

DCU Coke Drum Update

Martinez Refining Company 2023

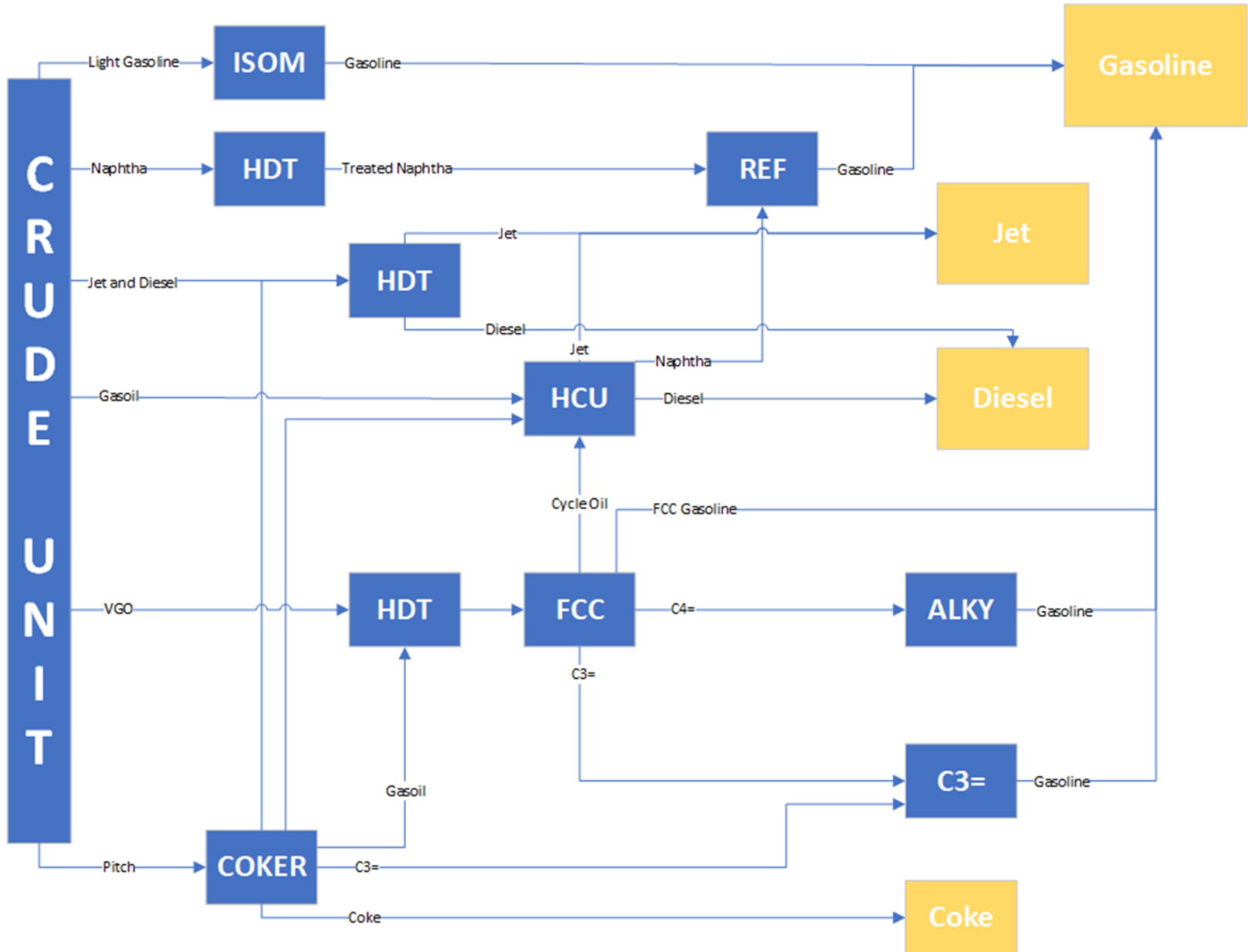
Sean Johnson, Engineering and Projects Manager





- Delayed Coker
 - Started 1995
 - 27,500 bbl/d capacity
 - 2 drum operation
 - Produces gas oil and naphtha feeds for hydrotreaters, cat cracker, naphtha hydrotreater
 - Product coke sold to offsite

Coke Drum Update



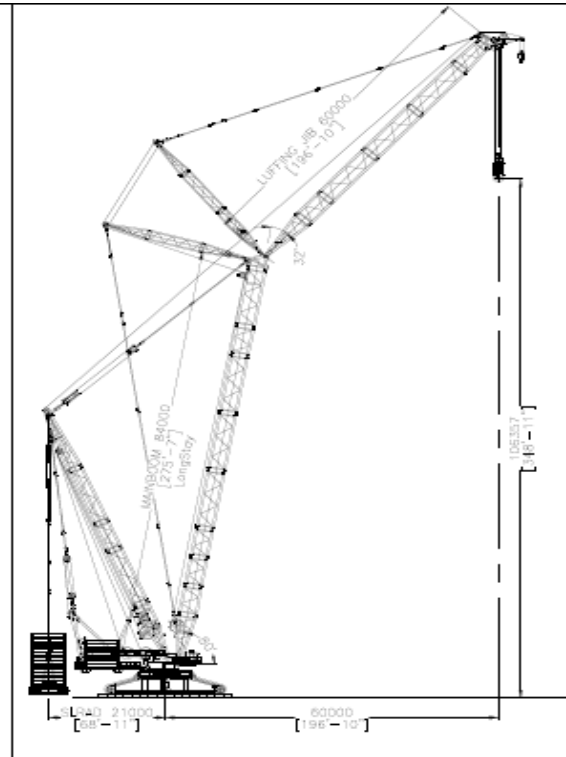
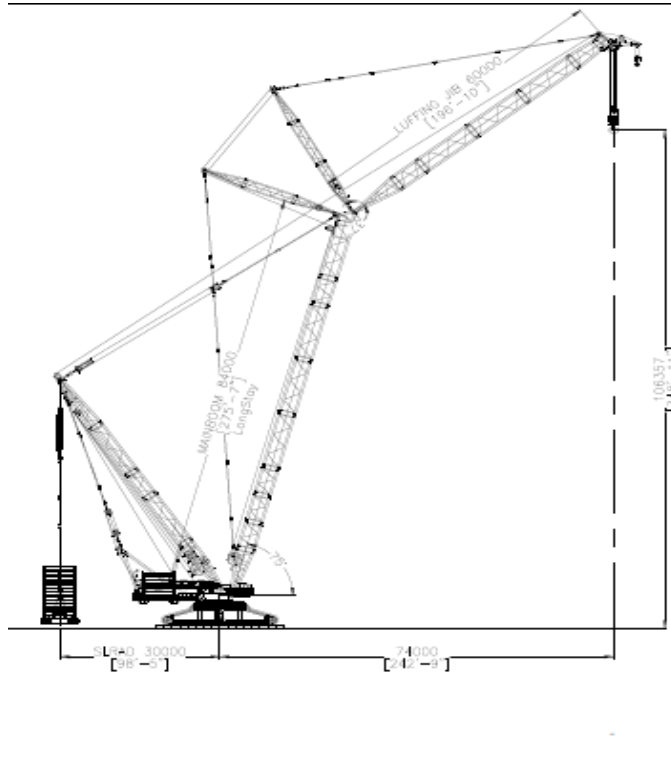




Coke Drum Update



- Working installation details
 - Lift plan
- Project details:
 - Top de-heading device
 - Piping replacement - scope
 - Motor operated valve technology

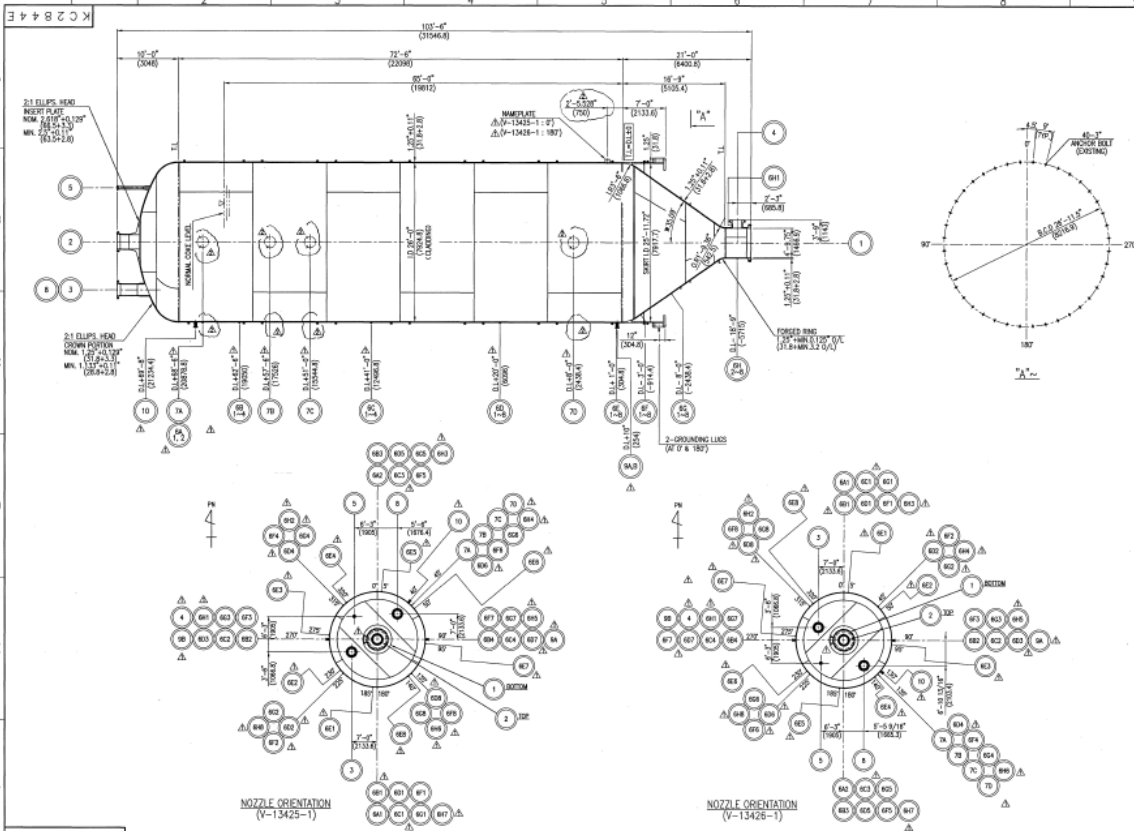


CRANE INFO:	Liebherr LR13000		Liebherr LR13000		
POSITION:	Set Derrick		Set Derrick		
Lifting Configuration:	PDW3B		PDW3B		
Crawler setup:	14m		14m		
	(Units)	METRIC	IMPERIAL	METRIC	IMPERIAL
Boom Length:	(m,ft)	84.0	276'-7"	84.0	276'-7"
Jib Length:	(m,ft)	60.0	196'-10"	60.0	196'-10"
Main boom Angle:	(°)	76	76	80	80
Central counter weight:	(Te, lbs)	0.0	0	0.0	0
Counter weight:	(Te, lbs)	400.0	881,800	400.0	881,800
Superlift:	(Te, lbs)	1600.0	3,306,900	1600.0	3,306,900
Superlift Radius:	(m,ft)	30.0	98'-6"	21.0	68'-11"
Radius:	(m,ft)	74.0	242'-9"	60.0	196'-10"
Capacity:	(Te, lbs)	861.9	1,238,700	613.8	1,363,200
Max. weight of Load:	(Te, lbs)	417.3	920,000	417.3	920,000
Hook block weight:	(Te, lbs)	36.6	84,900	36.6	84,900
Auxiliaries weight:	(Te, lbs)	11.6	26,400	11.6	26,400
Rigging weight:	(Te, lbs)	36.0	77,200	36.0	77,200
TOTAL Lift weight:	(Te, lbs)	602.3	1,107,400	602.3	1,107,400
Percentage of Capacity:	(%)	69.4	69.4	81.8	81.8
max. Crawler Pressure:	(Telm ² ,psf)	67.9	13,902	66.6	11,392
GBP beneath mats:	(Telm ² ,psf)	13.6	2,780	11.1	2,278

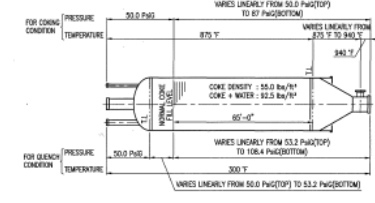
DRAFT
- IN PROGRESS -

Questions





- NOTES**
1. APPLICABLE CONSTRUCTION CODE (適用規格)
ASME BOILER AND PRESSURE VESSEL CODE, SECT. VIII DIV. 1, 2019 EDITION (U.S. CUSTOMARY UNITS)
ASME SYMBOLIC CONFORMATION MARK G REQUIRED.
 2. DESIGN CONDITION (設計条件)
1) INTERNAL



3. MATERIALS (材質)
SHELL & HEAD: SA-363 (SA-387 GR.11 CL.2) + SA-340 TP-41013 Q345
NOZZLE FORINGS: SA-182 GR.F11 CL.2 + INCO 62 WELD OVERLAY
FORCED RING: SA-350 GR.F11 CL.3 + INCO 62 WELD OVERLAY
4. DIMENSIONS ARE IN INCH AND DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS.
(寸法はインチ表示とし、括弧内は公称寸法をメートルで示す。)
5. DIMENSIONS MARKED BY * ARE FABRICATION REFERENCE.
(寸法に*は製作参考寸法を示す。)
6. ALL LONGITUDINAL WELDS AND CIRCUMFERENTIAL WELDS OF PRESSURE RETAINING PARTS ON BOTH INNER AND OUTER SURFACES SHALL BE GRINDING SMOOTH AND FLUSH. GRINDING MODIFICATION OF INNER AND OUTER SURFACE FOR CRAQ & CORROS. WELLS SHALL BE PARALLEL WITH THE VERTICAL AXIS OF VESSEL.
(縦線および円周線等圧力保持部分内外両面に研磨平滑に仕上げをせよ。又、腐食及び割れ等の防止を目的としてフランジ等の圧力保持部分の表面にクラック防止の研磨平滑仕上げをせよ。)
7. ALL WELDS OF ATTACHMENT TO PRESSURE RETAINING PARTS SHALL BE FULL PENETRATION AND HAVE A SMOOTH FINISH BY GRIND OR CHAMFER, UNLESS OTHERWISE NOTED.
(継手等圧力保持部分の接合は、完全な貫通溶接とし、仕上げは平滑に仕上げをせよ。)

8. FINISH OF CASKET CONTACT SURFACE (カセット面仕上げ)
B-1 NOZZLE & FLANGE: THE SEE WALL SURFACE OF CASKET DRUM, MAX. 63 WIRTS (1.6um)
B-2 ALL OTHER NOZZLE FLANGE: 120-250 μIRYS (3.2-6.3um)
9. THE CHLORIDE CONTENT OF WATER FOR HYDROSTATIC TEST SHALL BE MAX. 50 PPM.
(水試験に使用する水は塩化物濃度 50 PPM以下をせよ。)
10. SURFACE PREPARATION AND PAINTING (下処理と塗装)
SURFACE PREPARATION: SSPC-SP-10 COMMERCIAL BLAST CLEANING
PRIMER PAINT: CARBOLOX 903 CHROMIUM-BASED
DRY FILM THICKNESS: 75-100 μM (OVERLAP AREA: MAX.200%)
NO. OF COAT: 1 (LINE)
COLOR: GRAY
11. MAXIMUM ALLOWABLE WORKING PRESSURE
COOLING CONDITION: 150 Pa G @ 875-PAET
QUENCH CONDITION: 50 Pa G @ 300°
12. CORROSION ALLOWANCE (腐食)
INSIDE SHEET: CLOSING THICKNESS (MIN. 7/64")
1/16"

Document Review Status wood

- 1. Reviewed - No Comment. Work may Proceed
- 2. Reviewed with Comment. Reissue and re-submit. Work may proceed subject to incorporation of changes indicated
- 3. Rejected. Reissue and re-submit. Work may NOT proceed
- 4. Reissue not required. For information only.
- 5. Valid / Superseded

By: Miguel Perilla Date: 11-09-2021
Wood P&ID review and comment of document does not release to fabrication vendor of their contractual responsibility

DESIGN DATA 設計条件										REFERENCE DIM. 参照図番									
INSULATION	断熱									DWG. NO. 図番						DESCRIPTION 説明			
SHELL & HEAD	胴体・頭蓋									AD9037E						SHELL & HEAD			
FLUID NAME 流体名										AD9032E						NOZZLE (1)			
LETAL SERVICE 許容用途										AD9032E						NOZZLE (2)			
DESIGN PRESS. 設計圧力	設計圧力	PaG	902	NOTE 2	AD9034E											INSULATION SUPPORT (1)			
DESIGN TEMP. 設計温度	設計温度	°F	30	AT SOLO PaG	AD9030E											INSULATION SUPPORT (2)			
DESIGN PRESS. 設計圧力	設計圧力	PaG	100	15	AD9037E											LIFTING OTHER & TALKING COVER			
DESIGN TEMP. 設計温度	設計温度	°F	100	15	AD9037E											TALKING BEAM			
DESIGN PRESS. 設計圧力	設計圧力	PaG	100	15	AD9037E											TALKING BEAM			
DESIGN TEMP. 設計温度	設計温度	°F	100	15	AD9037E											TALKING BEAM			
DESIGN PRESS. 設計圧力	設計圧力	PaG	100	15	AD9037E											TALKING BEAM			
DESIGN TEMP. 設計温度	設計温度	°F	100	15	AD9037E											TALKING BEAM			

CUSTOMER'S PURCHASE ORDER NO. 発注文書番号
4502572037

REV. 2

SCALE 1:150, 1:100, 1:50, 1:25, 1:10, 1:5, 1:2, 1:1
SHEET 01 OF 01

DATE JUL 16 '21

V-13425-1/V-13426-1 COKE DRUMS ASSEMBLY

Suntoro Heavy Industries Process Equipment Co., Ltd.

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