Trenton Wax-Tape® Anticorrosion Wrap System Provides Corrosion Solutions for the Water, Wastewater and Hydroelectric Industries

Presented By
Pete Gallus
U.S. Northwest Regional Sales Manager

Agenda

Wax anticorrosion wrap system provides a long term solution for the protection of oil, gas water, wastewater and hydroelectric assets.

- Overview of wax anticorrosion wrap system and its benefits
- Products
  - Primers
  - Wax wraps
  - Outerwraps
  - Additional products
- Applications
- Installation – Simple is Good
- Case studies and field applications
- Sample specifications
- Summary

Benefits of the Wax Wrap Systems

Wax products have a proven track record for over 75+ years in protecting customer assets in a wide range of applications

- Compatible with cathodic protection
- Long lasting corrosion protection barrier
- Ease of application
- User friendly – No mixing, easy cleanup
- Minimal surface prep required SSPC-SP2
- No special tools required
- Compatible with other coatings
- No drying or curing time prior to backfill
- Environmentally friendly
- Clean SDS
- Visual Inspection – No Jeep
- UV resistant – Above Ground tapes
- Can be applied to wet pipe – Dew Point not a concern

Versatility of the Wax Anticorrosion Wrap Systems

Wax Wrap System
Primers

Primers are a key reason why the Wax wrap system is so effective in mitigating corrosion.

- **Standard Primers**
  - Primer is a paste like surface conditioner that is a blend of microcrystalline waxes, plasticizers and inhibitors
  - Displaces existing moisture and immerses into the metallic pores forming a hydrophobic layer
  - Buried and aboveground applications
- **High Temp Primer**
  - High-temperature wax-based coating compound that will not melt and can be applied at ambient temperatures from 0° up to 230°F
  - Buried and aboveground applications

Wetting the pipe with Wax

Wax Wrap System
Below Ground

Below ground wrap

- A non-firming, anticorrosion wrap that provides long lasting protection for all metal structures for underground applications *(Photos at right)*
- Protects ductile iron, steel, stainless steel, copper and galvanized piping
- Provides economical corrosion protection
- Removable / offers accessibility with excellent conformability to all irregular services

Wax Wrap System
Above Ground

Not all manufactures have a UV Rated product

- A self-firming anticorrosion wrap for buried and atmospheric applications
- UV resistant
- Minimal surface prep required SSPC-SP2
- Protects ductile iron, steel, stainless steel, copper and galvanized piping
- Provides economical corrosion protection
- Removable / offers accessibility
- Excellent conformability to all irregular services
- Available in a range of colors based on utility preferences

Wax Wrap System
High Temp

High Temp Wax

- Designed for use in aboveground and belowground applications
- Can be applied and will perform effectively at continuous operating temperatures up to 230°F
- Works well in locations and environments with consistently high ambient temperatures
- When applying the wrap, keep in a warm environment to ease application
- Minimal surface prep required SSPC-SP2
- No cure time-immediate backfill
- No VOC’s, non-toxic and UV resistant

Outerwraps

Resin impregnated fiberglass wrap

- Adds mechanical protection to soft coatings
- Superior protection against soil stress
- Protection against backfill
- A “hard shell” outerwrap that protects Wax-Tape® wraps and may be painted
- “*Non-Shielding*” - good for cathodic protection systems
- Immediate backfill

PVC outerwrap is applied over primers and Wax wrap.

- Provides good mechanical and chemical resistance
- Economical Wrap
- Quick Application

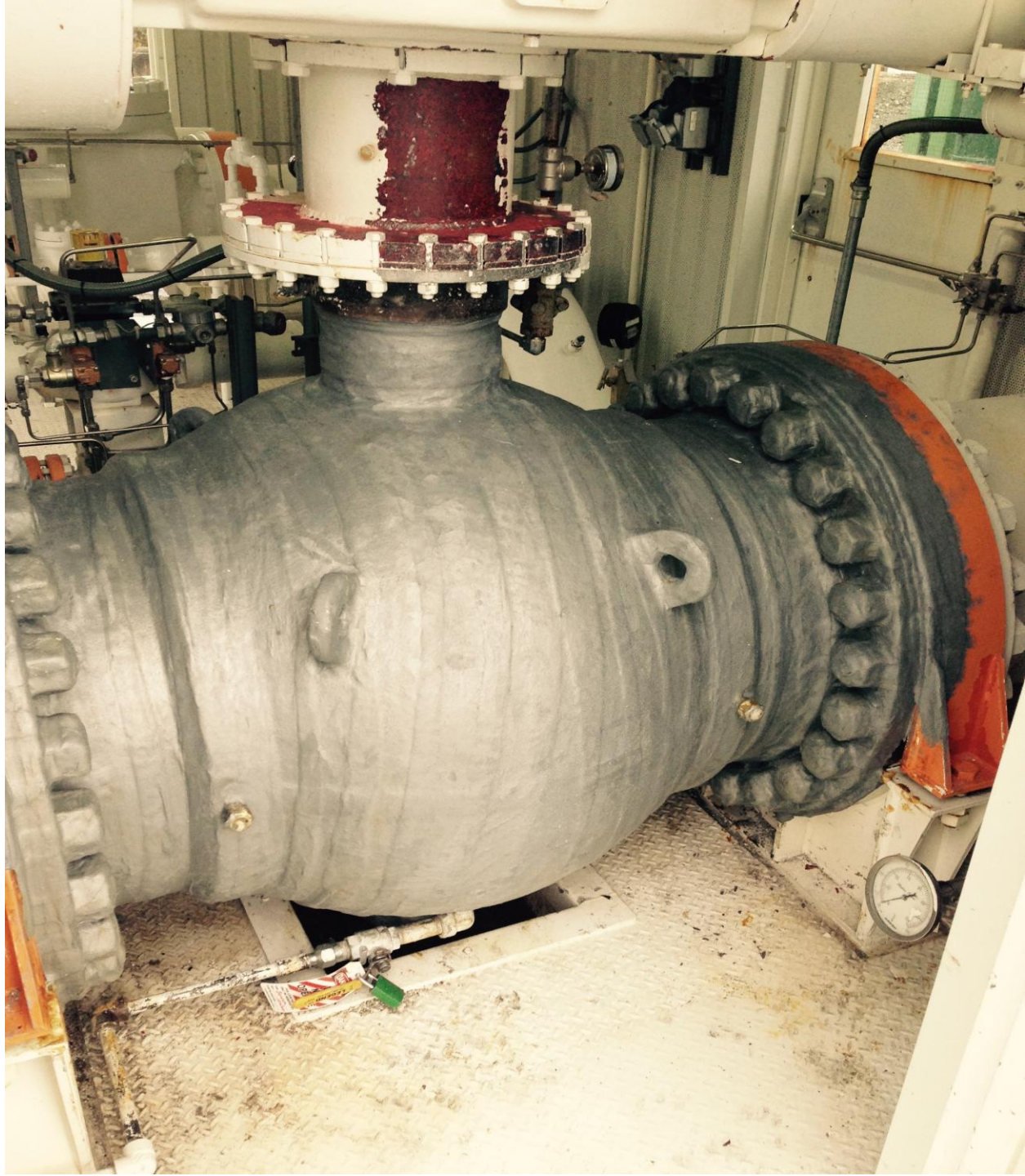
Additional Products

- **Profiling mastic**
  - Profiling mastic is used to establish smooth profiles over irregularly shaped fittings, such as flanged joints and valves. *(top photo)*

- **Exothermic weld protection**
  - Patch-Pad® exothermic weld protector is a versatile, easy-to-apply coating for small applications on pipelines and other metal structures. *(bottom photo)*

Applications

- Irregular Shapes – Fittings, Flanges, Valves, etc.
- Below Ground – Above Ground - Subsea
- Vaults – Water filled or Humid / Confined Spaces
- Soil to Air
- Coating to Coating
- Tunnels
- Encapsulate Asbestos and Lead Coatings
- Inclement Weather Situations



Irregular Shaped Fittings

Below Ground

Vaults and Pits

Vaults

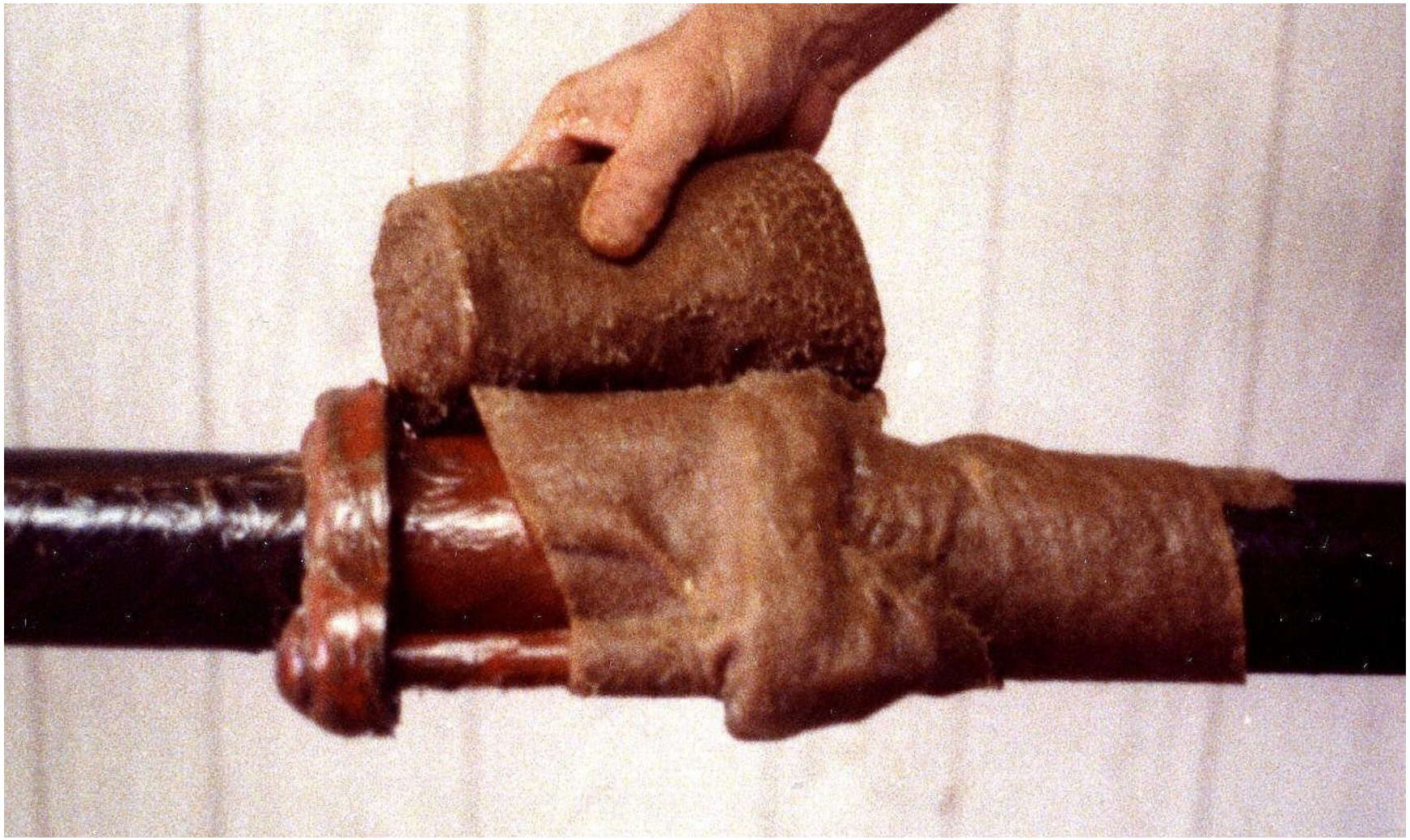
Soil to Air Transitions

Penstock Pipe in Tunnels

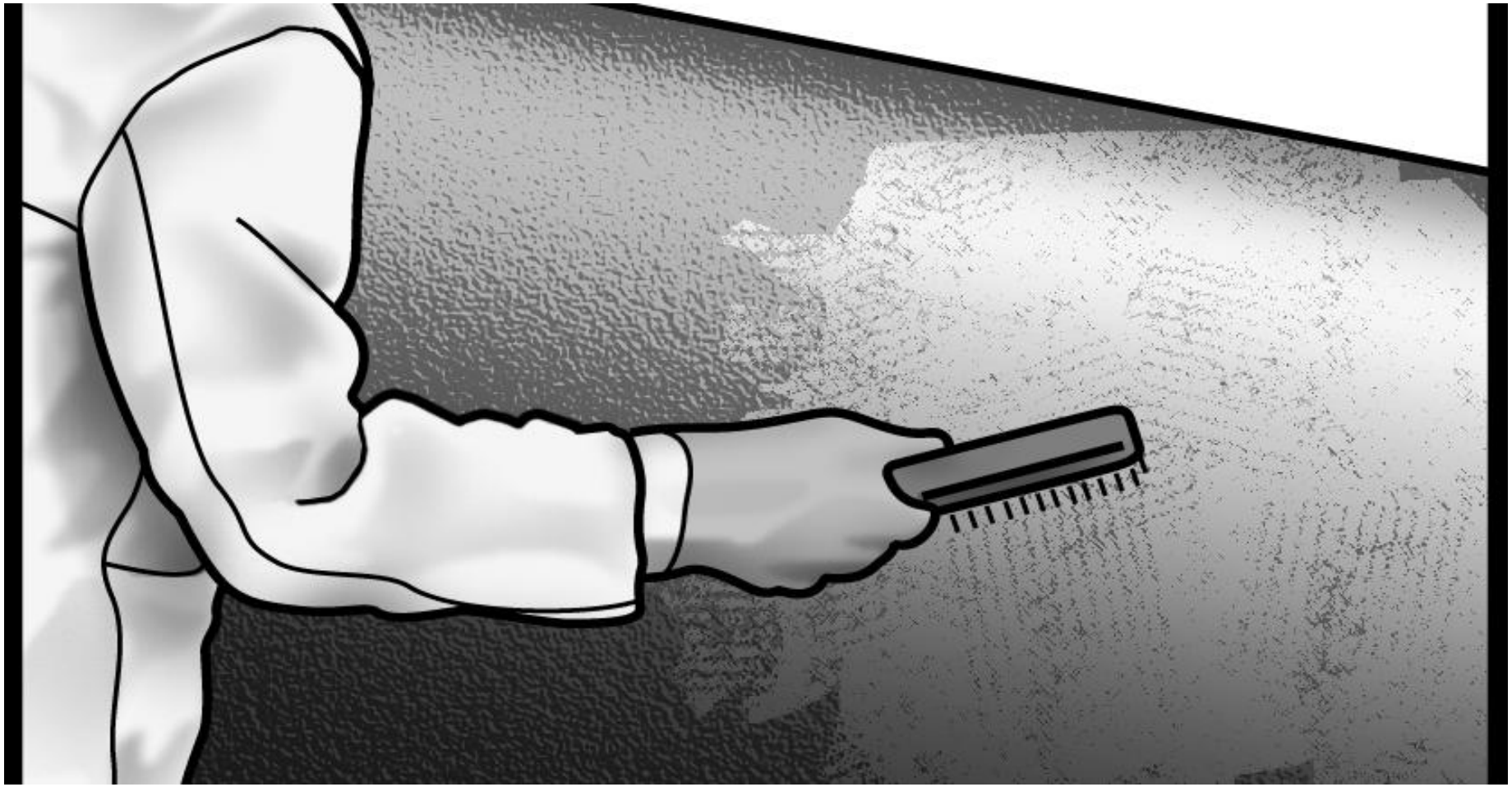
Encapsulate old asbestos coatings

No Pipe too Small or too Large

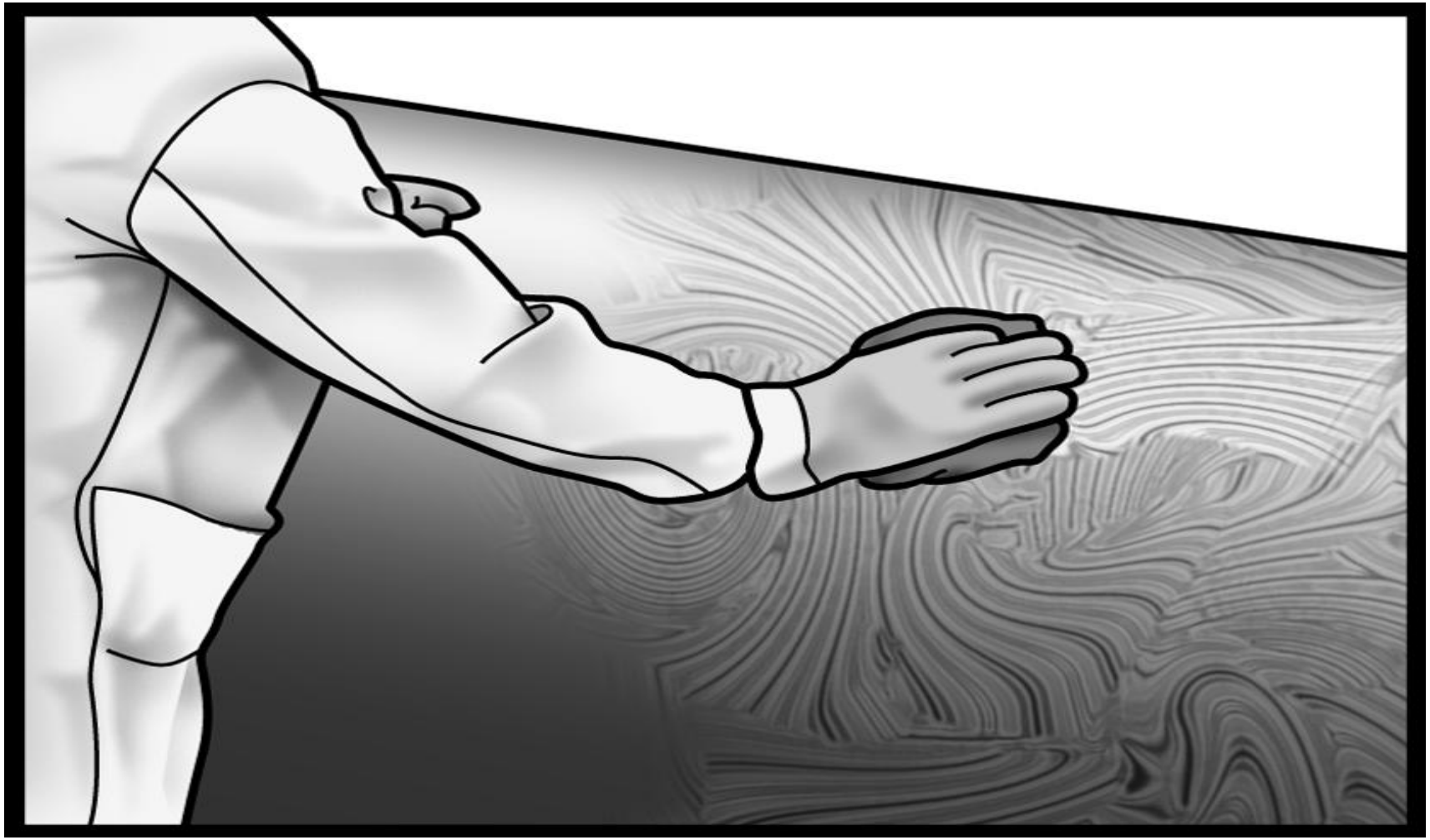
How to Install – Simple is Good



Hand Wire Brush: SSPC-SP2



Hand Apply Primer – *Most Important Step*



Yes- It’s messy, but it WORKS

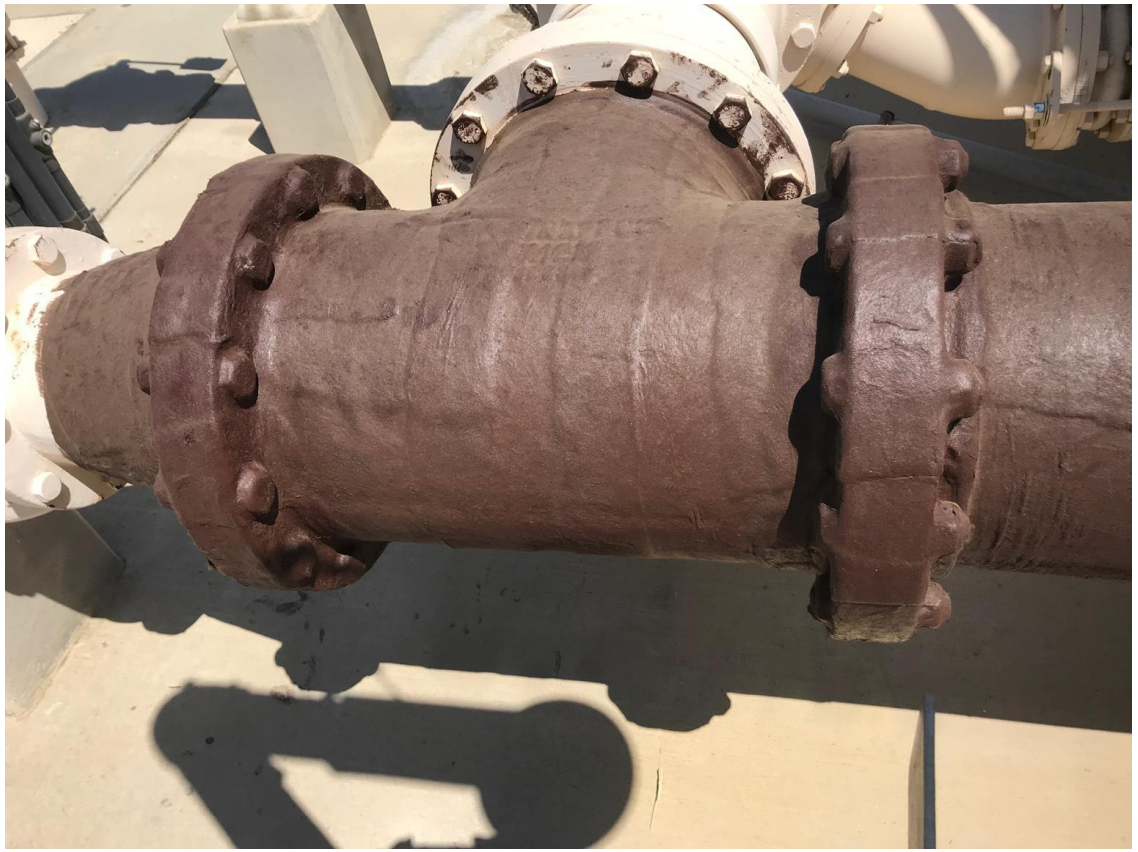
Apply Wax-Tape® Wrap

Apply Outerwrap if Necessary

Case Study in California

Western Municipal Water District, Lift Station

- **Project challenge**
  - Protecting the flange and MJ fittings. The issue with these particular assets was their expense and tendency to rust out over time. This project had previously needed regular maintenance, requiring blasting and recoating.
- **Solution**
  - Above ground UV rated wrap was applied.
- **Project outcome**
  - Inspected after 7 years and no new rust was seen.

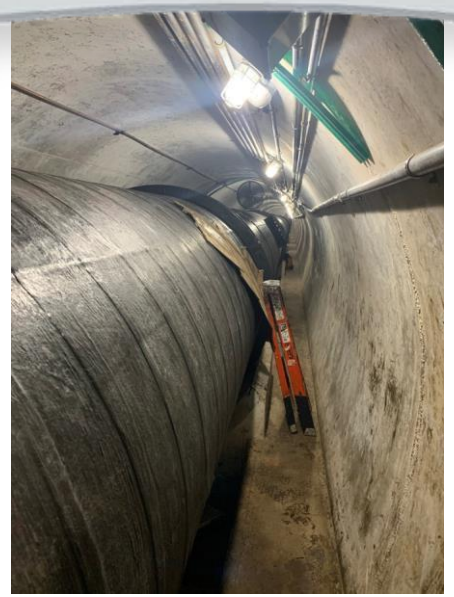


Case Study in Colorado

Two Penstocks located in Northern Colorado

- **Project challenge**
  - Two penstocks had been painted and were flaking, which exposed the lead primer underneath. Each penstock was approximately 280’ in length with a 72” diameter.
- **Solution**
  - Above Ground Wax anticorrosion wrap system provided the most practical application while offering a longer coating lifespan.
  - Primer and Above ground Wax- wrap were the recommended solution for the two penstocks.

The existing coating had begun to peel and flake, revealing the lead paint system underneath.



Temcoat™ 3000 primer and Wax-Tape® #2 wrap (black) were applied to 54’ of the 280’ penstock. This will be repeated each year until the penstocks are completely coated.

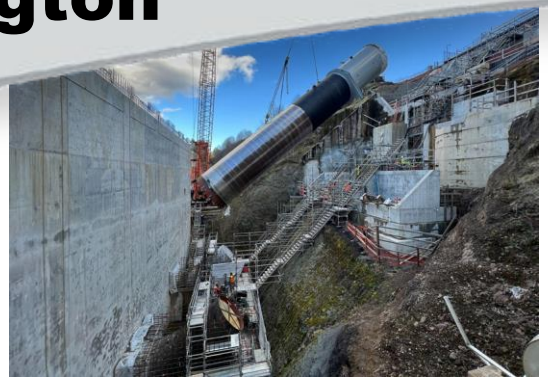
Below left photo shows the pipeline application in process.

Case Study in Oregon / Washington State

Two Penstocks

- **Project challenge**
  - A one hundred year old penstock was being replaced and wax products were specified to be applied on the newly installed penstocks.
  - The diameter of the pipe was 111” and required manufacturing special sizes of the Trenton Wax-Tape® anticorrosion wrap system.

- **Solution**
  - Wax systems provided the most practical application while providing a long coating lifespan.
  - Products used were primer, below ground wax wrap, above ground wax wrap, resin impregnated fiberglass outerwrap and the PVC clear wrap
  - Trenton was on site and trained the crews on the methods developed for applying the product on the penstocks.



Pre-applied Trenton products on Penstock and being put into place with a crane.

Penstock installed and ready to be connected to the dam.

Settlement and Victaulic joint wrapped with Temcoat™ 3000 primer and Wax-Tape® #1 wrap.

Close up of the irregular clamps coated with Temcoat™ 3000 primer and Wax-Tape® #1 wrap.

Case Study in Northern Utah

Belowground Vaults

- **Project challenge**
  - Painting resulted in repeated scraping and repainting every couple of years.
  - Vaults are often filled with water much of the year. Because the pipe structure is often wet, additional preparation is required before painting.
  - This vault has previously needed regular maintenance that required blasting and repainting.
- **Solution**
  - Wax system provided the most practical application that would ensure a much longer lifespan than paint.
  - Products used were primer, above ground wax wrap (blue) as specified by the customer
  - Long after a paint coating needs to be repainted the wax wraps will continue to protect for many years.

Summary of Benefits

- 75+ years of proven field-history
- Investment in quality products ensures long-term protection against corrosion
- Compatible with cathodic protection
- A successful corrosion protection barrier

Questions?

Pete Gallus
Sales Manager | U.S. Northwest Region

TRENTON CORP
An ISO 9001:2015 Registered Company
+1 (208) 618-9876
pgallus@trentoncorp.com
www.trentoncorp.com