

8-C Protective Pipeline Coatings

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1.0 SCOPE

The purpose of this section is to provide instruction on the application and testing of the coating systems used on the DENC and DESC *pipeline* system for above and below grade steel *pipe* and fittings.

2.0 REGULATORY REFERENCES

49 CFR Part 192 § [192.461](#)

3.0 PROCEDURE [[192.461](#)]

(a) All buried steel pipelines *shall* have an external protective coating applied for the purpose of corrosion control. These protective coatings *should*:

- (1) be applied on a properly prepared surface,
- (2) have sufficient adhesion to remain securely bonded to the pipeline,
- (3) be flexible enough to resist cracking,
- (4) be strong enough to resist damage due to handling and soil stress,
- (5) be compatible with cathodic protection methods,
- (6) have low moisture absorption, and
- (7) have high electrical resistance.

- (b) Mill coated pipe shall be coated as specified in the company Engineering Standards or purchasing specifications. Field coated pipe and components, and coating repairs, should be coated according to the manufacturer's installation guidelines with particular emphasis on surface cleaning, anchor pattern, cure temperatures and times, pipe temperature, and ambient dew point.
- (c) Precautions *must* be taken to minimize any damage to the coating during installation.
 - (1) Pipelines that are installed by boring, drilling, or other similar methods should be thoroughly checked, including a close inspection of the pipe's leading edge, to ensure that the protective coatings are not damaged.
 - (2) Protective measures such as rock shield, sand padding etc. should be used where there is a chance that the pipe might come in contact with any rock large enough to cause damage to the coating, during or after backfilling.
- (d) Any damages to a pipeline's protective coating that *may* be detrimental to effective corrosion control must be repaired.
- (e) Follow all manufacturer's instructions and allow all coatings to adequately cure before backfilling.
- (f) For all new 2" steel mains or larger protective coatings must be visually inspected and electrically inspected (jeeped) prior to lowering the pipe into a ditch and back filling. Any exceptions should be approved by the manager.
 - (1) Fusion-bonded epoxy coated steel pipe should be jeeped according to NACE SP0490-2007, *Holiday Detection of Fusion-Bonded Epoxy External Pipeline Coating of 250 to 760 μ m (10 to 30 mil)*
 - (2) 2" and smaller coal tar wrapped steel pipe should be jeeped at 10,000 volts
 - (3) 2-1/2" and larger coal tar wrapped steel pipe should be jeeped at 12,000 volts

4.0 TRAINING/QUALIFICATIONS

See the appropriate system Operator Qualification Program.

5.0 DOCUMENTATION/FORMS

Record all coating repairs on the applicable company forms.

System specific forms should be used where applicable.

State Specific: South Carolina

- [CP Deficiency Report \(DESC Form OM-405\)](#) (PDF file)

* C.P. exceptions are documented either in the Essentials system or by the paper CP Deficiency Report.

Corrosion control documentation shall be maintained for the life of the pipeline.

6.0 RELATED DOCUMENTS

NACE SP0490-2007, *Holiday Detection of Fusion-Bonded Epoxy External Pipeline Coating of 250 to 760 μm (10 to 30 mil)*.

7.0 APPENDICES

None at this time.

(UNCONTROLLED IF PRINTED)