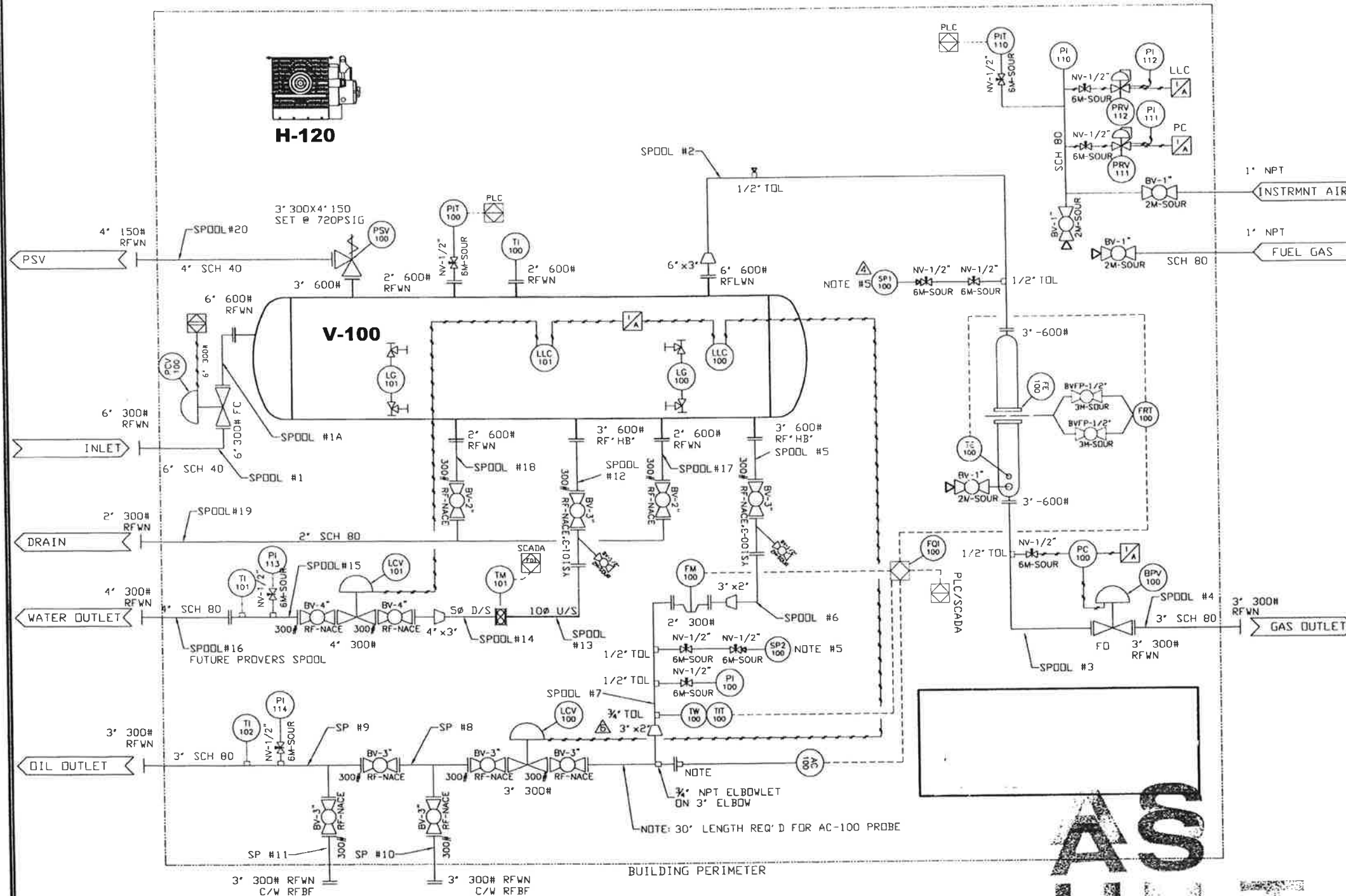


H-120
RUFFNECK FX5-480360-050-WT,
5KW EXPLOSION PROOF ELECTRIC
FORCED-AIR HEATER C/W
THERMOSTAT, 12" FAN, 480V
(3 PHASE), 120 VAC MOTOR/
CONTROLS

V-100
48" I.D. x 16'0" S/S
1440 PSI M.A.W.P. @ 130°F
HORIZONTAL SEPARATOR



BILL OF MATERIALS:

MARK	QTY	DESCRIPTION
LLC 100	1	2" NPT, NORRISEAL 1001A LIQUID LEVEL CONTROLLER, MOUNTED ON A 4" 600# HUB BLIND TAPPED 2", NACE
LLC 101	1	2" NPT, NORRISEAL 1001A LIQUID LEVEL CONTROLLER, MOUNTED ON A 4" 600# HUB BLIND TAPPED 2", NACE
PC 100	1	CVS 4150 PRESSURE CONTROLLER, 0 - 1000#, 6-30 PSI OUTPUT, DIRECT OR REVERSE ACTING, SOUR
BPV 100	1	3" 300# RF, CVS 657/45 ET BODY PRESSURE CONTROL VALVE FD, EQUAL PERCENT TRIM, 6-30 PSI SIGNAL, 14-20 PSI BENCH SET, 1 1/2" TRAVEL, NACE
LCV 100	1	3" 300# RF, CVS 667/45 ET BODY LCV CONTROL VALVE FC, EQUAL PERCENT TRIM, 6-30 PSI SIGNAL, 14-20 PSI BENCH SET, 1 1/2" TRAVEL, NACE
LCV 101	1	4" 300# RF, CVS 667/45 ET BODY LCV CONTROL VALVE FC, EQUAL PERCENT TRIM, 6-30 PSI SIGNAL, 14-20 PSI BENCH SET, 1 1/2" TRAVEL, NACE
PCV 100	1	6" 300# RF, FISHER V200 C/W 2052 ACTUATOR F.O. PRESSURE CONTROL VALVE, FREE ISSUE
PRV 111	1	1/4" NPT, FISHER 67 CFR REGULATOR, 5 - 35#, VENTED BONNET, NACE
PRV 112	1	1/4" NPT, FISHER 67 CFR REGULATOR, 5 - 35#, VENTED BONNET, NACE
AC 100	1	3/4" NPT, DREXELBROOK OIL/WATER CUT PROBE, FREE ISSUE, 30" INSERTION LENGTH, 10" COTE SHIELD, MOUNTED ON, 3" 300# HUB BLIND TAPPED
FM 100	1	2" 300#, CORIOLIS METER C/W TRANSMITTER MICRO MOTION, FREE ISSUE
LG 100	1	3/4" NPT, QUALITY MACHINE Q1520 TRANSPARENT GAUGE GLASS, c/w Q146 GAUGE COCK, NACE
LG 101	1	3/4" NPT, QUALITY MACHINE Q16R20 REFLEX GAUGE GLASS, c/w Q146 GAUGE COCKS, NACE
PI 100	1	1/2" NPT x 4" FACE, PRESSURE GAUGE, 0 - 1000#, SOUR
PI 110	1	1/4" NPT x 2-1/2" FACE, PRESSURE GAUGE, 0 - 200#, SOUR
PI 111	1	1/4" NPT x 2-1/2" FACE, PRESSURE GAUGE, 0 - 60#, SOUR
PI 112	1	1/4" NPT x 2-1/2" FACE, PRESSURE GAUGE, 0 - 60#, SOUR
PI 113	1	1/2" NPT x 4" FACE, PRESSURE GAUGE, 0 - 1000#, SOUR
PI 114	1	1/2" NPT x 4" FACE, PRESSURE GAUGE, 0 - 1000#, SOUR
PIT 100	1	1/2" NPT, ROSEMOUNT 2088 2088G3S22A1MSB4C6 PRESSURE TRANSMITTER, C/W READOUT, SOUR
PIT 110	1	1/2" NPT, ROSEMOUNT 2088 2088G3S22A1B4C6 PRESSURE TRANSMITTER, SOUR
TI 100	1	1/2" NPT 3" x 6" STEM, TEMP. INDICATOR, -40° TO 160°F, c/w 316SS THERMOWELL, SOUR
TI 101	1	1/2" NPT 3" x 2.5" STEM, TEMP. INDICATOR, -40° TO 160°F, c/w 316SS THERMOWELL, SOUR
TI 102	1	1/2" NPT 3" x 2.5" STEM, TEMP. INDICATOR, -40° TO 160°F, c/w 316SS THERMOWELL, SOUR
TM 101	1	3" x 3" 300#, PEMBINA CONTROLS QUICKSET TURBINE 60-600 GPM C/W INSTALL KIT & B2800 ABX-CS, MONITOR - FREE ISSUE
FE 100	1	3" SCH 80 600# RF, DANIEL SENIOR DRIFICE AGA 2000 METER RUN, LH CRANK, SOUR FLANGED TYPE COND
PSV 100	1	3" 300# x 4" 150 J DRIFICE 9100 SERIES, MERCER 91-84J11T90N1 PRESSURE SAFETY VALVE, 651-800 PSIG, SET @ 720 PSIG, SOUR
BV1/2T-2MS	2	1/2" NPT 2000#, BAR STOCK BALL VALVE, SOUR
BV1T-2MS	4	1" NPT 2000#, STOCK BALL VALVE, SOUR
BV2F-300S	2	2" 300# RF, JAG RP BALL VALVE, NACE
BV3F-300S	7	3" 300# RF, JAG RP BALL VALVE, NACE
BV4F-300S	2	4" 300# RF, JAG RP BALL VALVE, NACE
BVFP1/2T-3MS	2	1/2" NPT 3000#, WKM BALL VALVE, FP, SOUR
NV1/2-6MS	12	1/2" 6000#, WGI NEEDLE VALVE, SOUR
YS1003-300S	1	3" 300#, ALTA Y-STRAINER, SOUR
YS1013-300S	1	3" 300#, ALTA Y-STRAINER, SOUR

GENERAL NOTES

- 1) PIPING TO CONFORM TO ASME B31.3 LATEST EDITION
- 2) STRESS RELIEVING ON BUTT WELDED SPOOLS: SEE CHART WELDED PIPING STRESS RELIEVED FOR 1 HOUR @ 1150°F MAXIMUM HEATING: 400°F/HR FROM 800°F TO 1150°F MAXIMUM COOLING: 500°F/HR FROM 1150°F TO 800°F
- 3) HYDRO TEST ON BUTT WELDED SPOOLS: SEE CHART
- 4) ALL INSTRUMENTATION IS AIR TESTED TO 30 PSIG
- 5) SAMPLE PROBE IS A 1/2" TOL TO BE LOCATED NO CLOSER THAN 5 PIPE DIA'S TO THE CLOSEST OBSTRUCTION AS PER DIRECTIVE 17, SEC 8.2.1

PIPING DESIGN

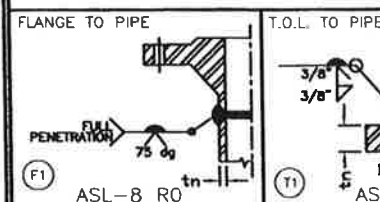
- 1) 1/2" THREADED L.P. LINES: SCH 80 WITH 3000# FITTINGS
- 2) 1" THREADED H.P. LINES: SCH 160 WITH 3000# FITTINGS
- 3) 1" THREADED L.P. LINES: SCH 80 WITH 3000# FITTINGS
- 4) 2" THREADED H.P. LINES: SCH 160 WITH 3000# FITTINGS
- 5) 2" THREADED L.P. LINES: SCH 160 WITH 3000# FITTINGS
- 6) WELDED PIPING: SCH 80/SCH 40
- 7) INSTRUMENT TUBING: 3/8" x 0.035" WALL 316SS
- 8) INSTRUMENT TUBE FITTINGS: 316SS SWAGelok
- 9) PROCESS TUBING: 1/2" x 0.035" WALL 316SS
- 10) PROCESS TUBE FITTINGS: 3/8" x 0.035" WALL 316SS

MATERIALS

- 1) PIPE: SA106 GR. B
- 2) NPT FITTINGS: SA105N
- 3) FLANGES: SA105N
- 4) WELD FITTINGS: SA234 WPB
- 5) PRESSURE GASKETS: 316SS FLEXITALIC
- 6) PRESSURE BOLTING: 2HM NUTS/B7M STUDS

TITLE:
48" I.D. x 16'0" S/S
DRESSED TO 300 ANSI
SOUR HORIZONTAL SEPARATOR
P & ID

WELD DETAILS



DESIGN DATA:

ASME B31.3 2010 ED. NORMAL SERVICE

	CLASS 300 SPOOLS # 1 - 19	CLASS 150 SPOOL # 20
M.A.W.P.:	720 PSIG @ 130°F	235 PSIG @ 100°F
M.D.M.T.:	-20°F @ 720 PSIG	-20°F @ 235 PSIG
HYDROTEST:	1080 PSIG	353 PSIG
RADIOGRAPHY:	100%	100%
OTHER/NDE	N/A	N/A
C.A.	1/8"	1/8"
PWHT:	YES, PER B31.3 LATEST ED.	YES, PER B31.3 LATEST ED.

REVISIONS:

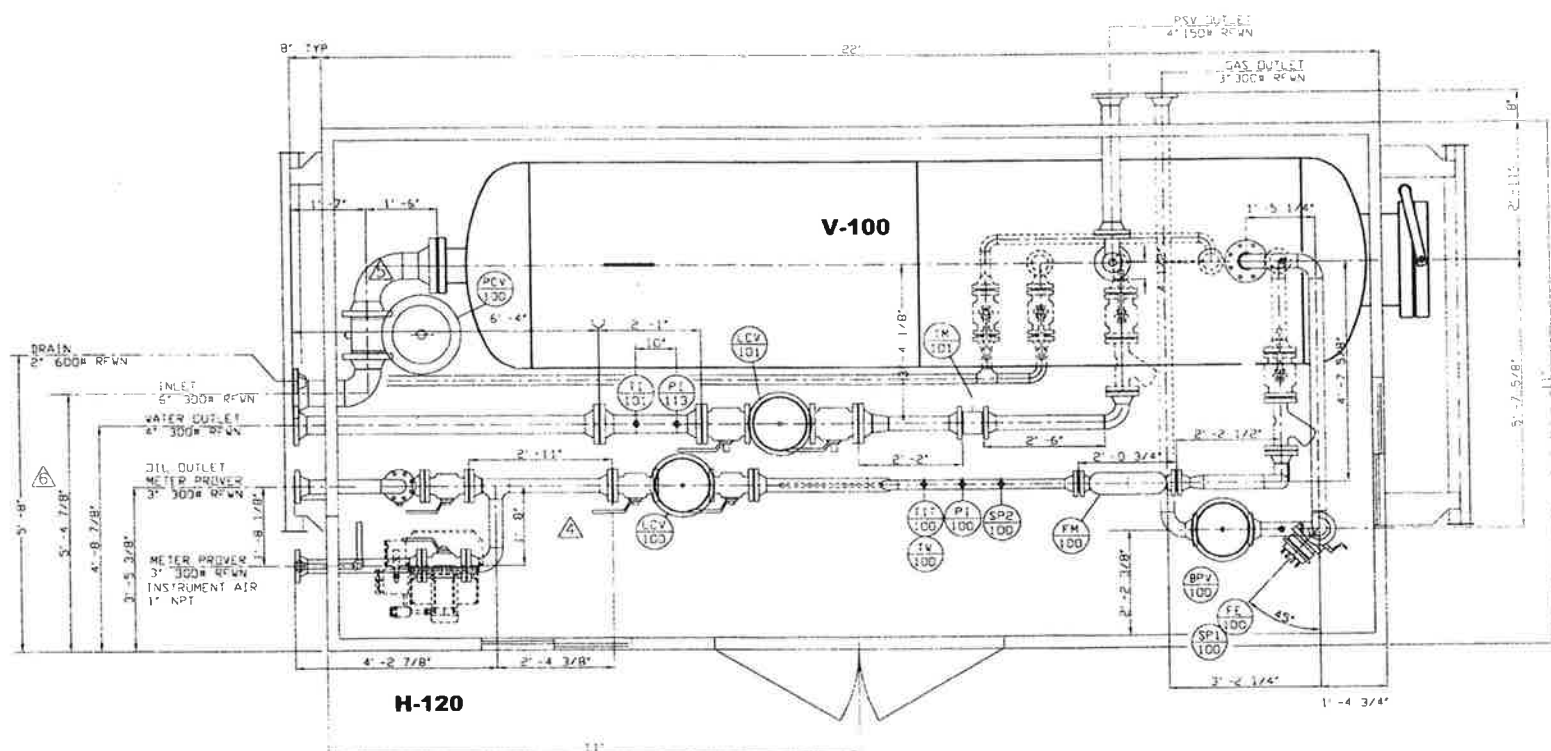
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7	AS BUILT	MG	06.30.14
6	RELOCATED REDUCER AS SHOWN	SPB	12.10.13
5	ISSUED FOR FABRICATION	SPB	12.10.13
4	REVISED AS PER CUSTOMER MARKUP REC'D NOV 26/13	SPB	11.28.13
3	REVISED AS PER CUSTOMER MARKUP REC'D NOV 21/13	SPB	11.21.13
2	REVISED AS PER CUSTOMER MARKUP	MG	10.29.13
1	ISSUED FOR APPROVAL	MS	10.22.13
0	SHOP ISSUED	NM	09.11.13
NO.	DESCRIPTION	BY	DATE



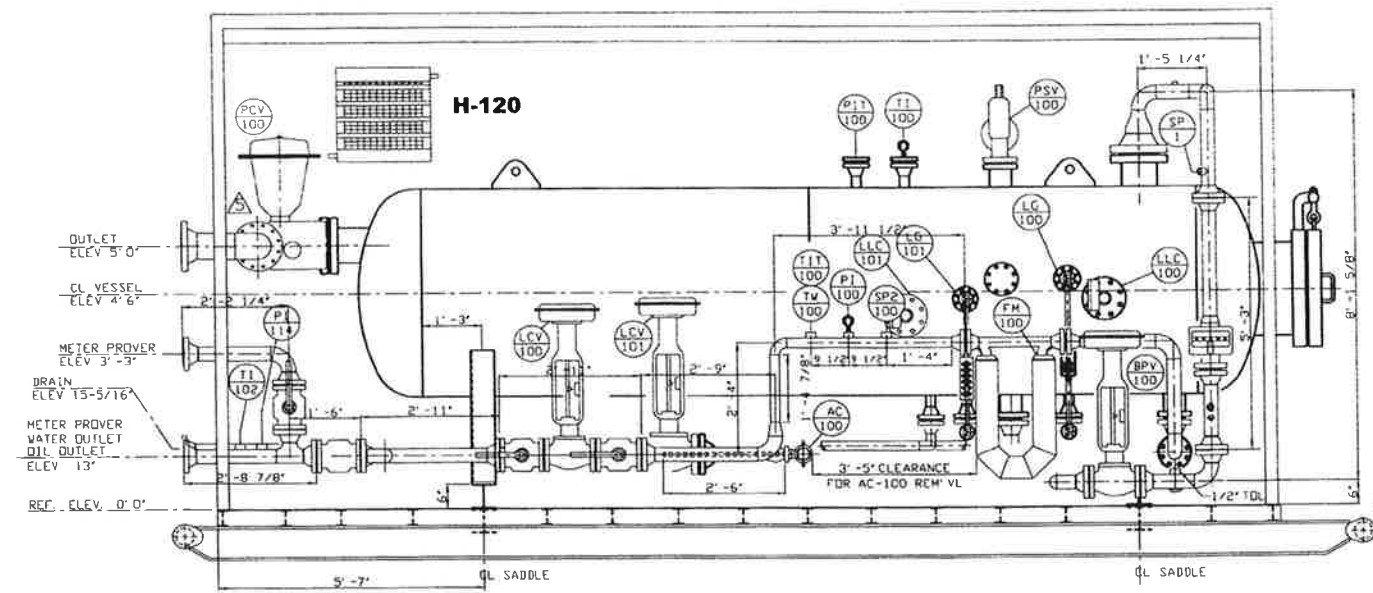
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CHECKED BY:		DATE:	9/11/13
APPROVED BY:		QUOTE:	VQ13-143
		DWG. #:	DM1900P
SHEET 1 OF 3		REV.:	Δ

TITLE: 48" I.D. x 16'0" S/S 1440# SOUR SEPARATOR

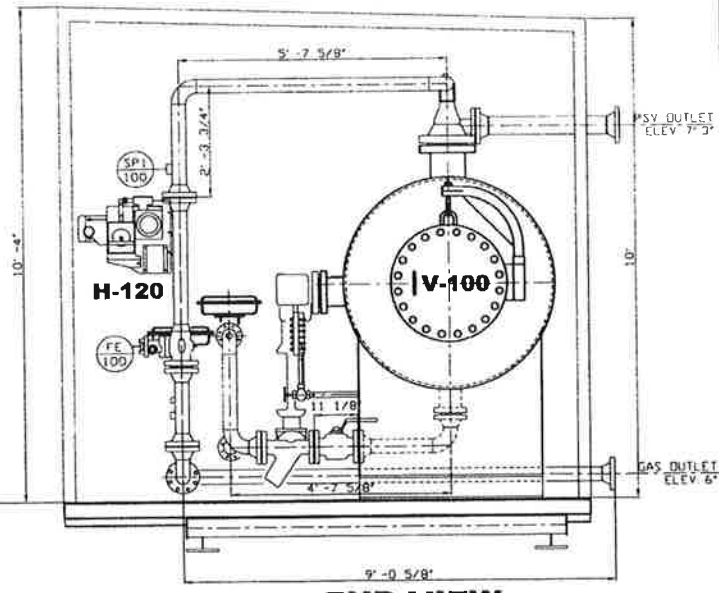
SERIAL #:
331943



PLAN VIEW



FRONT ELEVATION



END VIEW

SHIPPING INFO.
LENGTH: 24'-9"
WIDTH: 11'-0"
HEIGHT: 11'-5"
WEIGHT: 35,000 LBS.

DESIGN NOTES:

- GENERAL NOTES
- 1) DIMENSIONS ARE APPROXIMATE
 - 2) FINISHED WEIGHT 35,000 LBS
 - 3) SHIP TO LOCATE PIPE SUPPORTS
- FINISH NOTES
- 1) VESSEL, SKID & PIPING TO BE BLASTED TO SSPC-SP7 BRUSH BLAST
 - 2) VESSEL, SKID & PIPING TO BE PRIMED WITH ONE COAT OF ARGO SHOP PRIMER
 - 3) VESSEL, SKID & PIPING TO BE FINISHED WITH ONE COAT OF ARGO CLOVERDALE GRAY ENAMEL
- BUILDING
- 1) 11' x 22' x 10' / 10' x 4' EAVE
 - 2) 22 GA GALVALUME EXTERIOR
 - 3) 24 GAUGE FLUTED ALUMINUM INTERIOR C/W R12 INSULATION AND 6 MIL VAPOUR BARRIER
 - 4) 3' x 7' INSULATED STEEL MANDOOK C/W PANIC HARDWARE, LOCKSET & IWG
 - 5) 36" x 38" DOUBLE GLAZED SLIDING WINDOWS WITH SCREEN
 - 6) 12" x 12" MANUAL SLIDER WITH SCREEN (2 REQUIRED)
 - 7) CONTINUOUS 22 GA BASE FLASHING, RUST PRO EXT. SCREWS
 - 8) ALL PIPE PENETRATIONS SEALED
 - 9) LA METAL QUOTE Q13-Q1067

AS
BUILT

TITLE: 48" I.D. x 16'0" s/s SOUR
1440 PSI M.A.W.P. @ 130°F
HORIZONTAL SEPARATOR
LAYOUT

NOTES:	
1) SEE P&ID FOR MATERIALS LIST.	

REVISIONS:	
NO.	DESCRIPTION:
7	AS BUILT
6	ADDED EXTRA SPOOL DIMN'S
5	ISSUED FOR FABRICATION
4	RELOCATED PVC-100 AS SHOWN
3	REV PER CUST.MARKUP REC'D NOV 26,REISSUE FOR APPR.
2	REV PER CUST.MARKUP REC'D NOV 21,REISSUE FOR APPR.
1	SOLD TO HARVEST, REV PER CUST. P&ID, ISSUE FOR APPR.
0	ISSUED FOR FABRICATION-STOCK LAYOUT



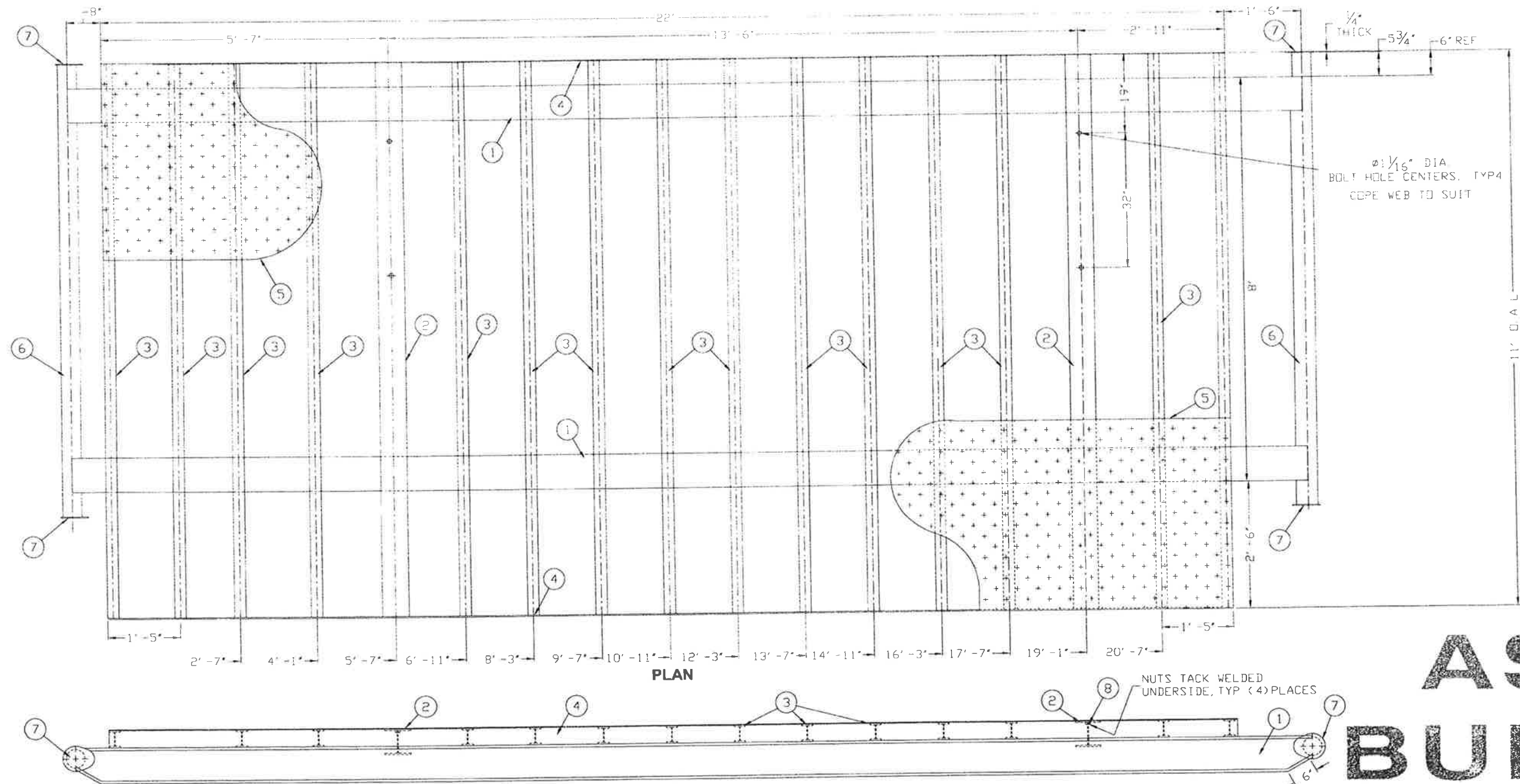
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CHECKED BY:	DATE: 11/12/13
APPROVED BY:	QUOTE: VQ13-143
SHEET 2 OF 3	DWG. #: DM1900L
	REV.: A

TITLE: 48" I.D. x 16'0" s/s
HORIZONTAL SEPARATOR

SERIAL #: 331943

TITLE: 11'0" x 22' FLAT SKID DRAWING

SERIAL #: 331943



BILL OF MATERIALS:			
MARK	QTY	MAT'L	DESCRIPTION
1	2	A36	W8 @ 48#/ft WIDE FLANGE 24' 2"
2	2	A36	W6 @ 15#/ft WIDE FLANGE 10' 11 1/2" LG
3	15	A36	S4 @ 7.7#/ft I-BEAM 10' 11 1/2" LG
4	2	A36	1/2" x 4' FLAT BAR 22' LG
5	1	A36	3/16" CHECKER PLATE 242 sq. ft.
6	2	A53B	4" SCH STD. ROLL BAR 8'-11 1/2" LG
7	4	A36	4" ARGO FAB. TEAR DROP
8	4	A194-2H	1" DIA. HEX. HD. NUTS

DESIGN NOTES:	
GENERAL NOTES:	
1) SKID TO BE BLASTED TO SSPC-SP7 BRUSH BLAST 2) SKID TO BE PAINTED WITH ONE COAT OF ARGO SHOP PRIMER 3) SKID TO BE FINISHED WITH ONE COAT OF CLOVERDALE GREY ENAMEL PAINT 4) USE FULL SEAM WELD WHEN BUTTING CHECKER PLATE TOGETHER 5) CHECKER PLATE TO BE STAGGERED INTERMITTENT WELDED TO ALL SUPPORT BEAMS 6) ALL MEASUREMENTS IN THE BILL OF MATERIALS ARE APPROXIMATE 7) APPROXIMATE WEIGHT OF THE SKID IS 6180 LBS	

REVISIONS:			
2	AS BUILT	NM	12.12.13
1	REVISED DIMENSIONS AS PER STOCK DWG	NM	10.11.13
0	SHOP ISSUED	NM	09.11.13
REVISION:	DESCRIPTION:	DRAWN:	DATE:

TITLE:		11'0" x 22'0" FLAT SKID FOR 48" x 16' HZ VESSEL LAYOUT DRAWING	
DRAWN BY:	NM	SCALE:	N.T.S.
CHECKED BY:	SB	DATE:	10.11.13
APPROVED BY:	SB	QUOTE:	-
SHEET 3 OF 3		DWG. #:	DM1900S
		REV.:	A

