Coating Application and Repair – Brush, Roll, or Wrap

SCOPE AND PURPOSE

This procedure is to ensure proper surface preparation and application or repair of coatings using a brush or roller.

It describes practices required to comply with §§192.461, 192.479, and 192.481.

RESPONSIBILITY

The Construction or System Maintenance Supervisor, or other designee, is responsible to ensure that proper surface preparation and application of coating to pipe is performed as described in this procedure.

PERSONNEL SAFETY (Where Applicable)

- When applicable, suitable personal protection equipment must be used commensurate with the task performed (eye protection, respiratory protection, etc.).
- Ensure that the work zone/area is setup to protect the public from danger.
- Ensure that all applicable safety equipment is being utilized as per company policy.

EQUIPMENT AND MATERIALS

Primer(s), as needed
Paint or coating, as needed
Wrap
Mastic
Routine tools
Other equipment and materials as needed

OPERATOR QUALIFICATION

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

INSTRUCTIONS

General

Buried steel gas piping must have an external protective coating.
Each external protective coating, whether conductive or insulating, applied for the purpose of external corrosion control must:
(1) Be applied on a properly prepared surface;
(2) Have sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture;
(3) Be sufficiently ductile to resist cracking;
(4) Have sufficient strength to resist damage due to handling and soil stress; and,
(5) Have properties compatible with any supplemental cathodic protection.
  (a) Each external protective coating which is an electrically insulating type must also have low moisture absorption and high electrical resistance.
  (b) Each external protective coating must be inspected just prior to lowering the pipe into the

ditch and backfilling, and any damage detrimental to effective corrosion control must be repaired.

(c) Each external protective coating must be protected from damage resulting from adverse ditch conditions or damage from supporting blocks.

(d) If coated pipe is installed by boring, driving, or other similar method, precautions must be taken to minimize damage to the coating during installation

Because of the various types of coatings available, some general procedures for applying brushed, rolled, or wrapped coatings are listed below. **All pipe coatings should be applied in accordance with the manufacturer's application instructions.**

- Store, handle and transport coating material(s) in such a manner as to prevent damage or contamination.
- Prepare the pipe, valve, or fitting surface by ensuring that all surface rust, dirt, oil, grease, loose coatings, or other foreign material is cleaned from the surface.
  - Welded joints may need to be wire brushed with a power wire brush or other method that will remove slag or other loose particles.
- Ensure that the pipe surface is free of moisture and remains free of moisture during the coating process.
- Apply the primer and/or finished coat evenly to pipe, fittings, and components ensuring adhesion and complete coverage.
- Allow the primer and/or finished coat to thoroughly dry (refer to manufacturer's specifications for drying times).
- Apply the wrap using a slight tension in a spiral configuration with sufficient overlapping of the wrap to ensure proper coverage taking care to minimize wrinkling of the wrap.
- If wrapping a pipeline that is to be pulled through a borehole, ensure that the wrap is applied so that the exposed edge of the wrap faces opposite to the borehole.
- For pipelines extending from underground to aboveground, the coating shall extend a reasonable distance above ground level.
- Inspect the final coating for verification that coating has been applied correctly.

REPORTING/NOTIFICATION

The SCUD employee shall complete documentation in accordance with the Operation and Maintenance Manual. SCUD utilizes electronic software to record and maintain all atmospheric corrosion inspections. Any corrosion shall be reported on the electronic Exposed Pipe Form. Engineering shall verify serviceability of any section of pipe found to contain corrosion pits.

ABNORMAL OPERATING CONDITIONS

AOC Main Category (Examples of Specific AOCs)	**Reactions to AOC, as appropriate**	
Unplanned escape of product from a pipeline • Blowing/Escaping gas/Grade I leak	➢ Protect life & Property ➢ Prevent accidental ignition ➢ Notify appropriate personnel	➢ Locate source/cause of AOC ➢ Use appropriate PPE ➢ Stop gas flow

	➢ Notify Fire/Emergency Responders ➢ Initiate Emergency Plan	➢ Make repairs/eliminate AOC
Fire or Explosion • Fire on a pipeline • Explosion	➢ Protect life & Property ➢ Prevent accidental ignition ➢ Notify appropriate personnel ➢ Notify Fire/Emergency Responders ➢ Initiate Emergency Plan	➢ Locate source/cause of AOC ➢ Use appropriate PPE ➢ Stop gas flow ➢ Make repairs/eliminate AOC
Unplanned Status Change • Low structure-to-electrolyte potential • Stray current on a pipeline	➢ Protect life & property ➢ Prevent accidental ignition ➢ Notify appropriate personnel	➢ Locate source/cause of AOC ➢ Make repairs/eliminate AOC
Inadequate Odorization or Reports of Gas Odor • Low odorization • Over odorization • Odor complaint	➢ Protect life & property ➢ Prevent accidental ignition ➢ Notify appropriate personnel	➢ Locate source/cause of AOC ➢ Make repairs/eliminate AOC

RELATED PROCEDURES

MAINT006 – Visual Inspection for Atmospheric Corrosion
MAINT007 – Visual Inspection of Buried Pipe and Components When Exposed
MAINT008 – Measurement of External and Atmospheric Corrosion