

ULTRA-FRAC[®] TECHNOLOGY

ULTRA-FRAC[®] Technology increases tower handling capacity by more than 50%

case study

FCCU Debutanizer

A 9.5-foot by 12-foot diameter Fluid Catalytic Cracking Unit (FCCU) debutanizer was revamped with ULTRA-FRAC[®] high capacity trays to debottleneck the vapor recovery unit in a major European refinery. The existing sieve trays were providing poor fractionation as they were pushed to their hydraulic limit, resulting in high RVP Gasoline product. Installation of ULTRA-FRAC high capacity trays provided the capability to increase the internal liquid and vapor traffic in the column. The ULTRA-FRAC technology

avoided the alternative of replacing the column with a larger vessel which would have cost several million dollars. The RVP of the gasoline was significantly lowered, which opened new highly profitable markets to this refiner for their product.

ULTRA-FRAC high capacity trays also provided additional capacity to further increase the feed rate to the debutanizer. The debutanizer is no longer the constraint in maximizing charge to the FCC Unit.

IDEAL APPLICATIONS FOR ULTRA-FRAC[®] TRAYS INCLUDE:

- ▶ NGL Fractionation Plants
- ▶ FCCU Gas Plants
- ▶ Fractionation Units with high capacity demands
- ▶ Ethylene Units, including C2 and C3 Splitters
- ▶ High pressure, low surface tension systems not suited for the use of structured packing

		Prior to Revamp	Post Revamp
Diameter	▶	9.5 ft x 12 ft	9.5 ft x 12 ft
Tray Type	▶	Sieve / Sieve	ULTRA-FRAC [®] / ULTRA-FRAC [®]
Tray Spacing			
Rectification	▶	24"	24"
Stripping	▶	30"	30"
Column Pressure Drop	▶	7.1 psi	7.8 psi
Tray Efficiency	▶	65%	>75%
% Of Original Tray Capacity	▶	100%	>150%



Koch-Glitsch Field Service Advantage

Depend on Koch-Glitsch Field Service to provide expert installation of custom-engineered Koch-Glitsch Mass Transfer products. Integrating design, fabrication and installation ensures faster, safer revamps with minimum down time.

Koch-Glitsch Field Service craftsmen are extensively trained to handle any field installation service need safely and efficiently.

Our crews frequently work on various levels of a tower simultaneously, removing equipment from one level while installing new equipment on another. All vessel modifications are made under ASME code qualifications.

For revamps or new construction, contact your Koch-Glitsch Field Service experts.

Pilot Plant Capabilities

For more than 20 years, Koch-Glitsch has offered customers solutions to critical design problems through its Pilot Plant Service. Our facilities offer the flexibility to complete distillation studies on a wide variety of compounds and systems. We provide customers with design data and commercial tower designs based on sophisticated analytical measurements,

including: gas chromatography, automatic titrimetry, spectrophotometric analysis, wet chemical analytical and physical property determinations. Additionally, Koch-Glitsch can conduct customer tests in absorption and stripping applications in a variety of tower diameters from 6 inches to 8 feet.

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KOCH-GLITSCH

The Fundamental Driving Force

IN MASS TRANSFER TECHNOLOGY

NOTE: The information contained in this bulletin is believed to be accurate and reliable but is not to be construed as implying any warranty or guarantee of performance.