



Selas Fluid

EDC Furnaces, Refinery and Specialty Heaters

Global Experience in EDC Pyrolysis

Selas Fluid Processing is acknowledged as the leading supplier of Ethylene Dichloride (EDC) cracking furnaces, having supplied and installed the majority of EDC furnaces worldwide since our first installation in 1959. SFPC has equipment installations and experience utilizing virtually every major VCM processor including, but not limited to:

Oxy Vinyls LP	Dow
Ineos Vinyls (formerly EVC/Stauffer)	Shell
Solvay	ICI
PPG	Mitsui

Utilization of our unique offset convection section with a dynamic radiant tube support system offers certain design features that improve performance, operation, maintenance, tube life and runtime. We have over 80 EDC furnaces installed worldwide with capacities to 225 kta.

Computer Modeling Coupled With Experience

The most important component of an "EDC Cracker" is the pyrolysis coil design. At SFPC, the radiant coil geometry is determined using our proprietary, technically advanced computer model of the reaction kinetics occurring within the coil.



EDC Furnace

This program establishes the optimum furnace design with respect to temperature, pressure drop and residence time as well as predicted run time from the build-up of Methyl Chloride and Butadiene. In addition, film cracking is minimized in our furnace design to reduce byproduct formation and resultant coke /carbon laydown.

Whether the fuels are liquid or gas, burners are sized and arranged to heat the process fluid under accurately controlled conditions of temperature and heat flux resulting in a furnace with the best possible onstream characteristics in terms of conversion rate, minimal byproduct formation and low overall operating and maintenance costs.



Did you know...

Our experienced process, structural, mechanical, and project engineers provide expertise for every phase of a furnace project:

- Concept Studies
- Detail Engineering, Procurement, Fabrication
- Field Construction
- Commissioning and Operator Training
- Upgrades for Increased Performance (NOx reduction, efficiency improvements)
- Replacement of Tubes, Manifolds, Burners, and other parts
- Auxiliary Equipment
- Full turnkey capability
- Field engineering support



Specialty Furnaces

Selas Fluid furnaces are specified for many specialty chemical processes, including but not limited to the following:

- Reactor Feed Heaters and Steam Superheaters for Styrene Monomer facilities
- Thermal cracking of Acetic Acid to produce Ketene and Acetic Anhydride
- Benzene to Biphenyl
- Heating Natural Gas while vaporizing and superheating Sulfur to combine into Carbon Bisulfide
- Superheating of Oxygen and Titanium Tetrachloride Titanium Dioxide facilities

Refinery Heaters

We can provide custom furnace design for virtually any refinery requirements. Our reference base is extensive in applications and large in number. Our wide range of direct-fired heaters includes these applications:

- Crude Heating
- Vacuum Distillation
- Visbreaking
- Hydrocarbon Catalytic Reforming
- Reboiling
- Steam Superheating
- Vertical Cylindrical and Cabin - all types
- CO Boilers

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. Computational Fluid Dynamic (CFD) modeling helps enable our engineers and designers to simulate fluid flow and heat and mass transfer. This tool is used in concert with our Technical Center pilot plant to provide insight into design issues, leading to improved functionality, return on investment, and savings in capital and operating costs for end-users.



Multi-cell catalytic reformer furnace with combustion air preheat for optimum heat recovery



Steam superheater. The design tools utilized by SFPC allow clients to progressively visualize the furnace as it is being designed.

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 EDC, refinery heaters, and specialty furnaces, or visit us online at www.selasfluid.com

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