

2014 PRESSURE VESSEL OF THE YEAR

Kennedy Tank & Manufacturing Co., Inc. Indianapolis, IN



A large multi-national chemical manufacturer inquired for supply on a large project. The project entailed equipment to double the capacity of one of their product lines at one of its largest plants in the states. Due to the large scope of the project and the required plant shut-down, all facets of the operation needed to adhere to tight production schedules and timely deliveries of finished goods.

The scope of supply was for (6) identical 64" diameter Falling Film Condenser Reactor heat exchangers.

The assembled empty weight of each condenser was 23,000 lbs. The materials of construction for the process side of condenser were type 316L stainless steel. The shell portion was fabricated from carbon steel. Each condenser utilized well over 2000 tubes, with each tube seal welded to the tubesheet on each end before being expanded into serrated (grooved) tube holes in the tubesheet. The process side was designed for 200 psig and full vacuum, requiring the use of 6" thick body flanges and 3" thick tubesheets. The condenser was constructed per ASME Section VIII requirements as well as TEMA class 'R' (Refinery) design requirements and were stamped with the ASME Code 'U' designation for Unfired Pressure Vessels.

To complete the construction within the committed fabrication window mandated the use of over (40) welder/fabricators and a dozen engineers/foreman/quality control personnel.

Product / project title: Six (6) PVC Reactor Condensers

Date completed: May 2014

Construction standard (if any): ASME / TEMA

Overall height / length (feet, inches): 9' -0"

Column height (feet, inches): -

Diameter (feet, inches): 5' -10"

Capacity (US gallons): -

Steel tonnage used (US tons): 69

Steel thickness (inches): 6" Thick Body Flanges