

## Upsell Corrosion Protection to Extend Product Life in Harsh Conditions

**LOUISVILLE, KY** – Hope springs eternal and so does coolant from a corroded tube. Corrosion is a natural process and can be responsible for a lot of heat exchange replacement work, especially in coastal climates. In coastal areas, moisture and salt wreak havoc resulting in metal deterioration on heat exchangers. For you it is business, for your business customers it can mean serious downtime and loss of production. For [Se-Cliff Coatings](#), a NARSA member since 1974, helping you help your customers with their corrosion issues is what they do.

Sometimes too much of anything turns ugly. Case in point are those customers who have to operate businesses and even emergency equipment in briny atmospheres. Extending heat exchange product life cycles is what corrosion protection is all about. Adding a few months, maybe a year to the life of radiators or coil can add up.

The people out for the recent NARSA HD Conference here at the Marriott East had a great opportunity to learn a little more about corrosion from Tom Clifford, sales director North America and Europe for [Se-Cliff Coatings](#), LLC. He also pointed to the opportunities that heat exchange specialist's business can help its customers by supplying products that have improved corrosion protection.

One can never prevent metal corrosion completely but there are products readily available that can reduce and retard the effects of corrosion. Corrosion begins immediately as new metal products like heat exchangers are exposed to the elements.

Tom shared some slides on where corrosion occurs and there are no surprises that the severe areas are coastal. One slide showed that all coasts were swathed in red (severe) and that the Cape Kennedy/Fort Pierce region of Florida has the highest rate of corrosion for HVAC systems in the U.S.

Tom pointed to other areas that may be corrosion contributors: salt, magnesium, coal mining; steel factories; high road salt areas; agricultural markets; petrochemical plants; marine; and food processing.

From a sales and marketing point of view, Tom said the case for corrosion protection on metal parts in general would include:

- less engine wear, longer engine life;
- less maintenance to the engine;
- continued engine performance and power;
- maintain near-original fuel-use levels;
- maintain low particulate emissions levels;
- less emergency failure, less downtime;
- reduced interruption of production, profits;
- much less total failure and reduced replacement costs of units and labor;
- a value added product that solves an expensive maintenance issue.

He listed several exterior coating technologies that are currently available. They include: paint, Copon and other specialized paints; powder coating, Heresite, E-Coat (Electrodeposition) which his company uses, and spray hydrophilic. Tom also addressed a list of his suggested criteria to consider when choosing a technology. That list includes:

- Corrosion retardant properties that meet all pertinent ASTM standards for salt water, and/or the specific application contaminants with no propensity for corrosion creep to occur.
- Electrochemical and physical adhesion properties that meet applicable ASTM standards for cross-hatch adhesion.
  - Coverage – 100% guaranteed in writing.
  - Durability, flexibility.
  - Impact resistant capable of handling in-field abuse and power washing.
  - Consistent, reproducible coating thickness – no matter the core's geometry or base metals used.
    - Zero bridging between fins and/or between louver edges.
    - High edge cove rage.
    - Green technology – can units be repaired and discarded safely (NSA Approved)
    - Military approval.
    - Warranty against defects or failure to protect against corrosion.
    - Cost competitive and efficient.
    - Supplier adheres to appropriate ISO process/production standards.
    - Minimum loss of heat transfer rate of less than 1% of capacity to transfer heat.
    - Minimum loss in air pressure drop. The coating should not significantly retard airflow rate as it passes through heat exchanger.

Tom explained the E-Coat process that his firm uses in Texas, Kentucky, New York, Michigan

and Italy. E-Coat is a method of painting that uses electrical current to deposit paint. It is a highly efficient and automated process. Paint deposition is regulated by voltage and it has the ability to coat interior cavities without bridging fins or louvers.

This process works on new product only (clean, unpainted cores). The product must be able to withstand a 385°F process. Product can be copper, aluminum or steel. Other considerations include turn-around time (5 to 7 day typical) and the supply of a reusable shipping box or container.

For more information, go to: [www.corekote.com](http://www.corekote.com) . NARSA members are reminded that they can find this and the other presentations from the 2018 NARSA HD Conference (as well as all of the HD Conferences) in the NARSA Member Center at [www.narsa.org](http://www.narsa.org).