

Finned Tube PRODUCTS

The heart of any extended surface heat exchanger is the finned tubing. We manufacture our own finned tubes in our plant, to have full control over quality and consistency. Cannon employs similar and dissimilar tube and fin material combinations for most of its products. Bending, coiling and serrated fins are also available.

Advantages of Brazed Finned Tubes:

1) Brazing provides a 99.9% metallurgical bond between the fin and tube. The brazing furnace creates a nitrogen cloud around the tube during the brazing to keep impurities out. A metallurgical bond gives much better heat transfer than a welded connection.

2) A nickel-chromium brazing compound is applied to the entire tube. Not only does it join the fin to the tube, but it also melts over the entire outer surface

area of the tube and fin surface to provide a nickel-chrome clad coating on the tube. This coating forms a layer over the tube and fin that aids in overall corrosion resistance.

3) The melting braze compound forms fillets at the base of the fin and tube. *Smooth* fillets provide two advantages over welding: First, craters on the rough surface of the weld provide a home for impurities in the flue gas stream to collect, the first step in the corrosion of the tube. Second, the rough weld surface creates many additional stress risers, places where failures are much more likely to get their start.

4) Cannon does not use the process of welding fins on a tube, because it physically violates the pressure boundaries of the tube wall, thereby unnecessarily increases wall thickness to meet ASME

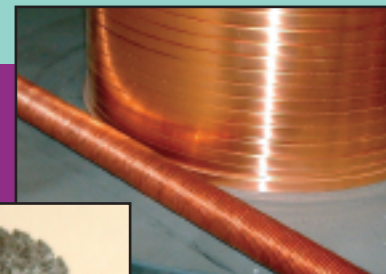
Code requirements. A brazed tube will maintain the same heat transfer performance but does not penetrate the pressure boundary. This reduces the tube wall thickness, weight, and cost of the unit.

5) Our brazing furnace temperature partially stress relieves tubes during the brazing process. A stress-relieved tube is much less likely to suffer stress-corrosion, which can occur in a welded tube.

Available Materials:

Tubing: Carbon Steel, Stainless Steel, Copper, Cupro-Nickel, Aluminum, Admiralty Brass, Inconel and other High-Nickel Alloys, Duplex, AL6XN

Fins: Carbon Steel, Stainless Steel, Aluminum, Copper



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Custom Heat Exchanger

PRODUCTS

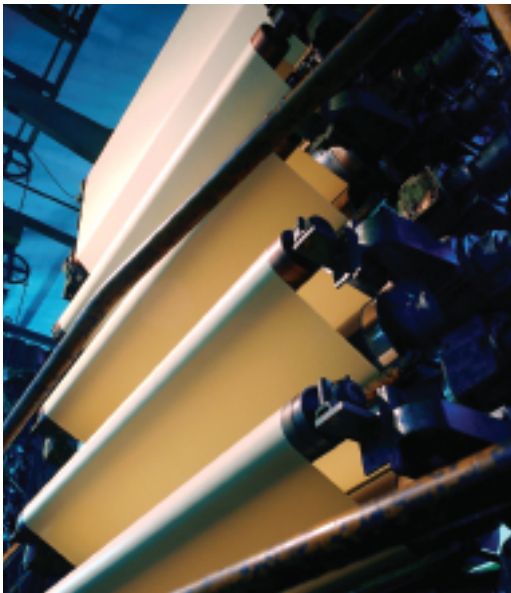
CHEMICAL INDUSTRY



PHARMECEUTICAL



FOOD PROCESSING PLANTS



PULP AND PAPER MANUFACTURING



HOSPITALS AND INSTITUTION



REFINING AND PETROCHEMICAL



Cannon Boiler Works, Inc.

HOFFMAN Process, Inc.

A Wealth of Experience in

For 30 years Cannon Boiler Works and Hoffman Process have been providing a wide variety of heat exchangers, both new and rebuilt. Our experience has helped customers solve many difficult corrosion problems with sophisticated material selection and creative design features that greatly improve the performance and longevity of their exchangers.

Our companies have now expanded capabilities by partnering, to offer a wider range of heat exchangers, customized for your needs. This partnership gives us a greater ability to solve your customers heat exchange and corrosion problems.

CERTIFICATIONS
API • ASME • TEMA



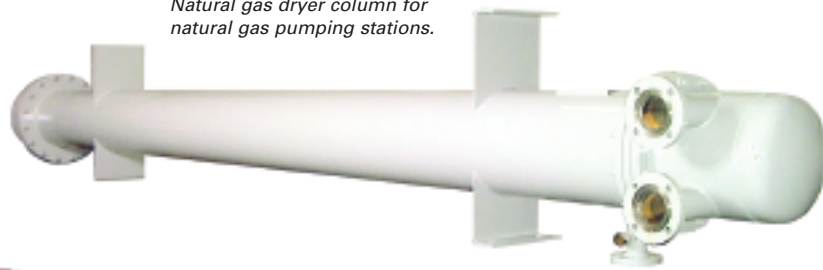
Hydrogen cooler for steel mill annealing hood.



Nitrogen heater for chemical plant weighting 100,000lb.



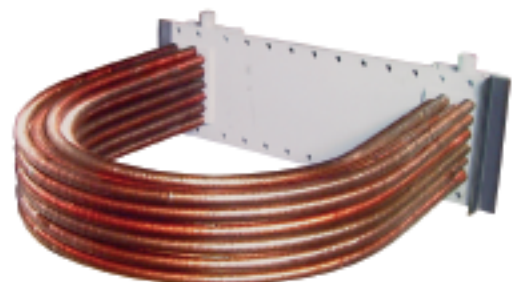
Combustion air heater for 100,000pph steam boiler.



Natural gas dryer column for natural gas pumping stations.



Fin fan cooler for natural gas pumping stations.



Cooling coil for steel mill galvanizing process.

Custom Heat Exchangers

TYPICAL APPLICATIONS

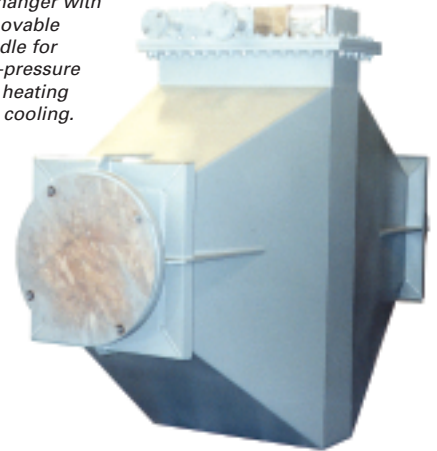
- Hot Oil Coolers
- Dryer Air Heaters
- Column Condensers
- Product Coolers
- Water/Glycol Coolers
- Gas Heating/Cooling
- Quench Oil Coolers
- Steam Condensers
- Inter and After Coolers
- Heat Recovery

INDUSTRIES SERVED

- Chemical
- Pharmaceutical
- Food Processing
- Pulp and Paper
- Hospital and Institution
- Refining and Petrochemical
- Primary Metals
- Plastics
- Coatings and Resins
- Utilities

These are only a few examples of the large and small exchangers we have designed and built. In times of economic uncertainty, many customers rely on the quick service and efficiency that Cannon and Hoffman can provide to keep them up and running.

Transition heat exchanger with removable bundle for low-pressure gas heating and cooling.



Nitrogen gas cooler for air separation plant.



Floating head heat exchanger with cross flow shell side design for low-pressure gas heating and cooling.



Cooling coils for steel mill annealing furnace.



Incinerator preheater/heat exchanger.



Experimental coil for natural gas heat pump.



Steam/natural gas superheater, all stainless steel construction.

