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شرکت ملی گاز ایران
مدیریت پژوهش و فناوری
امور تدوین استانداردها

IGS

مشخصات فنی خرید

اتصالات پلی اتیلن ، زین اسبی الکتروفیوژن

P.E. Fittings , Electrofusion Saddles



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ابلاغ مصوبه هیأت مدیره



مدیر محترم پژوهش و فناوری



باسلام،

به استحضار می‌رساند در جلسه ۱۹۹۶ مورخ ۱۴۰۱/۱۰/۱۸ هیأت مدیره، نامه شماره گ.دب/۰۰۰/۹۶۶۹۷/۱۶ مورخ ۱۴۰۱/۱۰/۱۳ آن مدیریت درمورد تصویب نهایی مقررات فنی شرکت ملی گاز ایران به شرح زیر مطرح و مورد تصویب قرار گرفت.

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۲- مشخصات فنی خرید اتصالات پلی اتیلن زین اسبی الکتروفیوژن

IGS-M-PL-014-4(1)



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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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1. Scope

This specification provides NIGC's minimum requirements of manufacturing, testing, inspection, dimension, tolerances, marking, packing, handling, storage etc., of polyethylene electrofusion tapping saddle with integral heating element in accordance with the **EN 1555-3:2021**, except otherwise have been specified in this standard, within an operating temperature range of -20 to 45°C and maximum operating pressure of 4 barg. These fittings are intended to be used with polyethylene pipes conforming to latest edition of **IGS-M-PL-14-1**

2. References

Throughout this specification, the following standards and codes are referred to. The edition of these standards and codes those are in effect at the time of issuing of this standard specification are noted in the references. Applicability of any changes in the standards and codes that may occur after issuing the current specification shall be mutually agreed upon by the purchaser and supplier and/or manufacturer.

2.1. Normative references

EN 1555-1:2021, Plastics piping systems for the supply of gaseous fuels- Polyethylene (PE) - Part 1: General

EN 1555-2:2021, Plastics piping systems for the supply of gaseous fuels- Polyethylene (PE) - Part 2: pipes

EN 1555-3:2021, Plastics piping systems for the supply of gaseous fuels- Polyethylene (PE) - Part 3: fitting.

EN 1555-5:2021, Plastics piping systems for the supply of gaseous fuels- Polyethylene (PE) - Part 5: Fitness for purpose of the system

EN 12117, Plastics piping systems – fittings, valves and ancillaries – determination of gaseous flow rate / pressure drop relationships.

EN 1716, Plastics piping systems – polyethylene (PE) tapping tees – test method for impact resistance of an assembled tapping tee.

EN ISO 1133, Plastics – determination of the melt mass – flow rate (MFR) and the melt volume – flow rate (MVR) of thermoplastics).

EN ISO 1167-1:2006, Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – determination of the resistance to internal pressure– Part1: general method.

EN ISO 1167-2:2006, Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – determination of the resistance to internal pressure – Part 2: preparation of pipe test pieces.

EN ISO 1167-3:2007, Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – determination of the resistance to internal pressure – Part 3: preparation of components.

EN ISO 1167-4:2007, Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – determination of the resistance to internal pressure – Part 4: preparation of assemblies.

GIS/PL2-4: 2019, “Polyethylene pipes and fittings for natural gas and suitable manufactured gas part 4: fusion fitting with integral heating element (s)”.

ISO 13955, “Plastics pipes and fittings – crushing De cohesion test for polyethylene (PE) electrofusion assemblies”.

ISO/ CD 13956, “Plastics pipes and fittings – De cohesion test of polyethylene (PE) saddle fusion Joints -Evaluation of ductility of fusion joint interface by tear test”.

ISO /FDIS 11357–6, “Plastics – differential scanning calorimetry (DSC) – part 6: determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)”

2.2. Informative references

EN ISO 3126, “Plastics piping systems–plastics piping components – measurement and determination of dimensions”.

ISO 228-1, “Pipe threads where pressure – tight joints are not made on the threads – part 1: dimensions, tolerance and designation”.

ISO 18553, “Method for the assessment of the degree of pigment or carbon black dispersion in polyolefin pipes, fittings and compounds”

3. Terms and definitions

3.1. Batch release test (BRT)

Test performed by the manufacturer on a batch of material or components which has to be satisfactorily completed before the batch can be released.