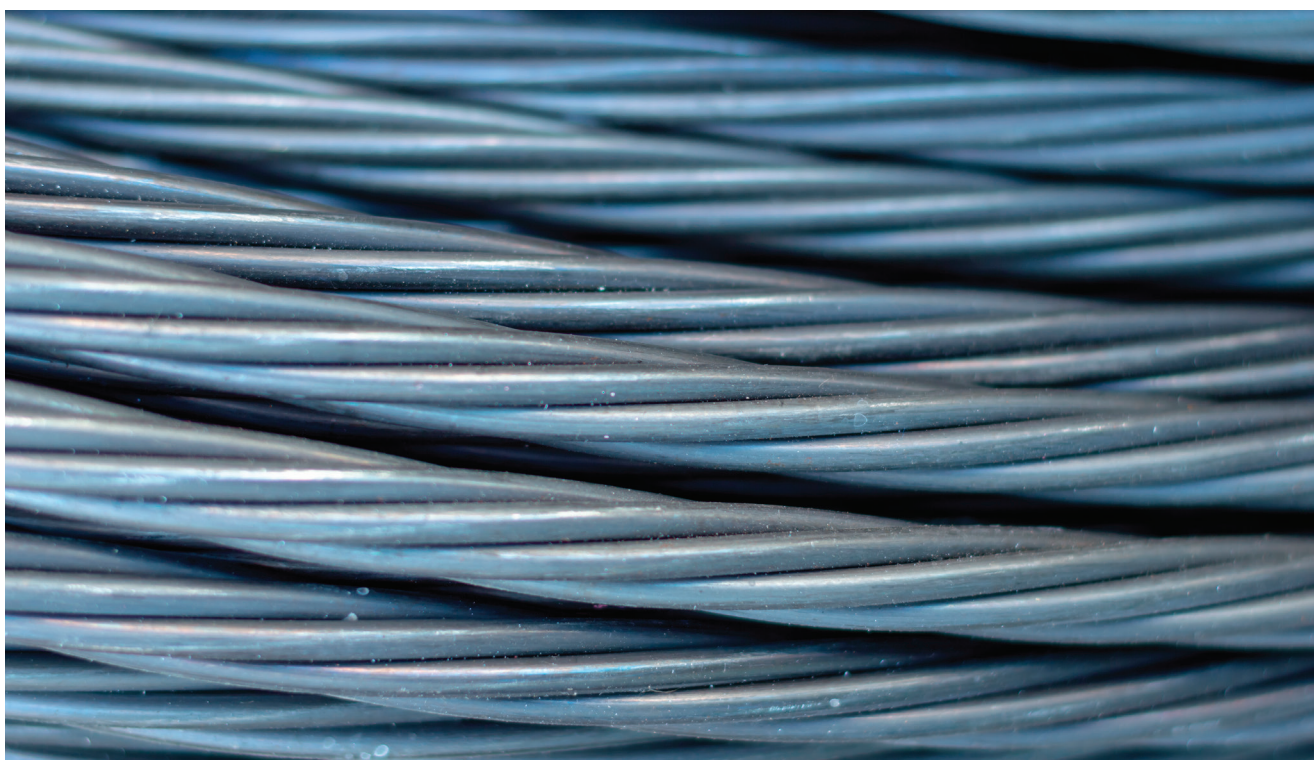


EPT GreenStrand™

By Power Manufacturing LLC

The World's First "Green" Stranded Cable



POWER MANUFACTURING, LLC
Corrosion Resistant Transmission & Distribution Products

Quality Engineered and Manufactured Domestically in the USA

WWW.PWRMFG.COM

INTRODUCTION

From stone age to space age.

The process of making galvanized steel strand today is much the same as it was in the 1800s when environmental impact was an afterthought. Electro-Plasma Technology by Power Manufacturing is a game-changing, environmentally-friendly cleaning and coating process used to manufacture stranded cable for telecommunications and power utility applications. Developed for the international space program, this process cleans and coats the rod in the same process eliminating costly additional steps and hazardous chemicals. It creates a better coating adhesion that won't scrape off—without affecting the mechanical properties of the rod.



Up to 5X better salt spray performance than the best hot-dip galvanized coatings.

WHY EPT GreenStrand™?



Supports environmentally and socially responsible corporate initiatives



Extends plant life in highly-corrosive coastal and industrial environments



Lasts considerably longer at similar price points to premium galvanized counterparts



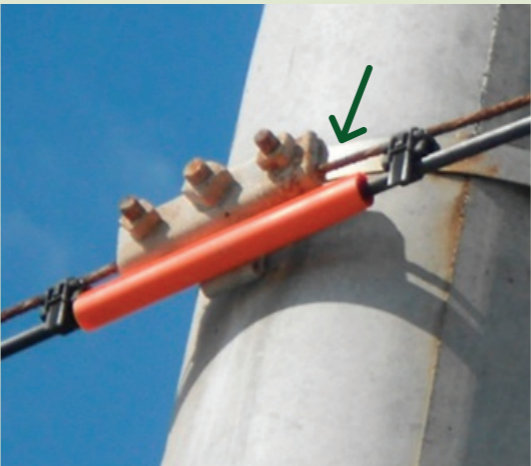
Drastically reduces ownership costs

EXEPTIONAL ENVIRONMENTAL PERFORMANCE

Process	Thickness	Rust Time*
Hot Dipped Zinc Galvanizing	26 microns	237 Hours
EPT Green 100% Zinc	15 microns	1,123 Hours
Hot Dipped Galfan® 95% Zinc/5% Aluminum	22 microns	493 Hours
Hot Dipped Bekaert Bezinal® 95% Zinc/5% Aluminum	25 microns	510 Hours
EPT Green 95% Zinc/5% Aluminum	15 microns	1,315 Hours
EPT Green 88% Zinc/12% Nickel	15 microns	2,680 Hours+

*Time to 5% red rust
Bezinal is a registered trademark of Bekaert Corporation
Galfan is a registered trademark of the International Lead Zinc Research Organization

ELIMINATES PREMATURE CORROSION



Since standard galvanization can scrape off the base metal, it is susceptible to premature corrosion caused by vibration or wind movement where the strand contacts the clamp.

STREAMLINED MANUFACTURING PROCESS



1) Clean & Coat

Optimized cleaning and coating process occurs on the same manufacturing line eliminating the need for additional steps.



2) Draw

Rod passes through multiple dies that gradually reduce the rod to the desired diameter. Since alloy is absorbed by the metal, it can't be scraped off when the rod is drawn



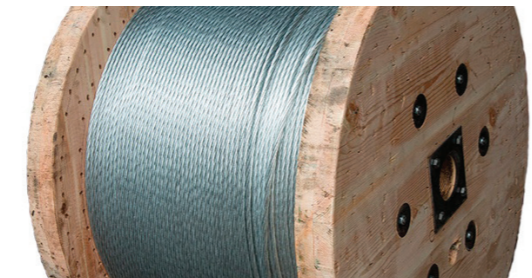
3) Galvanize (not needed)

Since alloy is added during cleaning and coating, the galvanizing step that would normally take place after drawing is eliminated.



4) Spool

Cleaned and coated rod is spooled on master reels



5) Strand

Multiple spools of rod are woven together into finished strand

REVOLUTIONARY SINGLE-STEP CLEANING AND COATING

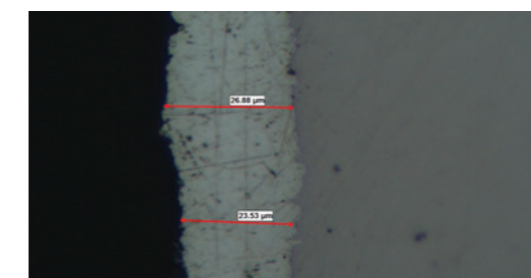
- Rod runs through electrically charged water
- DC charged electrolytes create superheated plasma at the surface of the rod
- Cleans and imparts unique surface characteristics that improve coating adhesion
- Coating material is added to the electrically-charged water
- Alloys mix with the substrate at the surface becoming embedded into the steel
- Since the alloy becomes part of the surface metal and can't scrape off, coating takes place before the drawing process—not after
- Water, residual alloy and hydrogen generated in the manufacturing process are reused
- Process does not affect the mechanical properties of the rod or cause hydrogen embrittlement like hot-dip galvanizing



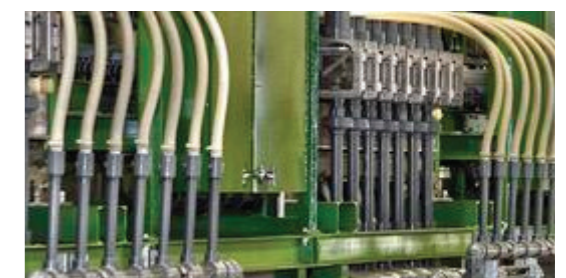
Wire prior to cleaning and coating



Cleaned and Zinc coated



Coating material is added to the electrically-charged water and mixes with the substrate at the surface becoming embedded into the steel



Hydrogen produced during the EPT manufacturing process can be captured and reused

EPT COATING ADVANTAGES

Considerations	Benefits
Eliminates the use of Zinc Phosphate which is a hazardous material	Reduces treatment and disposal costs
Closed loop system with no emissions or hazardous effluents	Environmentally-friendly and reduces costs. No pollution or hazardous substance abatement or handling necessary
100% cleaning can be achieved with no loss of steel	Better use of raw materials
Mechanical properties of the base metal are maintained	Rod maintains its original strength and durability. No additional measures are needed to prevent/reverse these effects
Inline cleaning and coating done as a continuous process	More efficient. Eliminates costly independent steps
Multiple strands of different size wires and grades can be processed at the same time	Creates manufacturing process and cost efficiencies
Same technology used for cleaning and coating	Machine uniformity optimizes investment, maintenance and training
EPT coated wire can be drawn. Coating won't scrape off	Enables cleaning and coating to take place in the same process
Provides more corrosion resistance with less coating compared with conventional processes	Limited consumption of alloys lowers costs while extending longevity in the field. This results in dramatically reduced costs of ownership
Traditional galvanization can scrape off at the clamp during installation or due to vibration over time	EPT coating becomes part of the wire surface and won't scrape off at contact points

ALL POPULAR SIZES AND ALLOYS

- Strand sizes from 3/16" to 1.25"
- Available with alloy coatings to meet customer budgetary and product longevity targets
- 100% Zinc
- 95% Zinc / 5% Aluminum
- 88% Zinc / 12% Nickel

MANUFACTURED TO INDUSTRY STANDARDS IN THE USA

- Manufactured from USA Steel
- New ASTM standard A1093
- Covers EPT processing of conductive materials
- No acids used in the cleaning process
- Eliminates the use of Zinc Phosphate, a hazardous material
- Provides approach for depositing a variety of coatings in many applications

CONTACT US TODAY FOR MORE DETAILS!

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