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شرکت ملی گاز ایران

مدیریت پژوهش و فناوری

امور تدوین استانداردها

IGS

دستورالعمل

سیستم پوشش غلاف انقباضی حرارتی برای حداکثر دمای تا ۸۰ درجه سانتی گراد

Heat Shrinkable Sleeve Coating System for Max. Temperature up to 80°C



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شرکت ملی گاز ایران



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باسلام،

به استحضار می‌رساند در جلسه ۲۰۷۹ مورخ ۱۴۰۳/۰۷/۲۹ هیأت مدیره،
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۲- دستورالعمل "تدوین و نگارش استانداردهای شرکت ملی گاز"

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Foreword

This standard specification is intended to be mainly used by N.I.G.C. and contractors, and has been prepared base on interpretation of recognized standards and technical documents, as well as knowledge, backgrounds and experiences in gas industries at national and international levels.

Iranian Gas Specification (IGS) are prepared, reviewed and amended by technical standard committees within NIGC standardization division of research and technology management and submitted to "the standards council of NIGC" for approval.

IGSs are subjected to revision, amendment or withdrawal, if required, and thus the latest edition of IGS shall be checked / inquired by NIGC'S users.

This standard must not be modified or altered by NIGC employees or its contractors. Any deviation or conflicts between this specification and other applicable standards, codes, procedure or well-known manufacturer's specifications must be resolved in writing by the user or its representative through Manager, Engineering Department or standardization division of NIGC.

The technical standard committee welcomes comments and feedbacks from concerned or interested corporate and individuals about this standard, and may revise this document accordingly based on the received feedbacks.

General Definitions

Throughout this standard the following definitions, where applicable, should be followed:

- 1- "STANDARDIZATION DIV." is organized to deal with all aspects of industry standards in NIGC. Therefore, all enquiries for clarification or amendments are requested to be directed to mentioned division.
- 2- "COMPANY": refers to National Iranian Gas Company (NIGC).
- 3- "SUPPLIER": refers to a firm who will supply the service, equipment or material to IGS specification whether as the prime producer or manufacturer or a trading firm.
- 4- "SHALL ": is used where a provision is mandatory.
- 5- "SHOULD": is used where a provision is advised only.
- 6- "MAY": is used where a provision is completely discretionary.

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The most important changes include the following but are not limited to, and the reading of the standard full text by the end user is mandatory:

Clause	Title
1	SCOPE
4	REQUIREMENTS
6	PACKAGING
8	STORAGE CONDITION
10	APPLICATION OF COATING
11	INSPECTION AND TESTING
12	REPAIR /Table 2-Physical properties of repair patch material
13	HEALTH, SAFETY AND ENVIRONMENT

1. SCOPE

This standard specification covers the minimum requirements of high temperature hot melt type heat shrinkable sleeve used for external corrosion protection on the field girth weld areas of line pipes. The hot melt type heat shrinkable sleeve shall be used for the pipeline projects that has been factory coated with three layer extruded polyethylene coating system with the maximum operating temperature of up to 80 OC.

Note 1: This standard withdraws and replaces IGS-M-TP-014-3 (3).

Note 2: This coating system shall be used for new construction or when pipelines are free of gas flow.

2. REFERENCES

Throughout this standard the following dated and undated standards/codes are referred to. This referenced documents shall, to the extent specified herein, from a part of this standard. For dated references, the edition cited applies. For undated references, the latest edition of the referenced documents applies.

2.1 Normative References

ASTM D 1000 (2017) "Standard Test Methods for Pressure – Sensitive Adhesive Coated Tapes used for Electrical and Electronic Applications"

ASTM D 4218 (2015) "Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds by the Muffle-Furnace Technique"

ASTM D 4285 (2018) Standard Test Method for Indicating Oil or Water in Compressed Air

ASTM D 2671 (2021) "Standard Test Methods for Heat-Shrinkable Tubing for Electrical Use "

ASTM D 2240 (2015) "Standard Test Method for Rubber Property—Durometer Hardness"

ASTM D 2290 (2019) "Standard Test Method for apparent hoop Tensile Strength Plastic or reinforced plastic pipe by split disk method "

ASTM D 638 (2022) "Standard Test Method for Tensile Properties of Plastics"

ASTM D 570 (2018) "Standard Test Method for Water Absorption of Plastics "

ASTM E 28 (2018) " Standard Test Method for Softening Point of Resins Derived from Naval Stores by Ring and Ball Apparatus "

ASTM D 4940 (2020) "Standard Test Method for Conducti Metric Analysis of Water Soluble Ionic Contamination of Blasting Abrasives"

IGS-M-PL-001-2 "SMLS/HFW/SAWH Carbon Steel Pipes, Part 2- Grades B to X80, Sizes 6 to 56 inches"

IGS-M-PL-001-2 "SMLS/HFW Carbon Steel Pipes, Part 1- Grades B, 1/2 to 4 inches"

IGS-C-TP-010 "3-Layer Polyethylene Coating System "

ISO 11124 (all parts) (2018) Preparation of Steel Substrates before Application of Paints and Related Products –Specifications for Metallic Blast-Cleaning Abrasives

ISO 11126 (all parts) (2018) "Preparation of Steel Substrates before Application of Paints and Related Products –Specifications for Non-metallic Blast-Cleaning Abrasives"

ISO 18553 (2007) "Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds"

ISO 8501-1 (2007) "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 (2017) "Preparation of Steel Substrates before Application of Paints and Related Products – Test for Assessment of Surface Cleanliness – Part 3: Assessment of Dust on Steel Surface Prepared for Painting (Pressure Sensitive Tape Method)"

ISO 8502-6 (2020) "Preparation of Steel Substrates before Application of Paints and Related Products – Test for Assessment of Surface Cleanliness – Part 6: Extraction of Soluble Contaminants for Analysis – The Bresle Method"

ISO 8502-9 (2020) "Preparation of Steel Substrates before Application of Paints and Related Products – Test for the Assessment of Surface Cleanliness – Part 9: Field Method for the Conduct Metric Determination of Water-Soluble Salts"

ISO 8503-5 (2017) "Preparation of Steel Substrates before Application of Paints and Related Products –Surface Roughness Characteristics of Blast-Cleaned Steel Substrates – Part 5: Replica Tape Method for the Determination of the Surface Profile"

ISO 9001 "Quality system – Model for Quality Assurance in Design, Development, Production, Installation and Servicing"

ISO 21809-3(2020) "Petroleum and Natural Gas Industries – External Coatings for Buried or Submerged Pipelines Used in Pipeline Transportation Systems – Part 3: Field Joint Coating"

NACE SP 0303(2020) "Field-Applied Heat-Shrinkable Sleeves for Pipelines: Application, Performance, and Quality Control"

2.2 Informative References

EN 10204 (2004) "Metallic Products-Types of Inspection Documents"