

## CURRAN ANTI FOULING / CORROSION EXCHANGER COATINGS

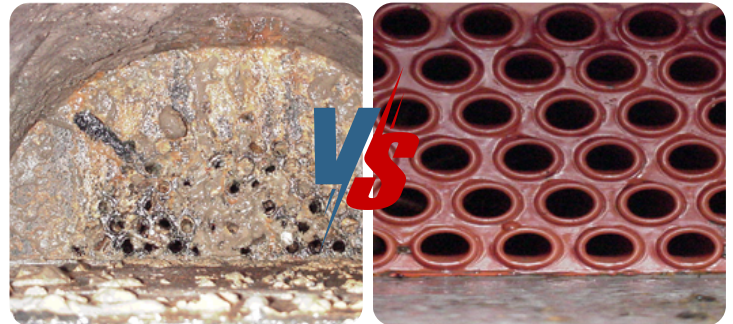
Protect Your Assets. Extend Equipment Life.

At Curran International, our industry leading heat exchanger coating materials protect your critical assets from corrosion, fouling, and harsh operational environments. These innovative solutions extend equipment life, enhance performance, reduce maintenance, and lower energy costs—delivering maximum efficiency and reliability.

### Why Choose Curran Coatings?

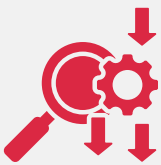
Curran's coatings provide superior protection to ID, OD, or both safeguarding your exchangers against the harshest conditions and media. We have a large portfolio of materials that are applicable to everything from low-temperature cooling water services to high-temperature process and gas streams.

*More Uptime. Less Downtime.*



After applying Curran coatings, in several cooling water exchangers the client dramatically reduced fouling & corrosion, **saving the refinery \$2 million annually** in maintenance and operational costs.

### Curran's Exchanger Coating Benefits



#### Mitigate Corrosion & Fouling

Our coatings provide a robust barrier against corrosion and fouling, significantly extending the life of your equipment and reducing maintenance frequency.



#### Enhanced Equipment Efficiency

By reducing fouling and drag, our coatings improve heat transfer and overall operational efficiency, resulting in energy savings and optimized performance.



#### Extended Service Life

Protect your equipment in the harshest environments. Curran coatings are designed for durability, reducing tube leaks and extending the lifespan of critical assets.



#### Fast Application with Minimal Downtime

Whether in the field or shop, Curran's coatings have rapid cure times, ensuring minimal disruption to your operations during maintenance or turnarounds.



## Unmatched Value and Performance



### Energy Savings

Curran coatings lower energy consumption. In real-world case studies, our coatings have delivered significant energy savings, such as reducing furnace energy use by 33% and cutting BTU consumption by as much as 50%.



### Cost Savings

Curran coatings provide substantial cost savings. In real-world applications, One refinery reported annual savings of \$300,000 in maintenance costs and an additional \$1.5 million in increased production.

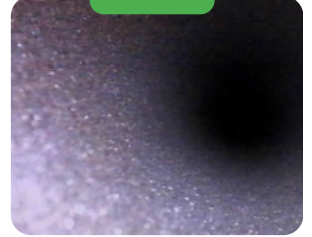
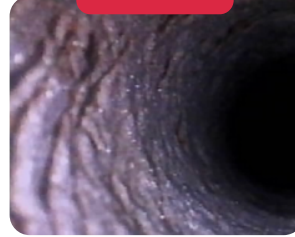
*Stop Frequent Repairs. Maximize Your ROI.*



Uncoated



Coated



*After 8 years of side-by-side operation, then Grit Blasted for IRIS*

## Tailored Coating Solutions for Every Need

*Combat Corrosion and Fouling*

Up to 400F°



### Epoxy Coatings

- High-performance protection for immersion and wet environments.
- Chemical and corrosion resistance.
- Applicable to: Heat exchangers, water boxes, piping systems, and steel surfaces.

Up to 400F°



### Sol-Gel Coatings

- Ultra-smooth, low-surface-energy coatings for foul-release and enhanced flow.
- Ideal for dropwise condensation and reducing fouling.
- Applicable to: Heat exchanger tubes, condensers, and surfaces that benefit from dropwise condensation and foul-release properties.

Up to 500F°



### Teflon Coatings

- Non-stick, low-friction coatings with superior foul-release properties.
- Excellent chemical resistance and heat tolerance.
- Applicable to: equipment that benefits from reduced fouling and friction.

Up to 750F°



### Ceramic Coatings

- High thermal stability and abrasion resistance.
- Withstands extreme temperatures up to 750°F.
- Applicable to: High-temperature equipment, including crude heaters, heat exchangers, and furnace tubes

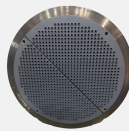
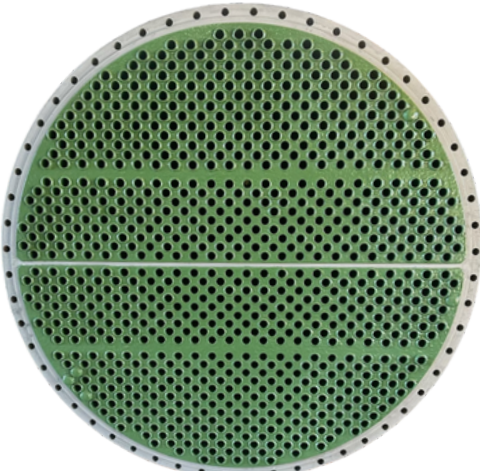
1800F°+



### Surface Treatments

- Advanced surface treatment for stainless steel and alloys.
- Improves oxidation resistance and reduces fouling in high-temperature environments.
- Applicable to: Stainless steel, nickel, and superalloy components in refinery towers, heat exchangers, and other high-fouling, high-temperature environments.

## Advanced Coatings for Complete Equipment Protection



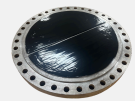
### Tube Sheets

Our coatings protect tube sheets from corrosion and fouling. Preventing costly damage and decreasing the need for routine cleaning. The protective barrier maintains the surface's smoothness and integrity, ensuring it functions efficiently.



### Channels / Floating Heads

Curran's coatings for channels and floating heads are designed to withstand cold-wall effects and harsh process environments. By filling in corrosion pits and providing thermal stability, these coatings protect against premature wear and ensure reliability.



### Covers/ Dollar Plates:

Covers and dollar plates are routinely attacked by harsh fouling and corrosion. Our high-performance coatings are the ideal solution for protecting critical components in exchangers. Our coatings create a durable barrier against corrosion and fouling.

## Exchanger Coating Capabilities

New Fabrication &  
Existing Equipment

Shop and Field  
Applications

Straight Tubes  
and U-Tubes

ID and OD  
Applications

## Metallurgies We Coat

CS

CuNi

Brass

SS

Duplex

CR

Ti

*and more*

## Versatile Coating Solutions for All Heat Exchanger Designs

Shell and Tube

Plate and Frame

Compablocs

Product Coolers

Feed Preheat

LSO  
Hydrotreater

Desalter Effluent  
Coolers

FCC Debutanizer  
Reboilers

Cracked-gas  
Reactors

Ethylene Furnace  
Tubes

Reactor Feed  
Effluent, 600+F

Reformer Feed  
Effluent

Distillation Tower Wash Beds:  
Structure and Grid Packing

Air Coolers

Spiral Exchangers

*and more*

## The Curran Advantage



### NACE Certified

Curran crews are NACE-certified, ensuring top-level expertise in all coating applications.



### Strong Partnerships Fabricators

Curran has established strong relationships with leading U.S. and global fabricators, ensuring seamless coordination for new and used bundle coatings.



### Worldwide Service

Curran International provides expert coating solutions globally, with full-service shops and experienced field crews in Houston, Texas / Edmonton, Canada / Rotterdam, Netherlands / Singapore / Saudi Arabia / & India. Our strategically located facilities and teams ensure we can deliver fast, flexible coating services wherever your operation is located. No matter where your facility is, Curran's global reach and local expertise are ready to meet your needs efficiently.

## Forecast Performance with Confidence

*Predicting the Impact of Curran Coatings*



### Performance Forecasting

HTRI modeling allows you to simulate the thermal performance of coated vs. uncoated equipment under identical operating conditions. By analyzing how Curran coatings reduce fouling and improve heat transfer, you can estimate potential gains in efficiency and reductions in energy consumption before coatings are applied.



### Maintenance Planning

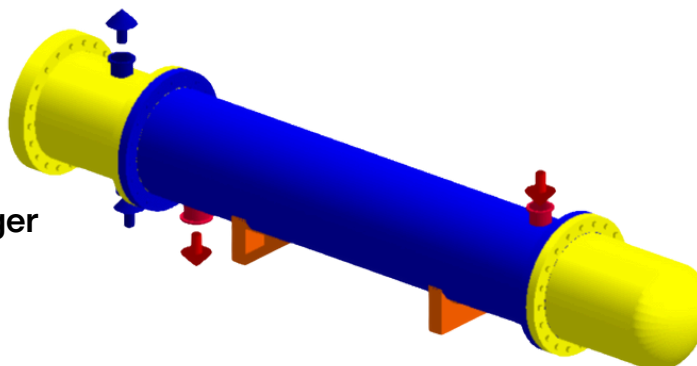
The modeling helps forecast extended cleaning cycles and reduced maintenance frequency by calculating the coating's impact on fouling rates. This enables teams to plan turnaround schedules more effectively, extending equipment run times and minimizing downtime.



### Cost-Benefit Analysis

By comparing coated and uncoated equipment performance, HTRI modeling provides a clear picture of the return on investment (ROI) for applying Curran coatings. The results give maintenance managers data to demonstrate savings in operational costs, energy consumption, and extended equipment life.

### Example of Coating Application Modeled



Crude Pre-Heat Exchanger

#### Modeling Assumptions:

Identical operating parameters for coated & uncoated exchangers

Uncoated bundle cleaned yearly; coated bundle cleaned 24 months

Tube side desalted crude 370F; Shell side - HVGO 505F

Fuel Value \$3.50 per MBtu/hr  
Furnace Efficiency = 0.9

TEMA AES Type; Shell ID = 50"; 4 Tube Passes;  
11 Baffle Passes; Single Vert Seg, 20.9% Cut

## 4 Simple Steps to Protect Your Heat Transfer Equipment

1

2

3

4

### 1. Contact Us

Reach out to discuss your specific needs. Whether it's fouling, corrosion, or thermal inefficiency, we'll identify the best coating solutions for your equipment.

### 2. Provide Details

Complete our coating questionnaire, which our team will send you. Then send detailed drawings if available. (U1 Preferred)

### 3. Receive Proposal & Specifications

We'll provide a tailored proposal that includes the scope of work, timeline, and cost. It will also specify the coating material along with the relevant PDS and SDS documents.

### 4. Application & Delivery

Upon approval, our certified team will apply the coatings at one of our global facilities or on-site. We guarantee fast turnaround times with minimal disruption to your operations.



## Frequently Asked Questions

### ▼ How long do the coatings last?

The lifespan of Curran coatings depends on the specific application and operating conditions. Typically, our coatings can last between 7 to 10 years.

### ▼ At what rate will fouling be mitigated?

The rate of fouling mitigation varies based on the operating environment and service media flowing through your equipment. In many cases, Curran coatings typically reduce fouling by at least 20% or more.

### ▼ What is the maintenance/cleaning procedure for Curran-coated bundles?

Curran-coated bundles typically require less frequent cleaning due to the reduction in fouling. When cleaning is necessary, standard low-pressure water washing or gentle mechanical cleaning methods are often sufficient to maintain performance without damaging the coating. Our team will provide procedure once bundle is coated.

## Some Of Our Clients



ExxonMobil



MOtIVA

aramco



سابك  
sabic

## Reach Out Today To Learn More

“Discipline to  
procedure & Safety  
is our top priority.”

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HTRI



NACE

