

REBOILER

This one-pass straight tube inclined reboiler was reverse-engineered from the customer's drawings for a drop-in replacement unit. Built for the renewable energy industry, this exchanger was designed to meet ASME Code and TEMA B.



LANDFILL GAS COOLER

This 30" x 132" straight tube exchanger takes landfill gas from 110°F to 40°F in a single pass. The shell side has 8" ANSI flanges for utility connections. The unit has 829 seamless tubes and is designed to TEMA R.

DUPLEX 2205 BUNDLES

These bundles are two of six built for use in a biofuels application. At 192" in length, they make quite the statement. The full units were engineered with a four-pass removable bonnet and seamless Duplex 2205 tubes. Often used in chemical and fuel processing applications, Duplex 2205 is characterized by its high yield strength, as well as good fatigue strength and outstanding corrosion resistance in severe environments.



CALIBRATION HEATER

This custom two-pass recirculating calibration fluid heater was engineered for the aerospace industry. Inside, you'll find ½" seamless U-tubes with a two-pass tubing and bonnet design. The tubes are seal welded to the tube sheet, which is welded directly to the shell and bonnet to eliminate any possibility of a gasket leak. Built to ASME code, this unit has a 2" flange shell inlet and outlet, a 1" coupling shell vent and drain, and welded vertical supports.



GAS COOLER

This project was custom constructed from customer-specified drawings. It's a 16" x 48" industrial unit built for the fuel industry. It's made of all 304L stainless steel and has removable fabricated bonnets.

Fabricated bonnets are suitable for vapor applications or significant liquid flow rates on the process side, as the added volume in the channel allows the product to disperse before entering the tubes.



PROCESS COOLER

This cryogenic project was built for the aerospace industry. The U-tube style exchanger was designed to drop the temperature of the process fluid 175°F in two passes using liquid nitrogen coolant.

Due to the high-pressure application (2,500 psi), the channels were welded directly to the hub-style tube sheet of the exchanger. Its seamless U-tubes were roller-expanded and seal-welded in the double-grooved tube sheet for added durability.

The exchanger was wrapped with a 4" inswool insulation jacket for added safety and efficiency.

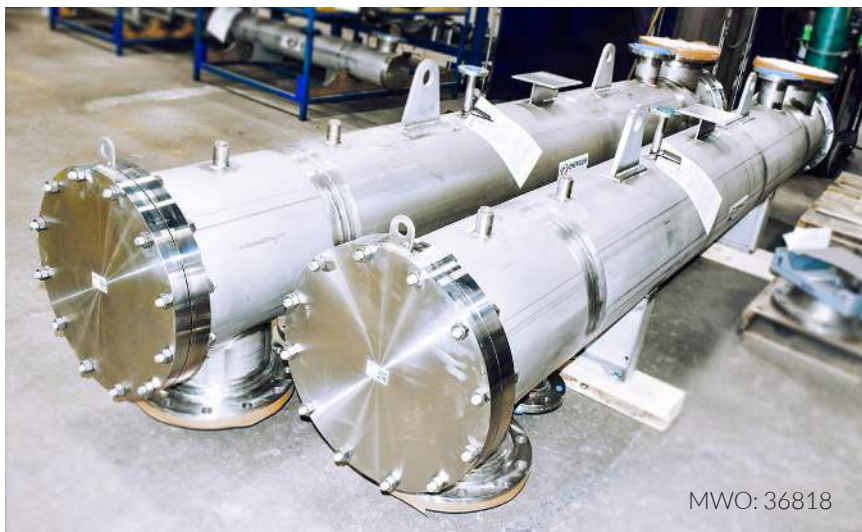


STEAM GENERATORS

This project includes a pair of straight-tube steam generators built for the energy industry. This design can be used with either steam or flue gas in the shell as the heat source. The hot utility inlet is located on the steam bustle (annular distributor), with an expansion joint incorporated. The expansion joint allows for shell expansion to prevent thermal expansion damage.



MWO: 35803



MWO: 36818

LFG COOLERS

This project spotlight includes four 16" x 96" straight tube LFG coolers, built with both 304L and 316L stainless steel. Each has 310 tubes that were roller-expanded and seal-welded into their double-grooved integral tube sheets. Using a propylene glycol-based coolant, these units will drop the gas product 60°F in one pass.

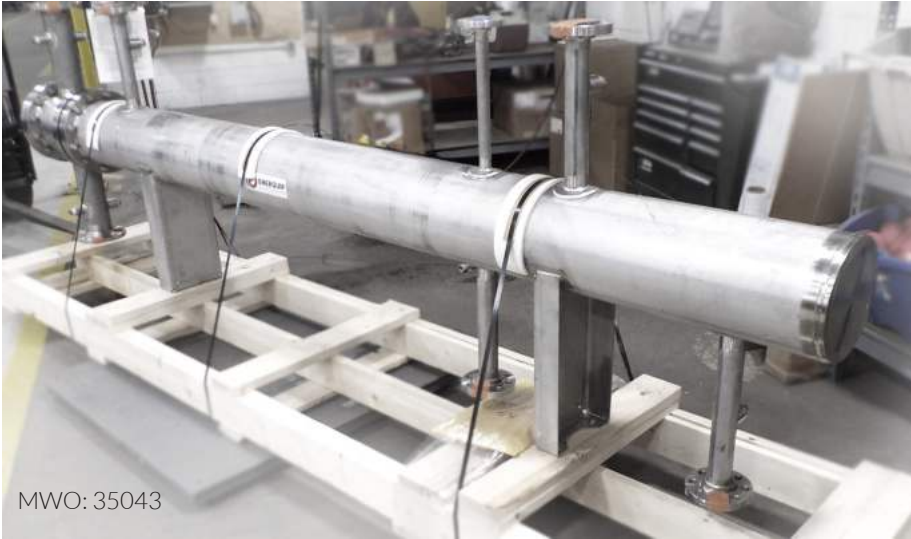
GAS VAPOR CONDENSER

This project is a 20" x 96" vertical condenser designed to process gas vapors in the biofuel industry. It was built with a fabricated bonnet and a flanged and flued expansion joint, allowing for thermal expansion.

The tube side of this condenser was designed with full vacuum conditions, which is when the pressure inside the shell is reduced to a level approaching a complete vacuum. Operating under full vacuum conditions lowers the boiling point of the fluid inside the tubes, enhances heat transfer by promoting better contact between the hot and cold liquids, helps prevent the ingress of contaminants from the atmosphere into the heat exchanger, and facilitates evaporative cooling.



MWO: 35799



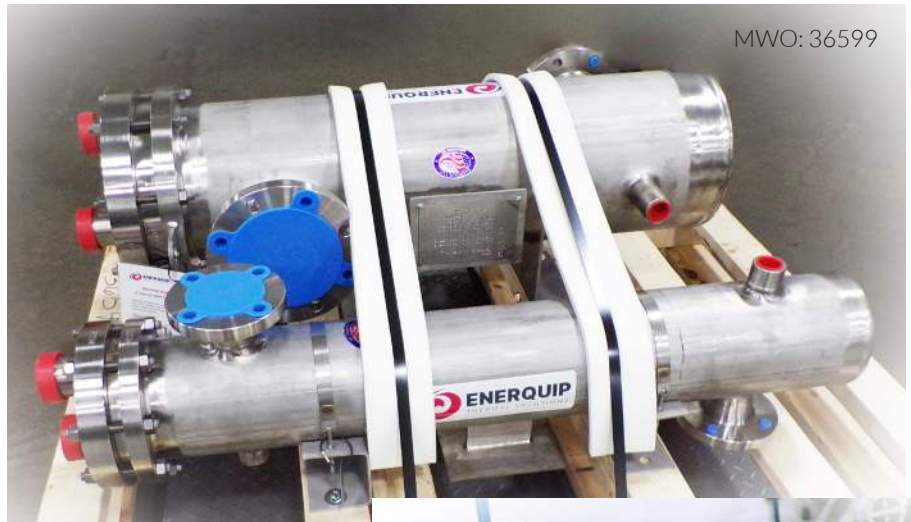
HYDROCARBON PROCESS HEATER

This project spotlight is a 10" x 120" U-tube shell and tube heat exchanger built for a hydrocarbon application. Using 400°F steam, this exchanger's job is to raise the temperature of the product almost 100°F in two passes. This unit was built with all 316L stainless steel and has an all-mill finish.

MWO: 35043

BIOGAS COOLERS

This project spotlight includes a pair of U-tube exchangers for a natural gas process. The larger of the two, a 10" x 30", is an exhaust line condenser designed to cool and partially condense biogas. The smaller, a 6" x 36", is a cooler that assists in heat loss and recovery from an engine coolant stream. Both were built with all 316L stainless steel components.



MWO: 36599



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