

**Case Studies (FIS-281)**

## CCR Platformer Heater Capacity Improvement Project

Furnace Improvements Services (FIS) was employed by a Louisiana refinery to perform a capacity improvement on a CCR Platformer Heater (H-41-01/02/03).

The heater was originally built in 2000. It was designed for a Naphtha feed rate of 25 MBPD and rated for 149.36 MMBtu/hr of process heat duty in the radiant section. The convection section recovered waste heat of 87.69 MMBtu/hr by generating steam. The refinery was looking to revamp the heater for Naphtha feed rate of 35 MBPD and total process heat duty of 203.48 MMBtu/hr.

FIS proposed recommendations to increase the capacity of the heater based on Furnace Improvements' "Split Flow Technology".



### Partially New Convection Section

The existing convection section is fabricated in four modules. In this option, FIS plans to reuse two modules of the existing convection section. Two new modules will be prefabricated in the shop, then all four modules will be erected. This option is more cost effective, as the estimated cost for the total project was \$3,537,000.

FIS plans to modify or replace existing burners. Current burners are oversized and have long loose flames. The new burners will be correctly sized for the new heat releases and will have shorter flames. FIS also proposes to modify the firing system using the *New Inclined Firing System (Patent Pending)* to eliminate flame impingement.