Latest Design for Heat Exchangers Includes Use of Tube Inserts

CTI produce 'sleeving' of condensers and heat exchangers

CTI Industries, USA, specialises in the 'sleeving' of condensers and heat exchangers. Sleeving eliminates the time and cost required to fully retube or replace the damaged heat exchanger, a unique restoration process that can save eighty-five to ninety per cent in comparison to other repair methods. Sleeves are thin-walled tubes made from a number of different alloys – copper alloys (CuNi and brass), conventional stainless steels (austenitic, ferritic and duplex), superaustenitic stainless steel (6 Moly alloys) and nickel-based alloys (eg alloy 400, C-276).

There are two basic types of sleeving, the most common being a tube 'shield', otherwise known as a tube insert or ferrule. These are used for problems related to the tube end and are typically 6-12" in length.

For problems that encompass the entire tube, Full Length Tube Liners™ can be installed resulting in a full restoration. Both of these methods require the sleeves to be expanded – either mechanically and/or hydraulically – into the damaged parent tubes.

In 2004, CTI received an important order from Hitachi-Japan for the supply and installation of 1,900 tube shields, to be installed into two new waste heat boilers.

The shields were made of alloy 601 material, 400mm long with a 1mm wall thickness. One end contained a flare while the opposite end had a 40º ID chamfer.

The boilers were designed by Haldor Topsoe of Denmark and sold to Qatar Gas. This state-of-the-art design included the installation of tube shield in an area of the boilers that are exposed to extreme corrosion, thereby adding years of additional service life at a relatively minimal cost.

Company: CTI Industries Inc
Address: 283 Indian River Road,
Orange, CT 06477, USA
Phone: + 1 203 795 0070
Fax: + 1 203 795 7061
Email: ctius@cti-ind.com
Web: www.cti-ind.com