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Guidance on Industry Standard for Cold Applied Tape Wrap

GIS 06-401

**BP GROUP
ENGINEERING TECHNICAL PRACTICES**

Foreword

This BP Engineering Technical Practice, Guidance on Industry Standard (GIS) is based upon ANSI/AWWA C214, "Cold Applied Tape Coatings for the Exterior of Steel Water Pipelines." The requirements of ANSI/AWWA C214 shall apply except as superseded by this GIS.

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1. Scope

- a. This GIS describes the materials and the methods of application of cold applied tape coating systems to transmission pipe, using coating techniques and equipment recommended by the SUPPLIER. It covers applications carried out in the factory and at site.
- b. Notwithstanding the Foreword, the service duty of the pipe shall not be restricted to service water.
- c. Cold applied tapes shall be used on pipe destined for onshore applications only, unless otherwise approved by the PURCHASER.
- d. Cold applied tape coatings have limited resistance to soil stressing at elevated temperatures, and particularly where temperature cycling is experienced. They shall not be used for pipe where the service temperature or the environmental temperature in service exceeds 40°C (104°F) unless independent test data is available which supports their use above this temperature limit to the satisfaction of the PURCHASER.
- e. Due to the difficulties associated with hand application to large diameter pipe and the risk of soil stressing (see also 1.d), cold applied tapes should not be used on line pipe larger than 18 in diameter.

2. Purpose

The purpose of this GIS is to provide PURCHASERS, SUPPLIERS, and APPLICATORS with the minimum selection criteria, application, performance testing, and inspection requirements for cold applied tape wrapping systems for the protection of steel transmission pipelines from external corrosion.

3. References

The following standards are referenced in addition to those in ANSI/AWWA C214.

BP

GIS 06-404	Guidance on Industry Standard for Field Applied Coating and Repairs for Pipelines.
GIS 06-405	Guidance on Industry Standard for Refurbishment of External Coatings on Pipelines.

American National Standards Institute/American Water Works Association (ANSI/AWWA)

ANSI/AWWA C214	Cold Applied Tape Coatings for the Exterior of Steel Water Pipelines.
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American Society for Testing and Materials (ASTM)

ASTM D570	Standard Test Method for Water Absorption of Plastics.
ASTM D1000	Standard Test Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications.
ASTM G8	Standard Test Methods for Cathodic Disbonding of Pipeline Coatings.
ASTM G12	Standard Test Method for Non-destructive Measurement of Film Thickness of Pipeline Coatings on Steel.



ASTM G14	Standard Test Method for Impact Resistance of Pipeline Coatings (Falling Weight Test).
ASTM G17	Standard Test Method for Penetration Resistance of Pipeline Coatings (Blunt Rod).

International Organisation for Standardisation (ISO)

ISO 8501-1	Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness – Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel Substrates after overall removal of previous coatings.
ISO 8502-3	Tests for the assessment of surface cleanliness – Part 3 Assessment of dust on steel surfaces prepared for painting (Pressure sensitive tape method).
ISO 8503	Preparation of Steel Substrates before Application of Paints and Related Products-Surface Roughness Characteristics of Blast-Cleaned Steel Substrates Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces. Part 2: Method of Grading of Surface Profile of Abrasive Blast-Cleaned Steel-Comparator Procedure. Part 4: Method for the calibration of ISO surface profile comparators and for the determination of surface profile – Stylus instrument procedure. Part 5: Replica tape method for the determination of surface profile.
ISO 11124	Preparation of steel substrates before application of paints and related products - Specifications for metallic blast cleaning abrasives.
ISO 11126	Preparation of steel substrates before application of paints and related products - Specifications for non-metallic blast cleaning abrasives.

NACE International (NACE)

NACE RP0274	High-Voltage Electrical Inspection of Pipeline Coatings.
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Society for Protective Coatings (SSPC)

SSPC-SP 1	Solvent Cleaning.
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The APPLICATOR shall be fully conversant with these documents and shall have ready access to them at the worksite throughout the duration of the work.

4. Definitions

The following definitions shall apply in this GIS:

Surface cleaning

The removal of all dust, dirt, soluble salts, oil, and grease from the steel substrate using organic solvents, or detergent-water solutions

Abrasive blast cleaning

The removal of surface contamination from the pipe by pneumatic or mechanically propelled non-metallic abrasive, steel grit, or a mixture of steel shot and grit

Power tool cleaning

The removal of solid surface contamination by power driven tools, such as rotary wire brushes, needle guns, flapper wheels, etc.

