



Ferndale Refinery Upgrade Project (FRUP)

Ferndale, WA

JH Kelly and Toyo USA joined forces to design and build a new Fluidized Catalytic Cracking (FCC) unit and provide an overall upgrade of the refinery for the Ferndale Phillips Petroleum 66 Co. (formally Tosco Refining Co.).

The upgrade added new treating units including a new Purge Treatment Unit (PTU), Flue Gas Scrubber (FGS), Main Air Blower (MAB), and the largest and main component, a new Fluidized Catalytic Cracking Unit (FCC). The 550-ton FCC Converter Vessel was offloaded and then strategically transported to the Refinery.

The Ferndale Refinery is currently a 95MBPD full capability refinery. The construction of the new 30MBPD FCCU replaced the existing Thermal Catalytic Cracking Unit (TCCU). The new FCCU increased quality and efficiency as well as fulfill the requirements set forth by the Environmental Protections Agency (EPA) in the Clean Air Act (CAA) of 1990 (including some of the more recent additions to the CAA).

ASME Code Work, Boiler, Civil, Instrumentation & Controls, Mechanical, Mechanical-Process, Pipe Fabrication, Pressure Vessel, Process Pipe-Industrial, Steel Fabrication and Structural Steel.

Customer: Phillips Petroleum Co 66 (Tosco)



Special points of interest:

- Peak Manpower approx. 125 men/day
- 30 MBPD Fluidized Catalytic Cracking Unit (FCCU)
- Three Phases
- 100,000 manhours without a lost time