-7014	1	CANALTA	6"600#RF SCH.80 SENIOR METER RUN, SOUR TRIM, 100%X-RAY, PWHT FLANGED UP AND DOWNSTREAM, BUILT TO AGA 14.32, 3-4th EDITION AGA 2002 SPECS, c/w CPA FLOW CONDITIONER AND THREE 3/4" 3000# TOLS, 121" F/F	PI-2011	1	WIKA OR EQUAL	PRESSURE INDICATOR 2-1/2" DIAL, 0-200 PSig, DUAL SCALE, 1/4" NPT END CONN.
PSLL-7012 PI-7012	1	BETTIS	MODEL PAR2000S-10, NACE, PRESS. RANGE 1780 PSIG TO 6000 PSig (GREEN SPRING)SET @ 1160 PSIG FALLING, MODEL 1B-7 ISO TEST VALVE, 6000 PSig RATING, 2"FNPT x 1 1/2"MNPT, 316 SS BODY,PGI 1/2" MxF 316SS NEEDLE VALVE, (1300 PSIG MIN. SETTING SPAN) 6000 PSI PRESSURE INDICATOR	TI-7011	1	TREND OR EQUAL	TEMPERATURE INDICATOR, MODEL 3302S, 3" DIAL, 1/2" BACK CONN. 6" STEM, 1/2"x 3/4"x 6" 316 S.S. THERMOWELL, 50°F-500°F- DUAL SCALE
PSHL-7012 PI-7012A	1	BETTIS	MODEL PAR2000S-10, NACE, PRESS. RANGE 300 PSIG TO 1500 PSig (BRONZE SPRING) 1348 PSIG RISING, 652 PSIG FALLING MODEL 1B-5 ISO TEST VALVE, 3000 PSig RATING, 2"FNPT x 1 1/2"MNPT, 316SS BODY, PGI 1/2" MxF, 316SS NEEDLE VALVE, 3000 PSI PRESSURE INDICATOR	TT-7010 TT-7014	2	ROSEMOUNT	TEMP. TRANSMITTER MODEL NUMBER 3144DIC6, DUAL COMPARTMENT HOUSING, 6" INSERTION WITH CONN. HEAD, -40 TO 400°C TEMP. RANGE, CSA APPROVED (ELECTRICAL BY OTHERS)
PT-1002 PT-7014	2	ROSEMOUNT	PRESSURE TRANSMITTER MODEL 3051G, 0-800 PSIG PRESS. RANGE 1/2"NPT CONN., SOUR SERVICE, HASTELLOY DIAPHRAGM, CSA APPROVED (ELECTRICAL BY OTHERS)	LG-7011	1	PENBERTHY	TUBULAR GAUGE GLASS ASSEMBLY c/w N7A GAUGE VALVES, 5/8"OD PYRXC RED LINE SIGHT GLASS,c/w GUARDS, 3/4"NPT PROCESS & 1/2"NPT DRAIN, CHECK BALL SHUT OFF c/w GAUGE GLASS GUARDS
FT-7014	1	ROSEMOUNT	DIFF. PRESSURE TRANSMITTER MODEL 3051CD, 0-1000"WC SS FLANGE SOUR SERVICE, HASTELLOY DIAPHRAGM, CSA APPROVED (ELECTRICAL BY OTHERS)	LSLL-7011	1	MURPHY	2" NPT, MODEL LI200E BODYGLAS FLOAT, 24 VOLT XP, STD. SERVICE TRIM
TY-7010	1	FISHER	MODEL 12P TRANSDUCER, 4-20 mA INPUT, 3-15 OR 6-30 PSI RANGE (ADJUSTABLE), XP, CSA APPROVED AND FISHER 67CFR REG (ELECTRICAL BY OTHERS) 0-125 PSI	ESDV-7010	1	MAXON	MODEL 100D8112SS-6-2-GJA1, 1"FNPT END CONN, LCB BODY, STD SERV., 24 VDC POWERED SOLENOID, VDS1 & VCS LIMIT SWITCH, CSA B6.5 3.9 B149.3 CERTIFIED INTRINSICALLY SAFE BARRIER (ELECTRICAL BY OTHERS),
PCV-400	1	FISHER REG6271000-03	PRESSURE REGULATOR, MODEL 627 1" NPT, SET @ 10 PSig, 3/32" DRIFICE, 1000# BODY	TSHH-7011	1	KIMRAY	MODEL HT-12 THERMOSTAT, -30°F-750°F TEMP.RANGE, INDIRECT, REVERSE THROTTLE ACTION 5-30 PSig INST. SUPPLY, 3/4" MNPT SEPERABLE SOCKET C.S., FIELD SET @ 390-400°F

VALVE DESCRIPTION

TAG	QTY.	MAKE	VALVE DESCRIPTION
1"BA4N1	6	BALON	1" NPT 3000# BALL VALVE R.P
1/2"NE4P1	3	CENTURY	1/2" CS NPT 6000# NEEDLE VALVE
3/4"BA4N1	2	BALON	3/4" NPT 3000# BALL VALVE R.P.
2"GA4H1	1	NAVCO	2" CLASS 800 NPT GATE VALVE, STD.
1/2"NE4P1S	5	CENTURY	1/2" SS NPT 6000# NEEDLE VALVE
1/4"NE4P1	8	CENTURY	1/4" CS NPT 6000# NEEDLE VALVE
1"P4M1	2	KF	1" NPT LUBRICATED PLUG VALVE, STD.
1/2"P4M1	1	KF	1/2" OR 1/4" NPT LUBRICATED PLUG VALVE, STD.
1"Y4H1	1	ALTA	1" CL 800 'Y' STRAINER VALVE, STD
1/2"BA4N1	1	BALON	1/2" NPT 3000# BALL VALVE R.P. STD.
1/4"BA4N1	1	BALON	1/4" NPT 3000# BALL VALVE R.P
1/2"BA4N1S	2	NUTRON	1/2" NPT 3000# BALL VALVE F.P. SOUR

5	REV AS PER MARK UPS	OMP	.	07-05-18
4	REV AS PER CHANGE ORDERS	AL	.	07-05-11
3	REV AS PER REMOVABLE PANEL	OMP	.	07-03-20
2	REV AS PER MARK UPS	CP	.	07-03-02
1	REV AS PER MARK UPS	OMP	.	07-02-26
0	REV METER LENGTH-ISSUED FOR CONSTRUCTION	CP	.	07-02-14
C	REV PER CUSTOMER MARK-UPS	CP	.	07-02-02
B	REV PER CHECKING	CP	.	07-01-05
6	AS BUILT	AL	.	07-06-14
NO.	REVISIONS	DWN	APPR	DATE

DATE 07-01-02	DESIGNED BY PES	DRAWN BY C.PRICHARD	CHECKED BY	TITLE BILL OF MATERIALS & NOTES FOR 84"ID x 30'-0" LONG 3,750,000 BTU/h LINEHEATER c/w 4"2500# RTJ COILS- 12 PASSES & 6"900# RF 4 PASSES
APPROVED BY	PROJECT NO. 6119-001	FILENAME 6119-001BOM	REFERENCE NO.	
SCALE N.T.S.	SHEET NO. 1 OF 1	DRAWING NO. PES-6119-001BOM	REV. NO.	△

