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شرکت ملی گاز ایران
مدیریت پژوهش و فناوری
امور تدوین استانداردها

IGS

مشخصات فنی خرید

فیلتر گاز خشک

Dry Gas Filter



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شرکت ملی گاز ایران



دفتر مدیر عامل

ابلاغ مصوبه هیأت مدیره

مدیر محترم پژوهش و فناوری

باسلام،

به استحضار می‌رساند در جلسه ۲۰۶۴ مورخ ۱۴۰۳/۰۴/۱۷ هیأت مدیره، نامه شماره ۴۹۰۷۰ مورخ ۱۴۰۳/۰۳/۳۰ آن مدیریت درمورد تصویب نهایی مقررات فنی شرکت ملی گاز ایران به شرح زیر مطرح و مورد تصویب قرار گرفت.

۱- مشخصات فنی خرید "فیلتر گاز خشک"

IGS-M-PM-105(2)

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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 Standard (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) or affiliated companies.
- 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- "PURCHASER": refers to National Iranian Gas Company (NIGC), affiliated companies who will purchase the service, equipment or material.
- 5- "SHALL ": is used where a provision is mandatory.
- 6- "SHOULD": is used where a provision is advised only.
- 7- "MAY": is used where a provision is completely discretionary.

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1.SCOPE

This standard covers the minimum requirements for the technical specification, materials, fabrication, and welding, testing, inspection, painting and packing for shipment of the dry gas filter used in natural gas industry. The vendor shall furnish complete operating units including all necessary items such as valves and etc. to ensure satisfactory and safely operation. The equipment shall be completely assembled.

The specification does not supersede the accepted pressure vessel codes but only supplements them with regard to certain conditions not fully covered in the codes. The equipment shall be designed for full load, unattended continuous operation without the provision of special housing or shelters etc. Compliance with this standard is the responsibility of the manufacturer.

2. REFERENCES

Throughout this standard the following dated and undated standards/codes are referred to. These referenced documents shall be, 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

ASME BPVC Sec. VIII, Div. I: ASME Boiler and Pressure Vessel Code "Rules for Construction of Pressure Vessels" Division 1.

ASME BPVC Sec. IX: ASME Boiler and Pressure Vessel Code "Qualification Standard for Welding, Brazing, and Fusing Procedures; Welders; Braziers; and Welding, Brazing, and Fusing Operators".

ASME B.16.5: "Pipe Flanges and Flanged Fittings NPS 1/2 through NPS 24 Metric/Inch Standard".

ASTM A694: "Standard Specification for Carbon and Alloy Steel Forgings for Pipe Flanges, Fittings, Valves, and Parts for High-Pressure Transmission Service1"

ASTM A105M: "Standard Specification for Carbon Steel Forgings for Piping Applications"

ASME B.16.11: "Forged Fittings, Socket-Welding and Threaded".

ASME B.16.20: "Metallic Gaskets for Pipe Flanges Ring-Joint, Spiral-Wound, and Jacketed".

ASME B.16.21: "Non-Metallic Flat Gaskets for Pipe Flanges".

ASME B.18.2.1: "Square and Hex Bolts and Screws (Inch Series)".

ASME B.18.2.2: "Square and Hex Nuts (Inch Series)".

IGS-M-PM-111: "Cartridge dry gas filter".

IGS-M-PL-002-1(3): Plug Valves size 2 to, 24", part (1)

IGS-M-PL-002(0): Part 2 Plug Valves size to 1 ".

IGS-O-CH-042: "Painting Procedure for Gas Industry".

IPS-G-GN-210: "Packing & Packages".

IPS-D-ME-100: "Nameplate for Pressure Vessel".

IPS-G-ME-150: "General Standard for Tower, Reactors, Pressure Vessels and Internals"

2.2. INFORMATIVE REFERENCES

ASME B31.3: ASME Code for Pressure Piping, B31 "Process Piping".

ASME B31.8: ASME Code for Pressure Piping, B31 "Gas Transmission and Distribution Piping Systems".

IGS-M-CH-033(1): "Specification for Iranian Natural Gas Quality".

3. DEFINITION

3.1. Filter: A device is designed to remove particle size up to 5 µm diameters.

3.2. Filtration Area: the measure of usable media in a filter.

$$\text{Filtration area} = \frac{\text{Flow Rate}}{\text{Gas Penetration Velocity}}$$

3.3. Pressure Drop: The resistance of a device to the flow of fluid through it.

3.4. Cartridge: It is a part of dry gas filter element that can be easily removed and replaced when it is worn out.

3.5. Quick type closure: All traps shall be provided with quick opening end closure to allow one-man operation for opening/closing in approximately one minute without use of additional device.

4. TECHNICAL SPECIFICATION

4.1. MATERIAL

4.1.1. The pressure vessel shall be fabricated according to ASME boiler and pressure vessel code, Sec. VIII Div. I, Sec. II.

4.2. DESIGN

4.2.1. The pressure vessel shall be designed, manufactured, painted, inspected, tested and constructed in accordance with the latest edition of the ASME code, Sec. VIII, Div. I and its subsequent addenda.

4.2.2. The pressure vessels will be operating in outdoor condition, under the sun and the rain and onshore condition. Necessary considerations shall be made to utilize the device in the mentioned conditions.