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شرکت ملی گاز ایران
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امور تدوین استانداردها

IGS

مشخصات فنی خرید

سیستم غلاف انقباضی حرارتی برای دمای تا ۸۰ درجه سانتیگراد

Heat Shrinkable Sleeve System (Hot Melt Adhesive) for
Service Temperature up to 80 C.



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شرکت ملی گاز ایران



دفتر مدیرعامل



ابلاغ مصوبه هیأت مدیره



مدیر محترم پژوهش و فناوری



باسلام،



به استحضار می‌رساند در جلسه ۱۷۸۰ مورخ ۱۳۹۷/۳/۶ هیأت مدیره، نامه شماره گ/۹/۰۰۰/۲۰۴۲۴ مورخ ۹۷/۲/۲۵ مدیر پژوهش و فناوری درمورد تصویب نهایی استاندارد به شرح زیر مطرح و مورد تصویب قرار گرفت :

۱. دستورالعمل بازرسی رله‌های حفاظتی کلیدهای هوایی



IGS-I-EL-003(0)

۲. دستورالعمل بازرسی رله‌های حفاظتی

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۳. سیستم غلاف انقباضی حرارتی برای دمای تا ۸۰ درجه سانتیگراد

IGS-M-TP-014-3(3)

این مصوبه در حکم مصوبه مجمع عمومی شرکت‌های تابعه محسوب و برای کلیه شرکت‌های تابعه لازم الاجرا می‌باشد.



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FOREWORD

This standard is intended to be mainly used by NIGC and contractors and has been prepared on interpretation recognized standards, technical documents, knowledge, backgrounds and experiences in gas industries at national and international levels.

Iranian gas standards (IGS) are prepared, reviewed and amended by technical standard committees within NIGC Standardization division and submitted to the NIGC's "STANDARDS COUNCIL" for approval.

IGS Standards are subject to revision, amendment or withdrawal, if required, thus the latest edition of IGS shall be checked/inquired by NIGC users.

This standard must not be modified or altered by the end users within NIGC and her contractors. Any deviation from normative references and/or well known manufacturers specifications must be reported to Standardization division.

Any comments from concerned parties on NIGC distributed IGS are welcome to technical standards committees and will receive serious attention and consideration should a revision to standards is recommended .

GENERAL DEFINITIONS

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

- 1- "STANDARDIZATION DIV." has been organized to deal with all aspects of industrial standards in NIGC. There for, all queries for clarification or amendments are requested to be directed to mentioned div.
- 2- "COMPANY": refers to national Iranian gas company.
- 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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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.

Note:

The materials for field repair of main coating (melt stick, filler mastic and repair patch) are covered in Annex A.

2. References

Throughout this standard specification , the following standards and codes are referred to , the edition of them , that are in effect at the time of issues of this standard specification shall , to the extent specified herein , form part of this standard specification . The applicability of changes in standards and codes that occur after the date of standards that referred shall be mutually agreed upon by the purchaser and manufacturer or supplier.

2.1 Normative References

IGS-C-TP-010(1) , " 3Layer polyethylene coating system"

ASTM D 570 (2010), "Test method for water absorption of plastics"

ASTM D 638 (2014) , "Test method for tensile properties of plastics"

ASTM D 1603 (2014), "Standard test method for carbon black content in olefin plastic"

ASTM D 1000 (2017) , "Test Method for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications"

ASTM D 2240 (2015) , "Test method for rubber property-durometer hardness"

ASTM E 28 (2014) , "Test method for softening point of resins derived from naval stores by Ring-and-Ball apparatus"

ISO 6964 (2006) , "Determination of carbon black content by calcination and pyrolysis Test method and basic specification"

ISO 18553 (2014), "Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds"

ISO 21809-3 (2016), "Petroleum and Natural Gas Industries External Coating – Part 3: Field Joint Coatings"

2.2 Informative References

BS EN 12068 (1999) , "Cathodic protection-External organic coatings for the corrosion protection of buried or immersed steel pipelines used in conjunction with cathodic protection-Tapes and shrinkable materials"

3. Terms and Definitions

3.1 Heat Shrinkable Sleeve

Coating that will reduce in dimensions from an expanded size to a predetermined size by the application of heat.

3.2 Hot Melt Adhesive

A family of adhesive based on semi-crystalline polymers.

3.3 Coating Repair Material

Pre-manufactured patches, fillers, etc., compatible with and made from similar materials as the heat shrinkable sleeve.

3.4 Coating System

The complete number and types of coats applied to a substrate in a predetermined order.

3.5 Filler Material

Compatible material used under a heat shrinkable sleeve or repair patch to fill voids if any.

3.6 Factory Coating (mill coating)

Coating applied to pipe length in a factory or yard before delivery.

3.7 Cut back

The length of pipe left uncoated at each end for joining purpose (e.g.welding)

3.8 Adhesion Strength

The force necessary to remove the coating from a prescribed surface when measured in Accordance with specific conditions of test.

3.9 Application Procedure Specification (APS)

Document describing procedures, methods, equipment and tools used for coating application.

4. General Characteristics

1- The hot melt type heat shrinkable sleeve shall consist of a hot melt type adhesive coated wraparound sleeve.

2- The black backing layer of the heat shrinkable sleeve shall be irradiation (electron beam) cross linked high density poly ethylene.