PIPELINE CASING FILLING PROCEDURES

- By Tom Weber-Trenton Corporation
Corrosion and Debris Inside of a Casing
Inside the casing: Filling with dielectric material

Potential corrosion control solutions
Filling With Wax: Benefits

- Prevents Corrosion for the life of the pipeline!
- How? Presents a permeant water proof barrier
- Wax is chemically inert-will not dissolve, leak out, degrade, dry or crack over time
- Trenton Fill Coat #2 Casing Filler Wax is non-toxic and non-hazardous
- Reduces need for increased cathodic protection and helps to prevent future shorted casings
- Protects the casing itself internally from corrosion
Trenton Recommendations for Customer Preparations Before Filling Casings

- Expose both ends of the casing.
- Check for unobstructed vent access to casing.
- Install a top vent (2”) on the high end of the casing, and a bottom vent (2”) on the low end of the casing. (*Vent height must be at least 4” higher than the actual casing.* )
- On longer casings to be filled with cold-installed Fill Coat #2, install additional vents should be installed in casings longer than 125-150 feet.
Casing Vent Recommendations

- **Suggested optimal vent sizes**
  - 2” up to 1,000 gallons (3,785 litres)
  - 3” up to 1,000 to 2,500 gallons (3,875 to 9,460 Litres)
  - 4” over 2,500 gallons (9,460 litres)
  - Any casing with a 2” or greater vent opening can be filled
- Vent opening at the casing interface should be 1.5” minimum.
- We recommend optimal vent placement to be at least 12” from end of casing. Shorter distances are acceptable, as long as the vent is not restricted by the end seals or spacers.
End Seal Removal and Flushing On Existing Casings

- Remove seals and inspect condition inside casing.

- Flush casing if necessary, to remove debris in casing.

- Seal both ends of the casing with end seals, preferably link-type seals if possible.

- Air test casing and seals with 5 psi for approximately 15 minutes.

- If the casing passes the air test back fill and schedule fill.
Important Communications With Filling company prior to the Fill:

- Any difficulties in preparation of the casing

- Access to the job site - Right of way or obstacles?

- Time scheduling, (safety meetings, or early quit times etc.) will help expedite the work and insure best results
Casing End Seals

- Link Seals are best but require carrier pipe to be concentrically aligned inside the casing

- Must be able to withstand air pressure test! Traditional rubber boot seals don’t nor to “shrink sleeve” type seals

- Specially made wrap around end seal when carrier alignment is not possible-Installation video available
Trucks with hot-installed Wax Filler
Hot Installed Casing Filler is best for:

- When a turnkey wax installation is required
- Typically preferred for larger and numerous casings
- Time constraints are in place
Corrosion Inhibitor poured into casing before filling
Filling Procedure

- Corrosion inhibitor is poured into the fill vent at a ratio of 1 gallon per 200 gallons of filler.

- Wax filler is pumped into the casing through the bottom vent when possible.

- The fill process is normally completed when the filler is displaced from the discharge vent. (Gallonage meter monitors progress of fill as well.)

- Various valves and pressure gauges help control the quality and the safety of the fill.
Casing Filling In Process
Clean Up

- Any Filler discharged from the vents, will be cleaned up by the filling crew.
- Any material leaking from failed end seals will be cleaned up by customer
- Wax Filler is 100% non-toxic and requires no special disposal procedures
Cold Filling in drum with pumping unit
Trenton Cold Installed Casing Filler

• Most economical for smaller jobs that may not require a truck or for remote locations

• Contractor or operator installable—specifically formulated for ease of installation

• Requires a specialized rentable pump

• Available in 55 gallon drums

• Environmentally safe, clean MSDS no toxic ingredients to potentially contaminate ground water
Water displacement from casing
After Filling a Casing

- Further corrosion concerns in a casing that is properly filled are permanently eliminated
- Filler is chemically inert
- Wax Filler will not dry, crack or liquefy and leak out of the casing. It is not water soluble.
- Environmentally benign and non-toxic
- New casings are often filled to prevent future corrosion and resultant maintenance concerns
- Filling Casings is an established practice in throughout the world in Latin America, Europe and Asia
QUESTIONS?