

IGS-M-PL-006(3)

Jan. 2017

Approved

مصوب



شرکت ملی گاز ایران

مدیریت پژوهش و فناوری

امور تدوین استانداردها

IGS

مشخصات فنی خرید

اتصال عایقی

INSULATING JOINT



تاریخ: ۱۳۹۵/۱۱/۲۶
شماره: ی. ۰/دب. ۳۲۵-۱۷۸۳۷



شرکت ملی گاز ایران



دفتر مدیر عامل



ابلاغ مصوبه هیأت مدیره



مدیر محترم پژوهش و فناوری

باسلام،

به استحضار می‌رساند در جلسه ۱۷۱۸ مورخ ۱۳۹۵/۱۱/۱۰ هیأت مدیره، نامه شماره گ. ۱۵۴۷۱۸/۰۰۰/۹۶ مورخ ۹۵/۱۱/۶ مدیر پژوهش و فناوری در مورد تصویب نهایی استاندارد تحت عنوان "مشخصات فنی خرید اتصال عایقی" به شماره استاندارد (3) IGS-M-PL-006 مطرح و مورد تصویب قرار گرفت:

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

الهام ملکی

دبیر هیأت مدیره



رونوشت: مدیر عامل محترم شرکت ملی گاز ایران و رئیس هیأت مدیره

: اعضای محترم هیأت مدیره

: مشاور و رئیس دفتر محترم مدیر عامل

: رئیس کل محترم امور حسابرسی داخلی

: رئیس محترم امور حقوقی

: رئیس محترم امور مجامع



FOREWORD

This standard is intended to be mainly used by NIGC and contractors, and has been prepared based on interpretation of recognized standards, technical documents, knowledge, backgrounds and experience in natural gas industry 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 employees and contractors.

This standard must not be modified or altered by NIGC employees or its contractors. Any deviation from normative references and/or well-known manufacturer's specifications must be reported to Standardization Division.

The technical standard committee welcomes comments and feedbacks 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.

Website: <http://igs.nigc.ir>

E-mail: igs@nigc.ir

CONTENTS	PAGE
1. SCOPE	2
2. REFERENCES	2
3. TERMS AND DEFINITIONS	3
4. SYMBOLS AND ABBREVIATED TERMS	4
5. ORDERING INFORMATION	4
6. TECHNICAL REQUIREMENTS	4
7. INSPECTION AND TESTING	8
8. MARKING	11
9. QUALITY ASSURANCE PROVISIONS	11
10.DOCUMENTS AND CERTIFICATES	12
11. PACKING AND SHIPMENT	12
 TABLES	
TABLE 1 – Pup Piece Type	5
TABLE 2 – Forged Parts and Pups Material	5
TABLE 3 – Minimum Overall Length of Insulating Joints	7
TABLE 4 – Bevel end Cut –Back Length	8
 APPENDIX A – Data Sheet	13

1. SCOPE

This specification covers minimum NIGC's requirements of design, material selection, fabrication, inspection and testing for butt weld end, monolithic insulating joints used for electrical insulation between sections of non-sour natural gas pipelines with pressure class rating 150, 300 and 600 as per ASME B16.5 , service temperature range from -29 °C to +60 °C. The insulating joint is intended to be girth welded between two pipeline sections under or above ground.

2. REFERENCES

Throughout this standard specification the following standard and codes are referred to. The applicability of changes in standards and codes that occur after the date of this standard that referred shall be mutually agreed upon by the purchaser and supplier and / or manufacturer.

ASME B16.5 (2013) "Pipe Flanges and Flanged Fittings"

ASME B31.8 (2012) "Gas Transmission and Distribution Piping Systems"

ASME sec V (2013) "Nondestructive Examination"

ASME sec VIII (2013) "Division 1: Rules for Construction of Pressure Vessels"

ASME sec IX (2013) "Qualification Standard for Welding and Brazing Procedures Welders, Brazers and Welding and Brazing Operators"

ASTM A 105.(2012) "Standard Specification for Carbon Steel Forgings for Piping Application"

ASTM A 370 (2012) "Standard Test Method and Definitions for Mechanical Testing of Steel Products"

ASTM A 694.(2003) "Standard Specification for Forgings, Carbon and Alloy Steel for Pipe Flanges, Fittings, Valves and Parts for High Pressure Transmission Service"

ASTM D 709 (2001) "Standard Specification for Laminated Thermosetting Materials"

ASTM D 2000 (2006)"Standard Classification System for" Rubber Products in Automotive Applications"

API-5L.(2012) "Specification for Line Pipe"

API-1104.(2013) "Welding of Pipe Lines and Related Facilities"

MSS-SP-75 (2008) “Specification for High Test Wrought Butt-welding Fittings”

ISO 8501-1 (2007) “Preparation of Steel Substrates before Application of Paints and Related Products-Visual Assessment of Surface Cleanliness”

ISO TS 29001 (2007) “Petroleum, Petrochemical and Natural Gas Industries-Sector Specific Requirements-Requirements for Product and Service Supply Organization”

BS EN 10204 (2004) “Metallic Products-Types of Inspection Documents”

IGS-M-TP-027(2013) “External Liquid Epoxy Coating for Rehabilitation and Repair of Buried Steel Pipe Line, Bends, Field Joints, Valves and Fittings”

3. TERMS AND DEFINITIONS

DFT (Dry Film Thickness)

The thickness of a coating remaining on the surface when the coating has hardened

NPS

Nominal Pipe Size (in)

PSL

Product Specification Level

Pup

A transition piece of pipe, API 5L grade, with specified nominal wall thickness used for fabricating of Insulating joint, with welded end preparation suitable for adjoining pipe as specified in the purchase order. No girth weld is permitted along to the pup piece

Purchaser /End user

National Iranian Gas Company or subsidiaries or its approved representative that buys the insulating joint

Routine Test

Types of test are done during production performed by the manufacturer which has to be satisfied the products are in accordance with the requirements

SAWL

Tubular product having one longitudinal / straight seam produced by double submerged-arc welding

SMLS

Pipe without any weld seam, produced by a hot-forming process, which can be followed by cold sizing or cold finishing to produce the desired shape, dimension and properties

Type Test

Testing performed on typical sample to prove that material, design, manufacturing and etc is capable of conforming to the requirements given in the relevant standard. Type