



Partnership Reduces Risks of New Product Design

Major redesign of heat exchanger successful due to close collaboration with Middletown Tube Works

The Background:

Our client is the second largest manufacturer of furnaces and air conditioners in the US. Middletown Tube Works (MTW) had, for many years, been supplying this manufacturer with 2.75 inch tube for the heat exchanger of one of its many lines of furnaces. As such, they were familiar with MTW's ability to deliver high-quality tubing, on-time, at a competitive price. What they needed now was a partner that could help work through a major product redesign that would increase the energy efficiency of one of its major furnace lines.

The Business Problem:

The HVAC manufacturer had been using "clamshell" type heat exchangers for its furnaces for many years and needed to improve its efficiency. The decision was made to move to a tubular design. Such a radical change in the design of its heat exchanger created the potential for downstream production related problems that had to be dealt with early in the redesign process. In addition, time-to-market was critical in making sure that overall revenue targets would not be missed.

The Solution:

MTW got involved very early in the design process to help reduce the risk of such a redesign and expedite the time-to-market. MTW hand-in-hand with the client to specify and then prototype the heat exchanger tubes until a suitable design was created. The resulting 1 1/4" and 1 3/4" tubes—which were manufactured in both Stainless 409 and aluminized steel are now part of the new, more efficient furnace which has become a success in the marketplace.

"Middletown Tube Work's willingness to work with us on this redesign in a truly collaborative manner was instrumental in helping us reach our goals. The way they partner with customers is one of the attributes that sets them apart"