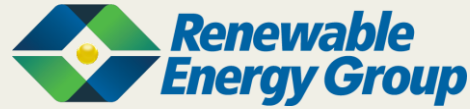


# EM Manufacturing Ltd.

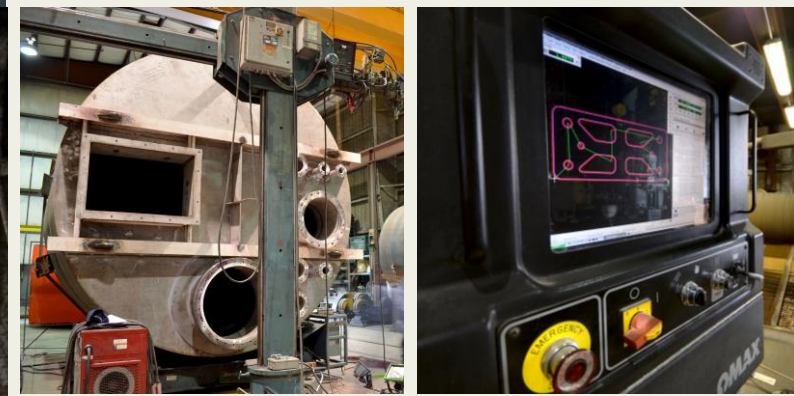
## Some of Our Clients



## Certifications & Qualifications



American Petroleum Institute

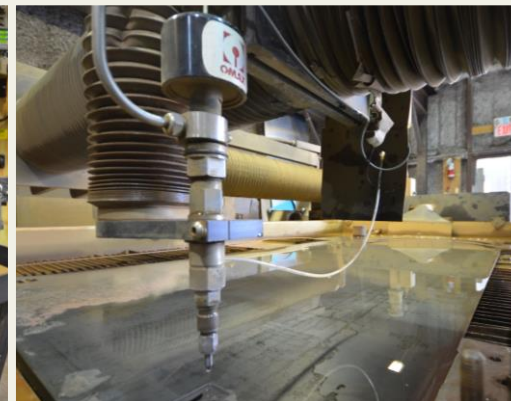


## EMM Team

- 40-50 full time includes:
- 4 Professional Engineers
- 1 Engineer-in-training

## Machine Shop

- CNC Horizontal Boring Mill
- CNC Drilling Machine
- Water Jet Cutter
- Vertical boring Mill
- CNC and Manual Lathes



## Welding Capabilities

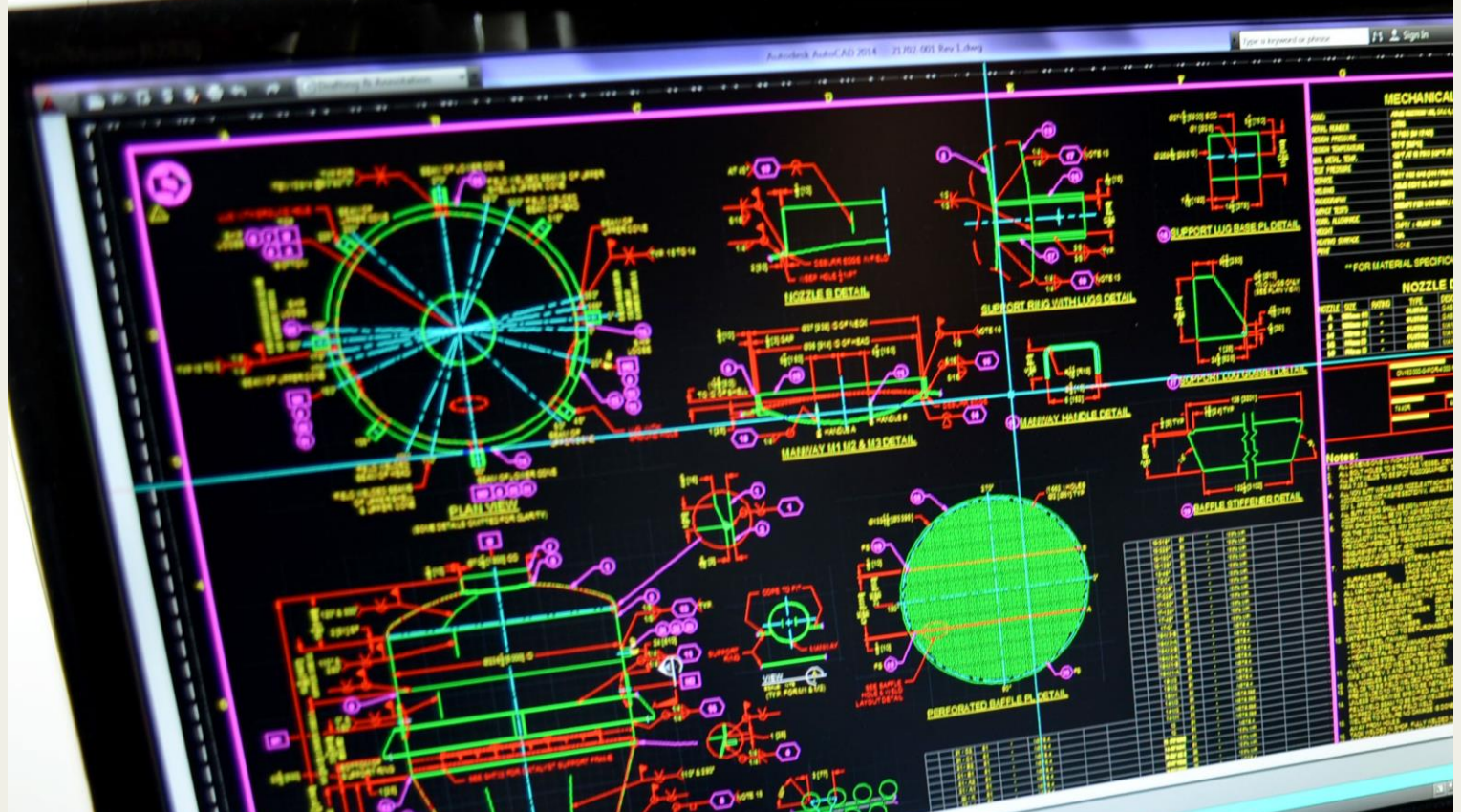
	Maximum Thickness	Welding Processes Qualified (i.e.: SMAW, GMAW, GTAW etc.)
Carbon steel	8"	GMAW, GTAW,SAW
Chrome-moly steel	2"	GMAW, GTAW,SAW
300 Series stainless steel (P-8)	8"	GMAW, GTAW,SAW
Ferritic stainless steel (410)	1/4"+	GMAW, SAW
Duplex stainless steel (2205, 2207, P10H)	3/4"	GTAW,GMAW
6 Moly SS (AL6XN, 254SMO)	3/4"	GTAW,GMAW
Nickel alloy (C-276, 400, 600, 800)	1 1/2"	GTAW,GMAW
Stainless steel clad on carbon steel	3/8"+	GMAW,SAW
Nickel alloy clad on carbon steel	1/2"+	GMAW,SAW
Solid wall titanium	3/8"	GTAW
Dissimilar metal welds	1 1/2"	GTAW, GMAW



## Machining Capabilities

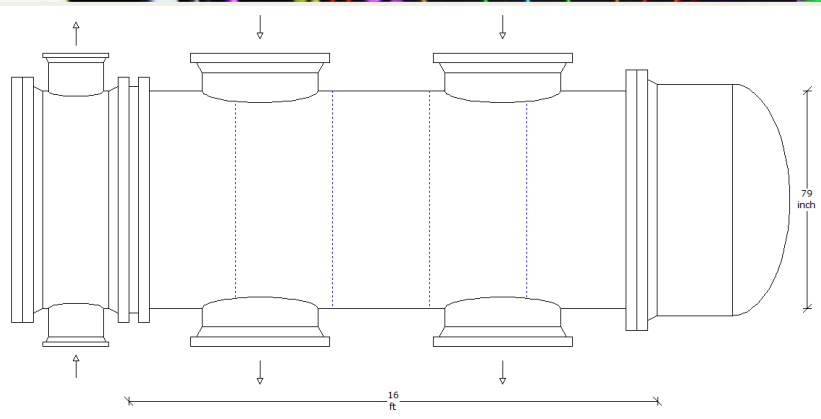
Machines	Number	Maximum Capacity (dimensions)
Drilling	2	60" x 60", 120" Dia
Horizontal lathes	3	36" Dia
Horizontal boring	1	96" Dia
Vertical boring	1	84" Dia



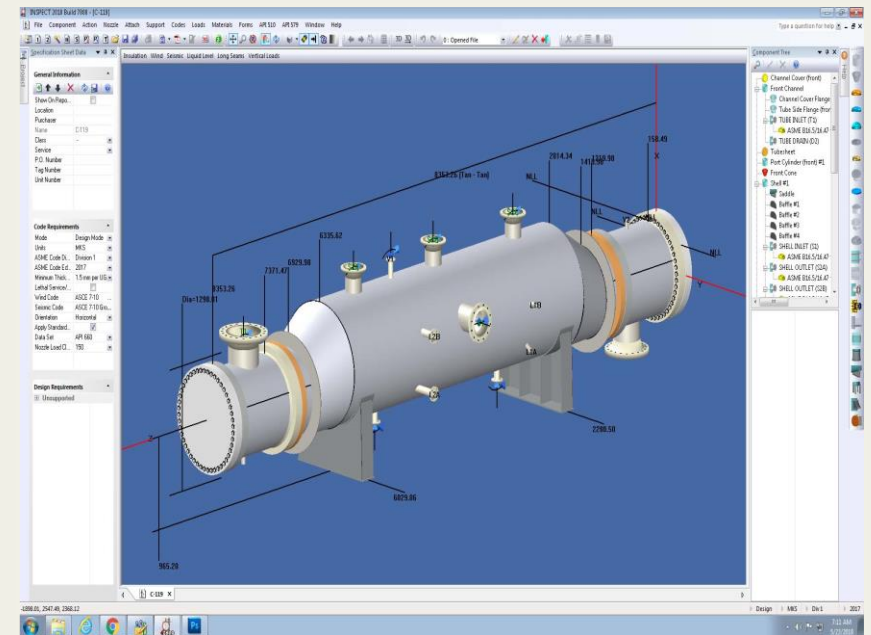
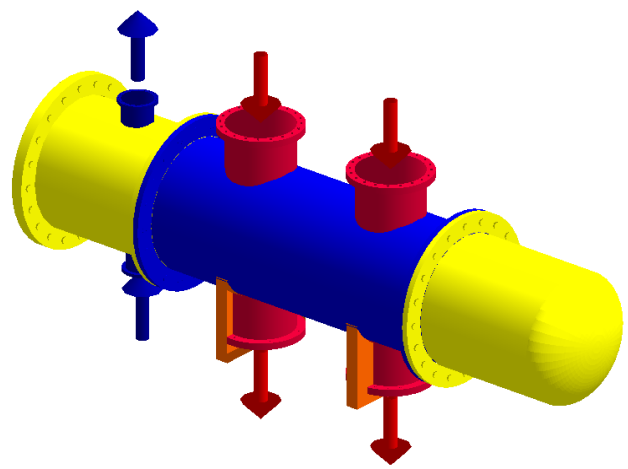


# Software

- HTRI
- AspenTech
- Compress
- Design Calcs
- AutoCAD
- Autodesk Inventor
- Nastran (FEA)



Unit	Shell 1	Total tube inlet nozzles	1	Stream ID	Shellside	Tube side
Item no.	E-213	Total tube outlet nozzles	1	Stream name	Cracked Gas	Cooling Water
TEMA type	AXS	Total shell inlet nozzles	2	Flow (total), 1000-lb/hr	485.4900	4656.7335
Shell diameter	79 inch	Total shell outlet nozzles	2	Pressure drop, psi	0.435	5.920
Tube length	16 ft			Temperature, F	84.00	80.80
Dry weight	77109 lb/shell			Wt. fraction vapor	0.00000	0.00000
Wet weight	130348 lb/shell			Pressure, psia	58.020	57.585
Bundle weight	47171 lb/shell					79.770





# 1 Domtar 2B Effect Evaporator

**Type:** Shell and Tube Heat Exchanger

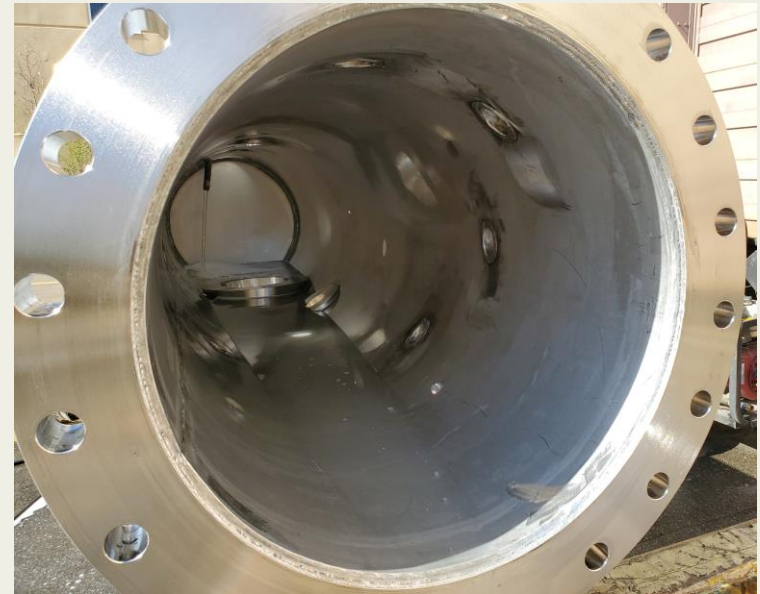
**Size:** 136-312 BEM

**Material:** Stainless Steel

**Empty Vessel Weight:** 150,000 lbs

**Industry:** Pulp and paper

**Code:** ASME Section VIII Div. 1



## **2** **International Paper** **MCSC Pump Stand Pipe**

**Type:** Pressure Vessel w/ Expansion Joint

**Size:** 24" OD x 115" O/L

**Material:** SMO 254

**Industry:** Pulp and paper

**Code:** ASME Section VIII Div. 1

# 3 Reg Services Group, LLC

**Type:** Pressure Vessels

**Size: Various - Largest :**114" ID x 648" OAL

**Material:** Duplex Stainless Steel

**Industry:** Renewable Diesel

**Code:** ASME Section VIII Div. 1





# 4 Reg Services Group, LLC

Additive Blend & Petroleum Diesel Tank

**Type:** Storage Tank

**Size:** 144" ID x 330" OAH

**Material:** Carbon Steel

**Industry:** Renewable Diesel

**Code:** API 650





# 5 Gran Tierra Energy Inc.

Crude Heat Exchanger (3 units) for Colombia

**Type:** Shell & Tube Heat Exchanger

**Size:** 19-168 AES, 34-240 AES, 30-240 AES

**Material:** Carbon Steel/Alloy

**Industry:** Oil & Gas

**Code:** ASME Section VIII Div. 1, TEMA R



# 6 North River Midstream Operations LP Amine Still Reboiler Shell

**Type:** Shell & Tube Heat Exchanger

**Size –** 88/48-144 AKS

**Material:** Stainless Steel

**Industry:** Oil & Gas

**Code:** ASME Section VIII Div. 1



# 7 Nova Chemicals

## Cracked Gas Exchanger

**Type:** Shell & Tube Heat Exchanger

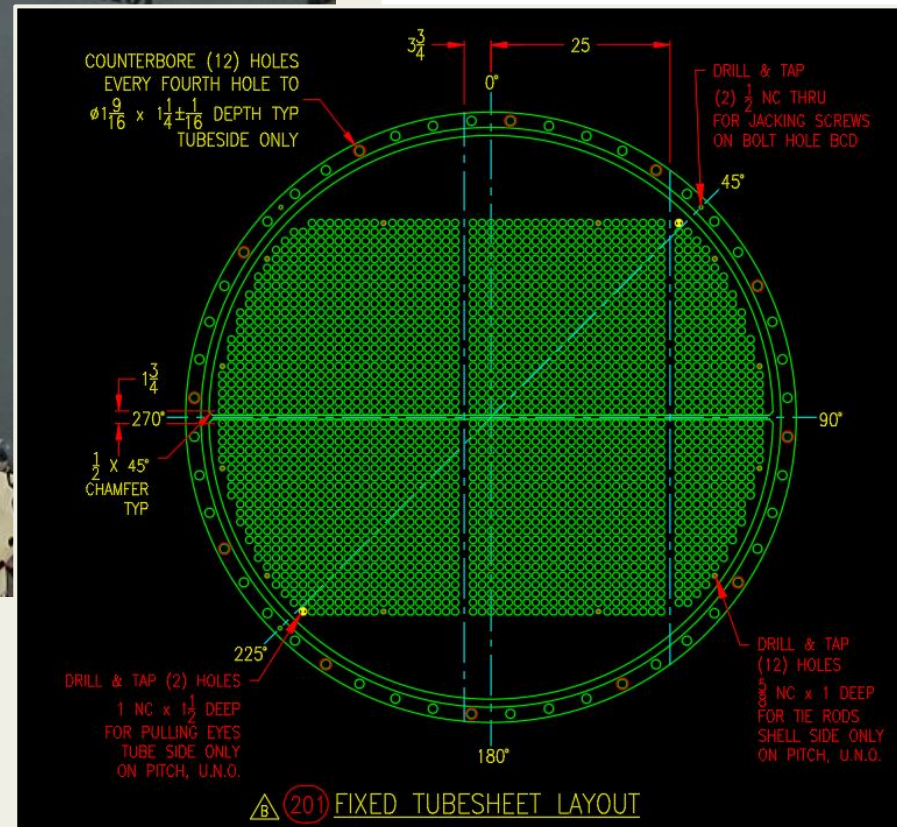
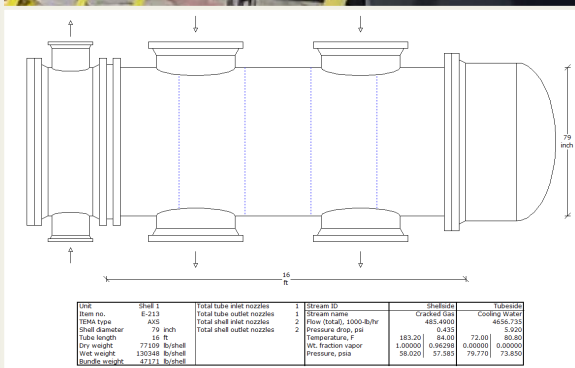
**Size:** 79-192 AXS

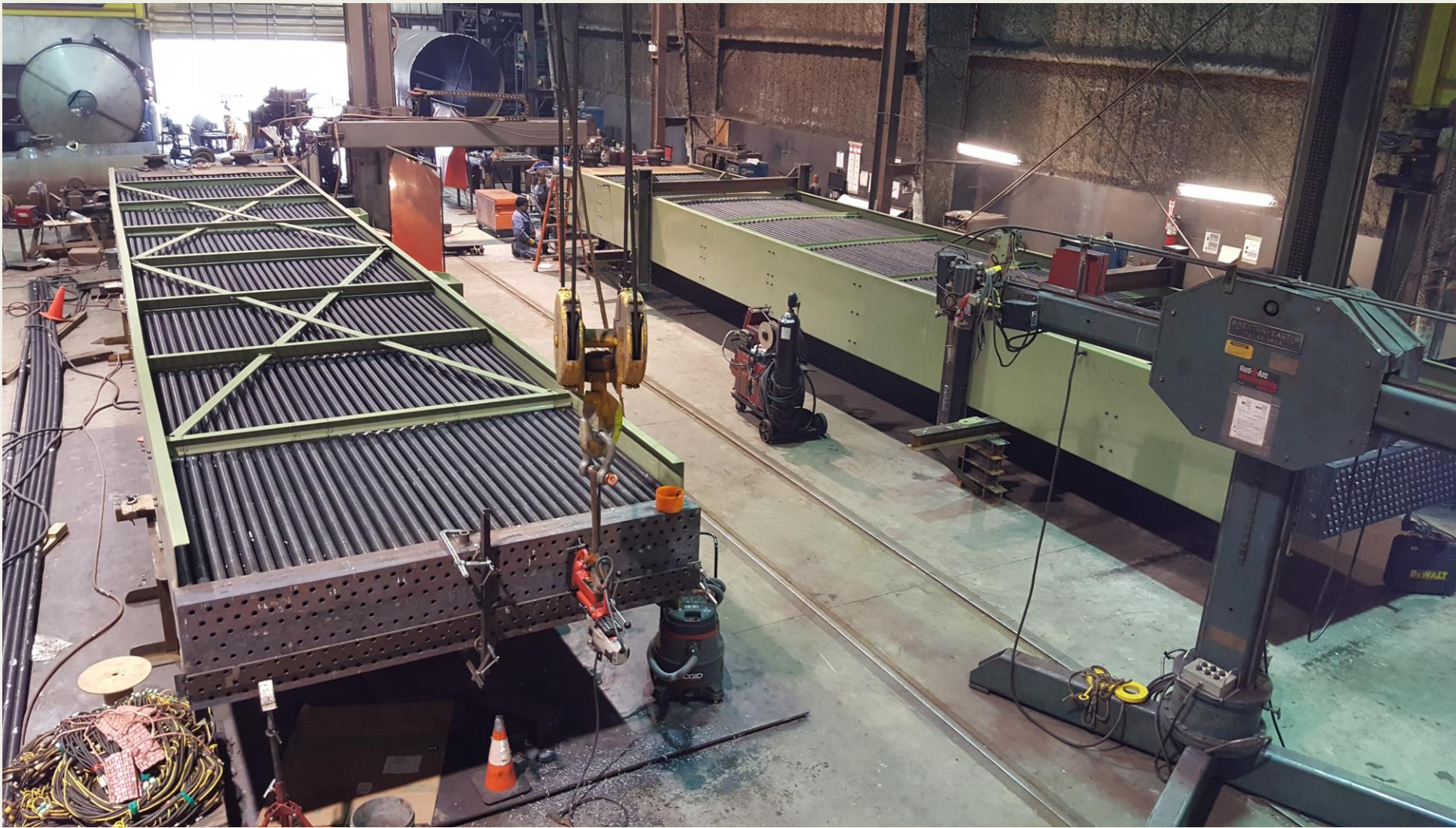
**Material:** Carbon Steel

**Empty Vessel Weight:** 76,980 lbs

**Industry:** Chemicals

**Code:** ASME Section VIII Div. 1, TEMA R





# 8

## Parkland Refinery

**Air Cooler Overhead Condenser  
(Bundle Replacement)**

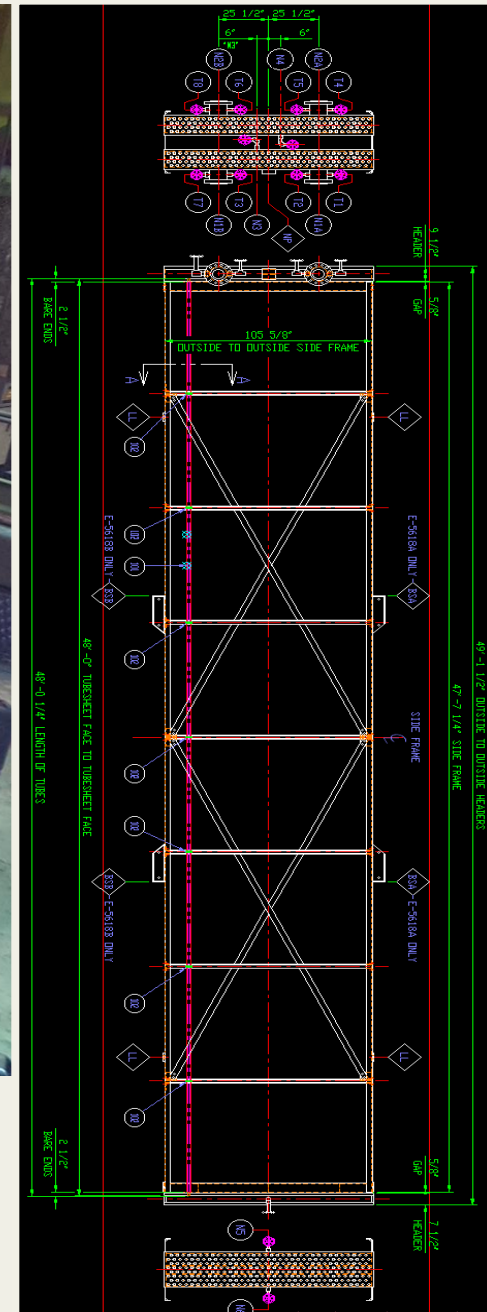
**Size:** 106" Wide x 590" OAL

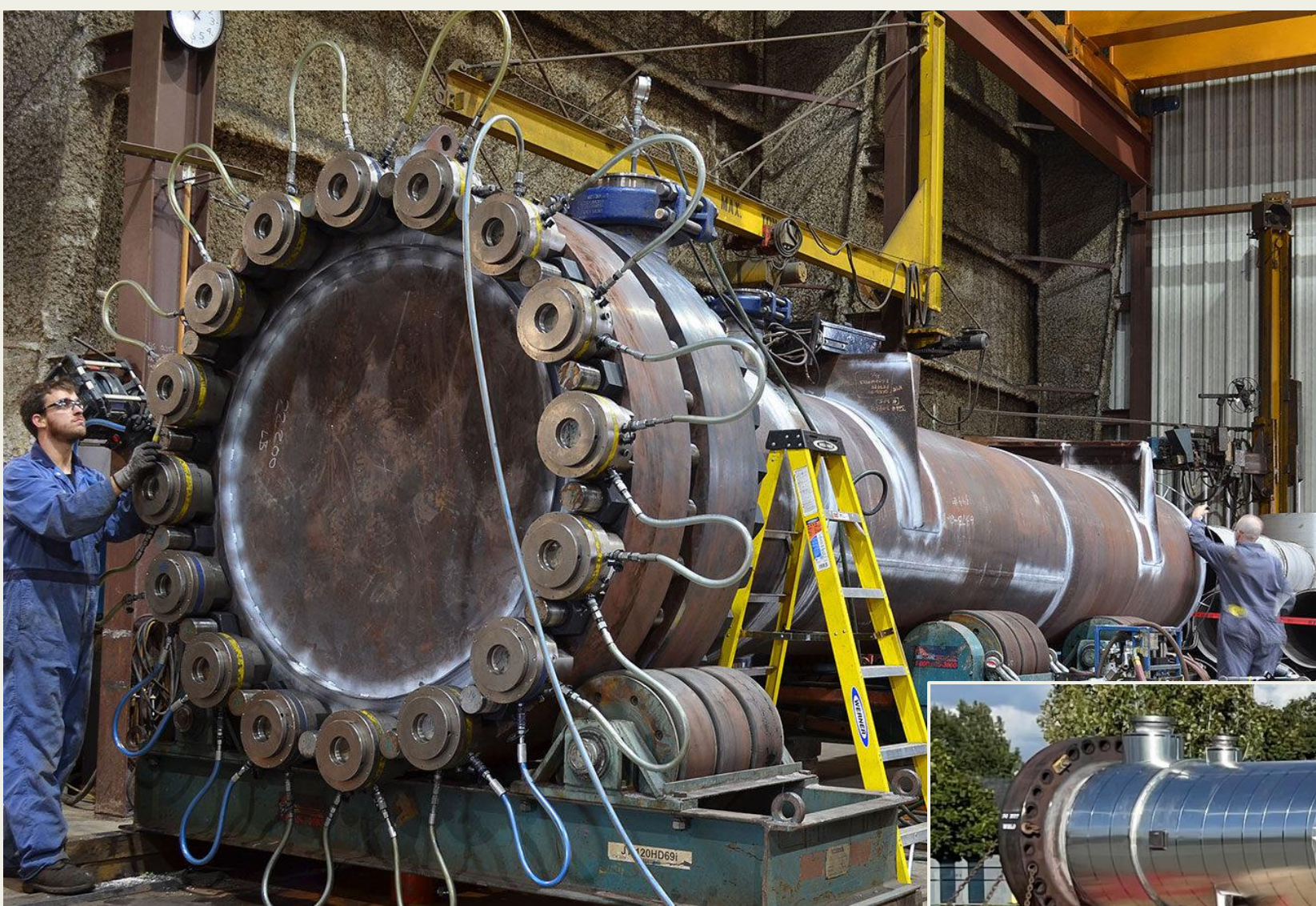
**Material:** Carbon Steel

**Empty Vessel Weight:** 34,630 lbs

**Industry:** Oil & Gas

**Code:** ASME Section VIII Div. 1





# 9 Cenovus Energy Inc. Boiler Feed Water / Blowdown Heat Exchanger

- Type:** Shell & Tube (U Tube)
- Size:** 45-240 NFU – BFW/Blowdown
- Material:** Carbon Steel
- Empty Vessel Weight:** 112,777 lbs
- Industry:** Oil & Gas
- Code:** ASME Section VIII Div. 1



# 10 Phillips 66 Company Slop Collection Drum

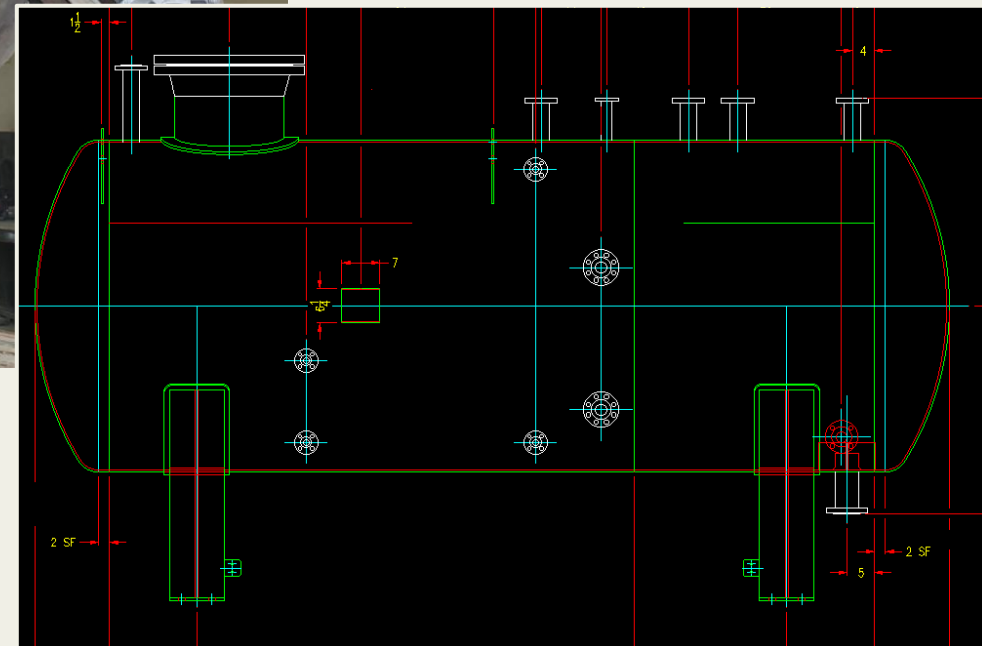
**Type:** Pressure Vessel

**Size:** 72" ID x 268" OAL

**Material:** Carbon Steel

**Industry:** Oil & Gas

**Code:** ASME Section VIII Div. 1





# 11 CF Industries Raw Water Exchanger

**Type:** Pressure Vessel

**Size:** 53-360 NEN

**Material:** Carbon Steel

**Empty Vessel Weight:** 57,205 lbs

**Industry:** Fertilizers

**Code:** ASME Section VIII Div. 1



# 12 Nutrien Inc

**Type:** Shell & Tube Heat Exchanger

**Material:** Carbon Steel & Stainless Steel

**Industry:** Chemicals

**Code:** ASME Section VIII Div. 1

# Q & A session

