Investigations on Catalyzed Reactions from Highly Viscous Educts



## **Catalyst Testing Plant**



- Heated convection oven flushed with inert gas
  - 3 zone split furnace with tubular reactor
  - Feed dosing with high pressure HPLC pump
    - Industrial control system





## **Technical Data**

John Garage	
Dimension plant W x D x H	1680 mm x 800 mm x 1920 mm
Mass of the unit without computer + spares	500 kg
Electrical supply	3 x N/PE 230/400V AC, 50 Hz, 16A, 6 kW,
Ambient conditions	10 to 40 °C, max. humidity < 85 $\%$
Pressure conditions	-1 to 200 bar @ temperatures up to 350 °C
Temperature conditions	-10 to 350 °C under pressure, -10 to 550 °C pressureless
Convection oven	2 kW, 148 °C
Vertical split furnace	3 zones, design temperature 1000 °C
Reactor type	Tubular stainless steel reactor, DN 15
Gas supplies	Nitrogen, low pressure: 2-3 bar, high pressure: 160 bar Hydrogen, 160 bar Air, 6 bar
Liquid supplies	Viscous or solid hydrocarbons with melting temperature < 130 °C
Gas / liquid separation	Cyclone with differential pressure sensor for liquid level measuring



gas feed

control cabinet



circulating air oven

vertical furnace



## AP-Miniplant turn-key research plants are used for:

- > Absorption, Adsorption, Extraction
- Reactive distillation. Distillation, Rectification, Evaporator, Humidification
- > Precipitation, Stirred Reactor, Dryer, Mixer, Filter
- Polymerization Reactor, Polycondensation, Gas Phase Polymerization
- Catalyst Test System, Fixed Bed Reactor, High Temperature Furnace
- > Training Plant, Container Unit, Gas, Liquid and Solid Dosing



## **Smart Solutions for Small Plants**

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