

Selas Fluid

Ethylene Furnace Add-Ons and Revamps

EPC Capabilities and Global Presence

Selas Fluid has supplied over 1,000 pyrolysis furnaces throughout the world. We offer engineering, procurement, fabrication and construction engineering services for any furnace project worldwide.

For add-on furnaces and revamp projects, Selas Fluid and our parent company, Linde Engineering, can offer:

- ✓ Concept Studies
- ✓ Basic and Detail Engineering
- ✓ Procurement and Fabrication
- ✓ Field Construction
- ✓ Commissioning and Operator Training
- ✓ Replacement Parts



Furnaces supplied on an EPC basis by Selas Fluid

For complete EPC projects Selas Fluid takes full, single source responsibility. For new furnaces this may include the furnace pipe rack, all civil work, and full integration of the furnaces into the plant.

In recent years we have successfully executed ethylene furnace projects on the Arabian Peninsula, in South East Asia, and in South America. All of these projects have demonstrated our strong qualifications for execution of such projects as we have consistently accomplished mechanical completion on or ahead of schedule.

Advanced Ethylene Technology

Selas Fluid executes every ethylene furnace project in conjunction with our parent company, Linde Engineering. During project execution, Linde Engineering is responsible for the Process Design Package, while Selas Fluid performs Detail Engineering, Procurement, and Construction.

The utilization of Linde's advanced PyroCrack[®] technology assures that our furnaces incorporate the most modern technologies for cracking selectivity, energy efficiency, furnace availability and more. Selas Fluid's engineering capabilities further ensure that our furnaces are easily maintained, mechanically robust, and reliable.

For furnace revamps we supply solutions to achieve higher olefin yields, increase furnace capacities, provide furnace feed flexibility, enhance energy efficiency, and to lower emissions.

State of the Art Design Tools

Selas Fluid employs Intergraph's Plant Design System (PDS[®]) three-dimensional modeling software to create equipment, structural, and piping drawings. During project execution our clients can review models with virtual plant walk-throughs, assuring fast and error free erection of the furnace without field modification.

Case Studies

Example 1: Add-on furnace for Borouge
(near duplicate design of five
previously installed Selas Fluid/Linde furnaces)

Location: Ruwais, United Arab Emirates

Technical Data: 120 kTA ethylene production
Ethane feed
Twin radiant cell
PyroCrack® 2-2 Coil
Six conventional TLE + one SQE
Floor/Wall burners
Thermal efficiency (LHV basis) > 94%
NOx guarantee: 104 mg/Nm³

Scope: Engineering, Procurement, Construction
Pipe rack extension, Furnace tie-in,
DCS integration

Schedule: 14 months
Mechanical completion 4 weeks ahead
of schedule



Example 2: Add-on furnace for PTT Chem

Location: Map Ta Phut, Thailand

Technical Data: 90 kTA ethylene production
Ethane and LPG feed
Twin radiant cell
PyroCrack® 2-2 Coil
Linear quench exchangers, SQE and TQE
Floor/Wall burners
Thermal efficiency (LHV basis) > 94%
NOx guarantee: 66 mg/Nm³

Scope: Engineering, Procurement, Construction
New pipe rack and furnace tie-in

Mechanical Completion: November 2008

Selas Fluid Processing Corporation is a wholly-owned subsidiary of The Linde Group. Since 1946, we have provided timely and innovative solutions to meet customer needs.

Call us today to learn more about our ethylene technologies, or visit us online at
www.selasfluid.com

Five Sentry Parkway East
Blue Bell, PA 19422 USA
(610) 834-0300 Telephone

16225 Park Ten Place, Suite 250
Houston, TX 77084
(281) 717-9090 Telephone

