



**Elliott Group**  
901 North Fourth Street  
Jeannette, PA 15644  
Telephone: 724-527-2811  
www.elliott-turbo.com

## NEWS RELEASE

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CONTACT: Christiann Bash  
TITLE: Communications Mgr.  
PHONE: 724-600-8651  
EMAIL: cbash@elliott-turbo.com

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SUBJECT: Elliott Group Introduces Specialty Coating that Prevents Fouling in Hydrogen Recycle Compressors

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Jeannette, PA – July 21, 2020 – Elliott has developed the first centrifugal compressor coating specifically formulated for hydrogen recycle compressors. Elliott’s Pos-E-Coat® Protect protects critical components from the unique fouling and corrosion challenges associated with the harsh operating environments of hydrogen recycle service.

During hydrogen recycle compressor operation, salts, such as ammonium chloride, carried over from upstream processes adhere to metallic surfaces and reduce compressor efficiency over time. Underneath the ammonium chloride deposits, pitting corrosion can occur rapidly on carbon and stainless steel components, creating perfect initiation sites for fatigue cracks. If not addressed, this can eventually result in operating issues or even equipment failure.

Elliott’s Pos-E-Coat Protect, when applied to rotors, impellers, and diaphragms, provides superior protection from ammonium chloride attacks and safeguards against potentially catastrophic issues caused by fouling and corrosion. “Industry standard coatings have been applied for decades as a ‘one size fits all’ approach to minimize fouling in all applications, but fouling in hydrocarbon recycle compressors is much more complex and problematic,” commented Klaus Braun, Elliott Director of Research and Development. “Hydrocarbon recycle compressors require a targeted, proven approach to prevent fouling and corrosion.”

Elliott’s Research and Development Team performed rigorous tests and assessed the potential of chlorides adhering to the coating over time, corrosion resistance, and the durability of the coating against solid particle erosion. Pos-E-Coat Protect significantly outperformed standard industry coatings in every category. The coating proved to be 10 times more

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durable than the industry standard coating in abrasion testing, and the bond strength is at least 5 times stronger than required.

As the newest addition to Elliott's coating product line for turbomachinery, Pos-E-Coat Protect is recommended for new hydrogen recycle compressors and existing compressors in service.

### **About Elliott Group**

Elliott Group designs, manufactures, and services technically advanced centrifugal and axial compressors, steam turbines, power recovery expanders, and cryogenic pumps and expanders used in the petrochemical, refining, oil & gas, and liquefied gas industries, as well as in power applications. The company employs 2600 people in 31 locations around the world. Elliott Group is a wholly owned subsidiary of Ebara Corporation, a major industrial conglomerate headquartered in Tokyo, Japan. Ebara employs 16,000 people and has sales of US \$4.5 billion.