



20,000 bpd Used Oil Refinery for Sale & Relocation

Presented by PRIOS Industry Systems & Services Ltd. Germany
www.priosgroup.com



1. History at a glance

The Refinery was built at 20,000 BPD by UOP/Chyoda in 1974 and mothballed in 1998.

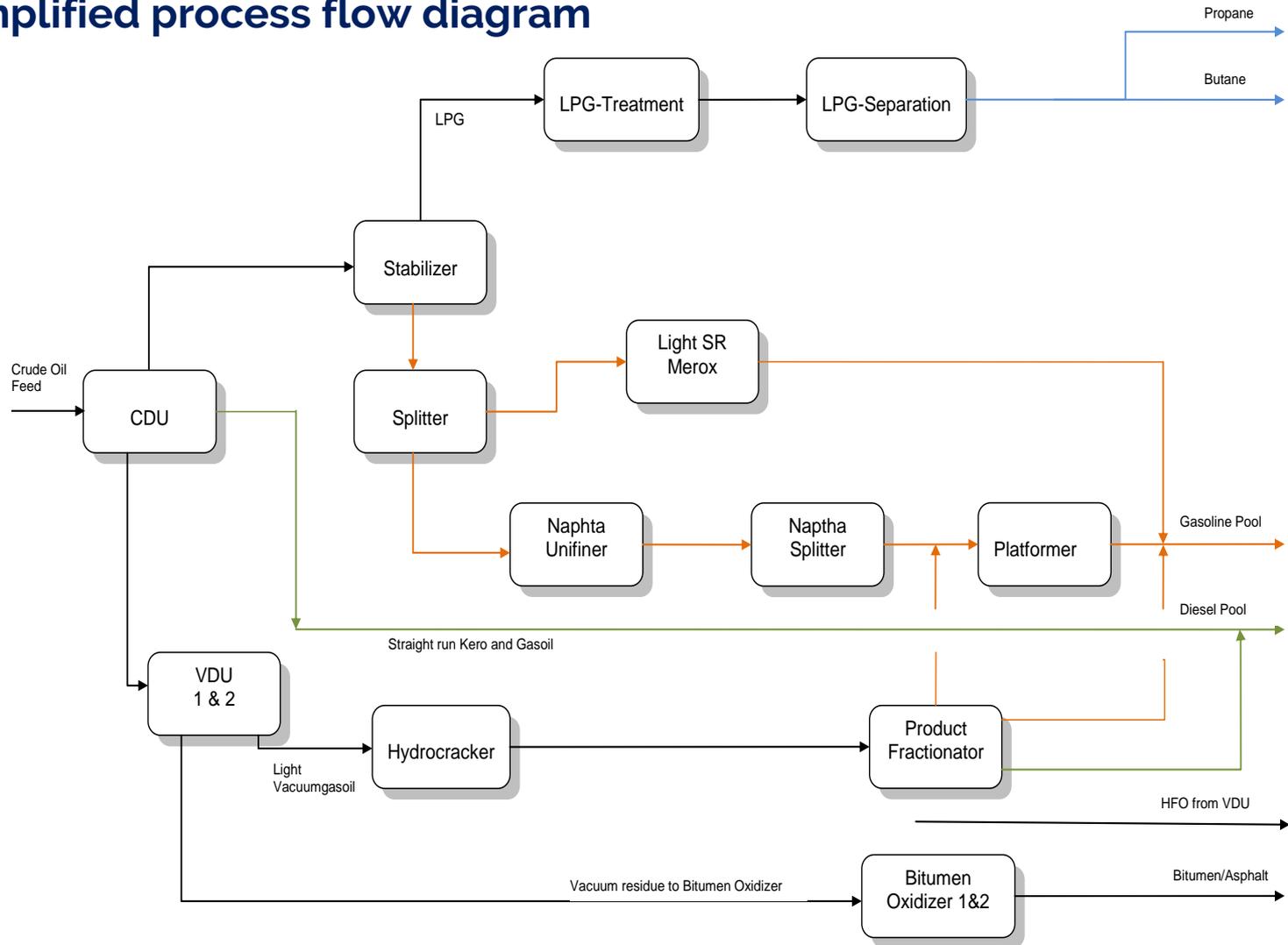
It was at very good operational condition when it was shutdown. The plant was designed for Arab heavy crude and was later modified to handle Arab Light.

It was regularly and thoroughly maintained and refurbished.

The refinery is completely dismantled and packed in eighty containers plus break bulk of heavy large sized machinery.



2. Simplified process flow diagram





3. Products and quantities

REFINERY PRODUCTION	Barrels/day	mTons/day	
LPG	503	81	
Premium GASOLINE	8,333	1,333	
DIESEL	9,000	1,440	
BITUMEN	1,500	240	
FUEL OIL	344	55	
TOTAL	19,681	3,149	

Naphtha and Kerosene can be produced separately away from the Gasoline mix.

4. Crude oil

Crude

The refinery was designed for Arabian Heavy Crude but later was modified to handle Arabian Light.

Crude Assay Parameter Arab Light

API	31.4
Sulfur Wt%	2.47
Nitrogen ppm	1350
Acid No mg KOH /gm	0.23
TBP Yields	
Butane & Lights Vol%	3.0
Lt Gasoline Vol%	6.6
Lt Naphtha Vol%	10.8
Heavy Naphtha Vol%	9.6
Kerosene Vol%	9.2
Gas Oil (EP 343°C) Vol%	13.4
Atmospheric Residue Vol%	47.4
Vacuum Gas Oil (EP 565°C) Vol%	27.5
Vacuum Residue Vol%	19.9



5. Processing units and capacities

The package contents following units:

<u>Refinery Unit</u>	<u>Barrels Per Day</u>	<u>Tons per day</u>
1 Crude Distillation Unit	20,000	3,200
1 Vacuum Distillation Unit	6,000	1,000
1 Vacuum Distillation Unit	5,000	833
1 LPG-Treatment and separation	5,355	893
1 LSR Gasoline Merox	1,095	183
1 Naphtha Unifiner Unit	2,410	402
1 Platformer	5,660	943
1 Hydrocracker UOP-Isomax	6,320	1053
1 Hydrogen Plant, Nm ³ /hr	652,551 std ft ³ /hr	18,478 Nm ³ /hr
1 Asphalt Oxidizer	500	83
1 Asphalt Oxidizer	3,600	600
1 Amine Regeneration Unit, Nm ³ /h	2,960	593
1 Waste Water Stripper	857	143
1 Visbreaker (Idle)	2,805	468



6. Associated utilities

- Electrical Generators 10 MW
- Instrument air generation
- Cooling Towers
- Steam Boiler..etc

7. Hydrocracker reactor data

Hydrocracker UOP-Isomax, two reactors

Operating pressure :	2210 PSI;	15.24 MPa
Operating Temperature:	875 °F ;	468 °C
Internal diameter:	7 ft;	2.13 m
Tangential length:	52.7 ft;	16 m
Corrosion allowance:	0.125 in;	3 mm

UOP Spec # 323 Rev 12, 9187C-326 Code ASME Section VIII

8.1 Pictures



8.2 Pictures



**IMPORTANT DISCLAIMER:**

Although the statements and technical information contained herein are believed to be materially accurate as of the date hereof, no representation or warranty is given as to the accuracy of any of the information provided. Certain information contained herein is based on information from sources considered to be reliable. The information referred to herein is subject to change. PRIOS Industry Systems & Services UG and their affiliates and any of their officers, employees, agents and professional advisors, expressly disclaims any and all liability as to any reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. This information has been provided to you for informational only and may not be relied upon by you in evaluating the merits of purchasing the assets described herein. This communication is not intended as and is not to be taken as an offer or solicitation in any jurisdiction, including those in which such an offer or solution is not authorized or to any persons to whom it is unlawful to make such a solution or offer. This document contains confidential information intended only for the use of the addressee. If you are not the intended recipient of this information then you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this communication in error, please contact the sender immediately and delete this material in its exhibits.

PRIOS Industry Systems and Services UG (limited)

Kapellenstrasse 34B
65193 Wiesbaden/Germany

info@priosgroup.com
www.priosgroup.com