

Factory Applied - Corrosion Resistant Coil Coating

INDUS: "i-coat"

Corrosion:

It has now become a known fact that hundreds of thousands of coil failures have occurred during the last decade due to corrosion. The cause is most typically environmental pollutants, which range anywhere from salt-air, to household cleaning agents, pesticides, formaldehydes, building materials, and even off-gassing of food. Each of these contaminant sources can initiate corrosion in coil tubing in a year or less when the conditions are right.

Kinds of corrosion

The two most common forms of coil corrosion are pitting and formicary. These two corrosive processes can occur in as little as a few weeks after installation. More typically, corrosion will begin appearing within a one- to four-year period.

Choosing Corrosion Protection

Choosing the most appropriate coil coating for the application could save the project thousands of dollars and eliminate repeat treatments. Choosing the wrong coil coating could reduce heat transfer capabilities and lead to higher energy bills



A Corroded Coil

Description

Water based self etching epoxy resin based coating is available in various colors, can be coated on all ferrous and non ferrous metals (as used in HVAC&R coil manufacturing) to give long term corrosion protection.

Advantages of Indus "i-coat"

Super Hydrophobic

A permanent super hydrophobic surface improves condensation characteristics and allows for faster run off of the condensate which improves heat transfer. It also reduces dirt and dust consolidation thereby reducing cleaning of the coil.

Corrosion Protection

The entire surface of the coil is protected, including tubes, which remain free of corrosion allowing the coil to maintain its long term heat exchange efficiency.

Reduce Mould and Bacteria

The coating contains permanent Ag+ technology (Ag+ = silver ion) reducing mould and bacteria growth within the coil. The coil stays clean and free of micro-biological contamination.

Very Thin

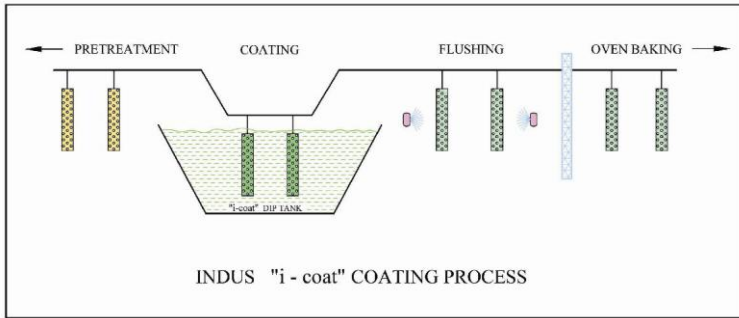
The coating is only 6 - 8 microns which does not affect heat exchange or air flow.



Indus "i-coat" Coated Coil

Indus "i - coat" Coating Process

The coils are cleaned of all dirt and oil, and then immersed in "i - coat" solution. The solution can be mixed as per the required dry film thickness. After dip coating the coils are flushed and oven backed. These coils have a very strong cross link polymerization, thereby providing superior adhesion to the coil material.



FEATURES

FEATURE	i - coat
Water based	YES
Flammable	N
Toxic	N
Solvent additions	Water ONLY
Clean up	Water
Adhesion to coil components	Excellent/Self etching
Thickness of deposited film	6-9 microns
Airflow	Improved
Heat exchange	No Impact
Penetration of coil block	Y/100%Full immersion
Penetration of fin collar/tube zones	YES/Complete
Flexibility	High
Water Contact Angle	152

APPROVALS

US FDA food contact
 EPA FIFRA Registration
 EPA Food contact
 EPA HVAC Use
 EPA Drinking Water Contact
 NSF Certification Standard 51 for Food equipment Material

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Technical Performance

ASTM/other Tests	i-coat
ASTM B117 Salt spray, 1000 hr	Pass
ASTM B117 Salt spray, 3000 hr	Pass
ASTM G 85, 1000 hrs	Pass
ASTM G 85-A5, 2000 hrs	Pass
ASTM G-87, Moist SO ₂	Pass
ASTM D 522, Flexibility Test	Pass
MIL -STD-810F, Sand & Dust	Pass
ASTM G21 / G22	Pass
ASTM D4798 UV Stability, 1000 hrs	Pass
72 hr Bio-film Test	Pass



A 3000 HRS SALT SPRAY TEST PASSED COIL WITH "i - coat"



AN IMMERSION TEST PASSED COIL WITH "i - coat"