

## Hydra-Loc® Tube Sleeving

### Extend the Life of Corroded or Worn Heat Exchanger Tubes

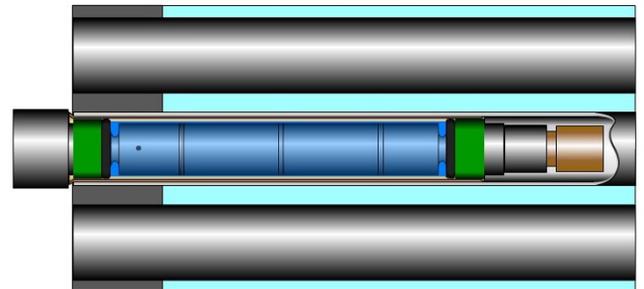
The majority of tube problems in heat exchangers and condensers occur within the first few inches of the inlet end of the tube, usually within or directly past the tubesheet. Traditionally, retubing the entire bundle was the only viable option. Partial or total bundle retubing, either in-place or in the shop, can be a costly repair. EST Group's Hydra-Loc technology enables you to save both time and money by recovering eroded or corroded tubes without retubing.

### Applications

- Near End tube sleeving
- Full length tube lining
- Partial tube sleeving

### Basic Operations

- Verify tube size (Wall Thickness and Inner Diameter) and material
- Brush and clean identified tube
- Position the tube sleeve within the tube, then expand it with the Hydra-Loc pump so it intimately contacts the tube ID



### Features and Benefits

- EST Group's Hydra-Loc Tube Sleeving technology allows for quick, safe and cost effective repairs to aging heat exchanger tubes
- Tube sleeve material, size and length are matched to customer's specifications
- Tube sleeves are hydraulically expanded into the tube using EST Group's Hydra-Loc technology to ensure intimate contact with the heat exchanger tube

### FAQ

- **Is Hydra-Loc Tube Sleeving equipment available for purchase?**  
The Hydra-Loc Tube Sleeving method is used by certified EST Group Service Personnel. The equipment is not offered as a purchase item separately from the service provided by EST Group technicians.
- **Can the sleeve and tube materials be mismatched and still achieve the desired functionality?**  
No. The sleeve and tube materials should be matched as closely as possible to minimize effects of differential thermal expansion and avoid undesirable galvanic corrosion.
- **What is the advantage to using the Hydra-Loc Tube Sleeving System versus traditional tube expansion methods?**  
The Hydra-Loc process is faster than conventional roller expansion techniques and the use of controlled hydraulic pressure during installation of the tube sleeve eliminates damage to the host tube and tube-to-tubesheet joints caused by over-rolling.
- **Is heat exchanger tube erosion a concern when using the Hydra-Loc Tube Sleeving System to install tube sleeves?**  
No. The Hydra-Loc hydraulic expansion process allows the sleeve to expand and conform to the actual contours of the heat exchanger tube.