

Challenges

A major cold rolled sheet producer who supplied the automotive market was being plagued by rejects due to stain. While some defects were detected when the steel was “in-process,” many were not discovered until after delivery was made to the customer, resulting in costly claims and rework.

In an effort to help the producer, Quaker Chemical recommended FERROCOTE® EGL-1, a product with enhanced corrosion protection properties. The new product was applied to the steel strip after temper rolling, and rejects due to stain were tracked.

Providing Solutions

Since switching to FERROCOTE® EGL-1, the producer has achieved the following benefits:

- No application changes needed
- Same coating weights as original product
- Better tolerance of residual water on strip
- Easy operator acceptance
- Easy removal for subsequent processing
- Automotive approvals
- Reduction of stain

Impact

The introduction of FERROCOTE® EGL-1 resulted in:

SAVINGS EQUAL TO 7 TIMES THE ADDITIONAL PRODUCT COSTS

Before:

Annual cost of the original corrosion preventive:	\$746,000
Tons of steel rejected annually due to stain:	6,400
Cost of replacement and rework for rejected steel*:	\$3,500,000

After:

Annual cost of FERROCOTE EGL-1 (Per gallon costs increased 58%):	\$1,175,000
Tons of steel rejected annually due to stain:	40
Cost of replacement and rework for rejected steel*:	\$20,000

Additional Annual Product Cost:	\$429,000
Annual Savings:	\$3,071,000

* Includes: making the order the first time, shipping the coils to the processor or warehouse, shipping the steel back to the mill, making another prime order, reshipping the order, less revenue from selling the rejects as secondary or scrap. Does not include additional costs such as multiple inspections and reduced customer satisfaction.

Customer Reference

AK Steel	Precision Strip
ArcelorMittal	RSDL
Double Eagle Steel	Serverstal NA
Duferco Steel	Sharon Coating
Kasle Metal	Taylor Coil
Nucor Steel	

OEM Reference

E.C.T.	Spray-and-roll application
ELETTROSPRAY®	Trion
Gencoat	United Air Specialists (UAS)
Ravarini	

Product Description

FERROCOTE® EGL-1 is a high performance corrosion preventive for both uncoated and coated steel strip. It is designed to lessen stain vulnerability due to atmospheric, substrate, equipment or handling conditions.

Process & Equipment

Operation:	Sheet Wet Temper Mill
Capacity:	1.5 million tons per year

Product & Process Expertise

Temporary corrosion preventives represent a very minor part of the costs in a steel-making process, typically considerably less than 1%. This case illustrates the importance of the correct selection of the corrosion preventive. The impact of correct selection is usually a multiple of the fluid costs making the price of corrosion preventive oil virtually irrelevant. That is why Quaker focuses on developing fluids with the highest performance without compromise. Fluids that sharpen your competitive edge.