ARMSTRONG

Double-Wall Heat Exchangers

WX HEAT EXCHANGER

File No.: 112.13
Date: August 15, 1992
File No.: New
After extensive design and testing, Armstrong has developed the new, highly efficient and cost effective double-wall heat exchanger with a number of unique features. The double-wall tube-in-tube construction provides positive indication of potential cross contamination between the shellside and the tubeside fluids. Should either tube fail due to corrosion, erosion, or abrasive action, the resulting leak is channeled between the tube walls to a vent space created by double tubesheets between the head and shell flanges. Thus leaks can be detected on the outside of the unit before contamination of either fluid in the heat exchanger can occur.

Thermal performance of the design is comparable to a conventional single tube heat exchanger of equal size and square foot surface area. This allows the double-wall unit to be used in place of an existing single-wall unit with minimal effect on performance.

Armstrong double-wall tubes are mechanically rolled into both tubesheets, which results in a reliable leak-free joint at a low cost. As well, Armstrong replacement tube bundles can be easily adapted to fit most other U-bend heat exchangers providing the same advantages as an Armstrong unit.

**Typical Specifications**

**External Heater**

Supply and install in accordance with manufacturers recommendations Armstrong Model _______ heat exchanger. Unit to be double-wall tube-in-tube construction with copper tubes expanded into steel double tubesheets. The tube bundle to be complete with steel baffles and mounted in a carbon steel shell. The head to be cast iron. Design and construction to be according to ASME and Provincial Pressure Vessel Codes, Section VIII, Div. 2. The unit to have a heat transfer capacity as shown on plans and specifications.

**Tank Heater**

Supply and install in accordance with manufacturers recommendations Armstrong Model _______ tank heater. Unit to be double-wall tube-in-tube construction with copper tubes expanded into steel (or brass) double tubesheets. The unit to be complete with brass tube supports and cast iron head. Design and construction to be according to ASME and Provincial Pressure Vessel Codes, Section VIII, Div. 2. The unit to have a heat transfer capacity as shown on plans and specifications.