

## **2.0 Technical Specifications**

### **2.1 Vessel: 36"OD X 10'-0" X 1440 psi Vertical Sour Separator (Serial # 432573)**

#### **Vessel Data**

- Design Code: ASME Section VIII Div. 1 Latest Edition and Addenda
- MAWP: 1440 psig @ +130°F
- MDMT: -20°F @ 1440 psig
- CA: 0.0625"
- RT: 1 (Full)
- Heads: 2:1 SE SA516-70N
- Shell: SA516-70N
- Nozzles: SA105N
- PWHT: 1150°F

#### **Features**

- Inlet diverter
- 316 demister
- Internal float hood
- AB, BC, SK design inspected and registered

## Nozzle Schedule

No.	Qty.	Service	Size and Rating	Comments
N1	1	Inlet	6" 600# RF	c/w diverter
N2	1	Outlet	6" 600# RF	c/w demister
N3	1	DRAIN	2" NPT	
C1	1	OIL LCC	2" CL3000 TOL	
C2	1	WATER LLC	2" CL3000 TOL	
C3	1	OIL OUT	2" CL3000 TOL	
C4	1	WATER OUT	2" CL3000 TOL	
C5a/b	2	OIL LG	3/4" CL3000 TOL	
C6a/b	2	WATER LG	3/4" CL3000 TOL	
C7	1	HLSD	2" CL3000 TOL	
C8a/b	2	INSPECTION	2" CL3000 TOL	
C9	1	PSV	2" CL3000 TOL	
C10	1	PI	1/2" CL3000 TOL	
C11	1	TI	3/4" CL3000 TOL	

### 2.2 Scrubber: 8" NPS X 24" X 350 psi Vertical Sour Scrubber (Serial 201333-F14)

### 2.3 Building: One (1) 8'-0" X 19'-0" X 9'-0"/9'-6" Shed Style Urethane Panel Building

- 28 Gauge Galvalume Exterior, White Interior
- 1 1/2" Thick Urethane Panel, R12 fiberglass insulation (roof and walls)
- One (1) 3' X 7' Urethane Panel Man Door c/w
  - IWG window
  - Panic hardware
  - Lock set
  - Weather-stripping
  - Aluminum threshold
  - Check chain
- One (1) 36" X 36" double glazed sliding window c/w lock and screen
- Two (2) 12" Louvers
- Ice Rake, Eaves and down spout (low side only)

### 2.4 Skid: One (1) 8'-0" X 19'-0" Oilfield Skid

- W8 X 18 main runners and cross members
- C6 X 8.2 stiffeners
- Four (4) lifting points c/w MPI

## 2.5 Manual Valves

Tag	Qty.	Description
BA-050	4	Ball Valve – Balon Model 1/2R-F03NL-SE 1/2" NPT 3M RP connections
BA-075	4	Ball Valve – JAG Model T3-F07T15N 3/4" NPT 3M FP connections NACE, A105N
BA-100	1	Ball Valve – Nutron Model T3R10520B2-SS-T 1" NPT 3M RP connections
BAF-206	3	Ball Valve – Balon Model 2R-F63N-RF 2" 600# RF RP connections NACE
CH-050	2	Check Valve - Wheatley Model 9D-822-503360-166 1/2" NPT 2160# connections
CHF-206	2	Check Valve Swing - Wheatley Model 9D-510-025144-1666 2" 600# RF connections NACE, WCC Body
CHF-306	1	Check Valve Swing- Wheatley Model 9D-510-035144-166 3" 600# RF connections
NV-025	3	Needle Valve - WGI Model WN1312 1/4" NPT FxF 10M connections
NV-050	2	Needle Valve 1/2" MNPT x 1/2" FNPT 6000# connections, 316SS

## 2.6 Instrumentation and Equipment

PSV 100	1	CROSBY JOS Pressure Relief Valve Model# 2H3JOS-E45LTJ JOS Standard Trim 316SST Nozzle & Disc 2" 600 H orifice (0.785 sq in API) 3" 150 RF x RF Set @ 1440 psig, Gas Service Temperature Range: -50F to 650F (-45C to 343C) Low Temp CS Body and Bonnet/SST Trim/Ctd Chrome Steel Spring (Standard) Threaded Cap
PSV 110	1	Taylor Safety Relief Valve Model 825E4651341 1" MNPT x 1 1/2" FNPT, NACE Primary "E" orifice Set @ 150 Psig
LC 100/101	2	Norriseal Liquid Level Controller Model# Model 1001A2SM60NSLDF 2" NPT process connection Direct, snap acting, Left Hand Mount Vertical Displacer NACE process, Sweet Instrument
LCV 100	1	Fisher D4 Control Valve 2" 600# RF connections 1 1/4" Port ATO/FC Size 40 Actuator NACE
LCV 101	1	CVS 667-D Control Valve 2" 600# RF connections 1 1/4" Microform Trim ATO/FC Size 40 Actuator NACE
LG101	1	Level Gauge - Reflex Quality Q16R20 Transparent Level Gauge (2,375 psig @ 100°F) Nace service construction One (1) Glass with 9 -1/8" visible length each Model 146 gauge valves - 3/4" MNPT end connection
LG100	1	Level Gauge - Transparent Quality Q15T20 Transparent Level Gauge (1,500 psig @ 100°F) Nace service construction One (1) Glass with 7 -7/8" visible length each Model 146 gauge valves - 3/4" MNPT end connection

PI 100	1	WGI Pressure Indicator 4" Face X 1/2" Btm mount 0-2000 psi dual scale Liquid filled, SS internals
PI 110	1	WGI Pressure Indicator 4" Face X 1/2" Btm mount 0-200 psi dual scale Liquid filled, SS internals
PRV 100/101	2	FISHER 67CFR 1/4" NPT connections 0 – 35 psi spring Vented bonnet
TI/TW 100	1	WGI Temperature Indicator 0-250°F dual scale 1/2" NPT Center Back Mount 6" stem 3" face c/w 316SS TOW

## 2.7 Piping

### Design Basis

Design Code: ASME B31.3 Standard

Design Temperature 100°F/-20°F

- Design Pressure: 1440 psi
- CA: 0.125"

### Materials

Process piping is ASME SA106B

- Forged Fittings are ASME /SA105N
- Butt-Weld Fittings are ASME SA234WPB
- Spiral wound 316SS gaskets, B7M studs, 2HM nuts
- Instrument tubing is 316SS
- Tube fittings are Swagelok SS

### Primary Flange Rating: 600 ANSI

#### Pipe Schedules

All welded piping 3" and larger to be Sch. 80

All 2" welded piping to be Sch. 160

All process threaded piping to be Sch. 160

All Instrument Air Piping to be threaded C.S. piping

Forged fittings are 6000# class

### Notes

100% of all butt welds to be x-rayed to ASME B31.3 Standard

Piping hydrostatic tested at 1.5 x design pressure for one (1) hour

Piping NOT PWHT

## 2.8 External Surface Preparation and Painting

	<b>Structural</b>	<b>Piping</b>	<b>Vessels</b>
<b>Preparation</b>	SSPC-SP3 Mechanical Clean	SSPC-SP73 Mechanical Clean	SSPC-SP3 Mechanical Clean
<b>Coat 1</b>	Cloverdale Shop Primer One (1) Coat	Cloverdale Shop Primer One (1) Coat	Cloverdale Shop Primer One (1) Coat
<b>Finish Coat</b>	Cloverdale Marine Enamel	Cloverdale Marine Enamel	Cloverdale Marine Enamel
<b>Color</b>	Standard Grey	Standard Grey	Standard Grey

### Notes.

1. Equipment with pre-finished paint systems will not be painted
2. Underside of vessel including inside of skirt to be blasted and primed
3. Stainless steel surfaces will not be painted

## 2.9 Shipping Dimensions

Dimensions: 8'-9" wide x 20'-0" Long x 15'-4" High  
Weight: 25,000 LBS

## 3.0 Electrical

- a) None considered