



# SEA-CURE®

## High Performance Stainless Steel

Revised July 7, 2006

Thank you for your interest in SEA-CURE® high performance stainless steel as an alternative to titanium. SEA-CURE® is one of the most cost-effective alloys in high chloride applications and where the potential for microbiological influenced corrosion (MIC) exists. SEA-CURE®, which was designed for seawater applications, has excellent corrosion resistance and similar thermal conductivity as titanium Grade 2. Depending upon the OD and wall, it can be 15-20% less expensive. It also has several technical advantages over titanium:

- A. SEA-CURE® has a significantly higher modulus that allows the use of a lighter wall with less problem of vibration. On new designs, SEA-CURE® requires less support plates resulting in additional savings. When tubing is used as a simple replacement in power plant condensers, most utilities can use .028" wall SEA-CURE® if the original condenser design was for heavier wall copper alloy tubing. When .028" wall Ti Grade 2 is used as a replacement, expensive staking is normally needed to prevent vibration. Because of SEA-CURE®'s higher modulus, staking is rarely needed saving some additional costs, and the time saved may reduce the outage schedule.
- B. SEA-CURE® has significantly higher steam and water droplet erosion resistance. This allows a greater cushion in cases where upset conditions may occur.
- C. SEA-CURE® is weldable to other stainless steels. If the concern is about tube to tubesheet leakage, SEA-CURE® can be successfully welded to TP 304, TP 316, high performance austenitic alloys, duplex stainless steels, and nickel alloys. Seal welds on titanium can only be made to titanium or Ti clad tubesheets.
- D. SEA-CURE®'s higher strength and modulus allows more tolerance for those tough designs and installations.

SEA-CURE® has over 25 years of commercial history with an outstanding performance record. To our knowledge, every power plant condenser that installed SEA-CURE® is still using the original tubes that we've supplied. It is accepted by both Section III and Section VIII of the ASME Boiler Code. It can be ordered to ASTM A268 or ASME SA268 specifications as UNS S44660. Plymouth Tube has delivered over 70,000,000 feet of this alloy for use in corrosive applications. If you have any questions, please call Plymouth Tube at 262-642-8370 or e-mail us at [sales@plymouth.com](mailto:sales@plymouth.com)



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