



Hydrotreating

Hydrotreating is an established refinery process for improving product qualities. The refining industry's efforts to meet the global trend for more-stringent clean fuels specifications, the growing demand for transportation fuels and the shift toward diesel have meant that hydrotreating has become an increasingly important refinery process in recent years.

NAPTA's hydrotreating process combines advanced process technology, high-performance catalyst systems and efficient reactor internal designs. This technology has helped many refiners to rise to the clean fuels challenges facing their businesses; operators around the world have licensed new units for their grassroots facilities as well as applying new catalyst and reactor internals technology to revamp their existing units.

Drawing on the NAPTA Corporation's know-how heritage, NAPTA's technology is designed to operate safely, reliably and efficiently, and to help maximise the return on investment during the entire life cycle of a unit. We have experience of a wide range of feedstocks and boiling ranges, including straight-run and cracked feedstocks such as from fluidised catalytic cracking (FCC) and coking, and boiling ranges from naphtha to FCC feedstocks.

In NAPTA's hydrotreating process, oil fractions are reacted with hydrogen in the presence of a catalyst to produce high-value clean products. The operating conditions will depend on the final application. For instance, temperature could range between 350 and 390°C and pressures between 60 and 90 barg for the production of ultra-low-sulphur diesel (<10 ppm). Several process configuration are available. Design conditions for other feedstocks like naphtha hydrotreatment will be different.

NAPTA's hydrotreating technology integrates successful operating practices with innovative designs that are based on research and development programs. The technology is designed to offer our customers benefits in several areas:

- **Energy efficiency:** The efficient use of energy is an increasingly important driver for refiners owing to high energy costs and the growing focus on businesses' carbon footprint. Our technology is designed by maximum efficiency

and incorporates lessons learned in refineries around the world.

- **Reliability:** Hydrotreater downtime is increasingly costly because today's stringent specifications mean that refiners have less processing flexibility. In comparison with similar technologies, NAPTA's hydrodesulphurisation (HDS) technology offers sustained advantages in terms of availability, onstream factor, utilisation and turnaround duration.
- **Catalyst selection:** We offer cutting-edge technology coupled with market-leading catalysts from our strategic business partner Ranido. We optimise the hardware design and select the best catalyst for an application.

In addition, we also offer after-service and operational support delivered by experienced personnel.

NAPTA can provide assistance during design, installation, operation and troubleshooting of the hydrotreating units. In the project phase, NAPTA can support its customers by providing professional services such as P&ID, HAZOP review meetings, etc. Also NAPTA can advise on equipment design and selection and also advise on the materials for construction. NAPTA experts can conduct a site visit for better understanding of site-specific issues; and training of local operational and technical staff.

The provided services can help you to:

- Identify causes of the problems encountered in your hydrotreating units.
- Optimise the operation of the unit.
- Provide long lasting solutions.

For more information, please contact with NAPTA's hydrotreating technology SME Mr Egbert van Hoorn via herein below contact details.

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