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شرکت ملی گاز ایران
مدیریت پژوهش و فناوری
امور تدوین استانداردها

IGS

مشخصات فنی خرید

مواد ضد کف برای سیستم شیرین سازی گاز

Chemical Foam Inhibitor (ANTIFOAM) for Use in Gas Sweetening System



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باسلام،

به استحضار می‌رساند در جلسه ۱۷۴۳ مورخ ۱۳۹۶/۵/۲۲ هیأت مدیره، نامه شماره گ. ۶۳۲۷۳/۰۰۰/۹۶ مورخ ۹۶/۵/۱۷ مدیر پژوهش و فناوری در مورد تصویب نهایی استانداردها به شرح زیر مطرح و مورد تصویب قرار گرفت.



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۳. مشخصات فنی مواد ضد کف برای سیستم شیرین سازی گاز طبیعی



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۴. دستورالعمل اجرای پوشش اپوکسی درون لوله‌های خطوط انتقال گاز طبیعی

IGS-C-PL-023(1)



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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 experiences 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 NIGC 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 provides the procedure for purchasing chemical foam Inhibitor (Silicone or EO/PO Based Antifoam) to be used in natural gas treating plants.

2. References

ASTM D 1881 (1986) "Standard Test Method for Foaming Tendencies of Engine Coolants in Glassware"

IGS-M-CH-059 (2016) "Standard Test Method for Evaluation of Silicon-Based Antifoams to be used in Natural Gas Sweetening Plants of Gas Refineries"

ISO 2859-10 (2006) "Standard Test Method for Sampling Procedures for Inspection by Attributes"

ISO 3951-1 (2013) "Standard Test Method for Sampling Procedures for Inspection by Variables".

3. Definitions

3.1 Antifoam

Anti-foaming agent is a chemical additive that prevents the formation of foam, breaks foam already formed, or be as a de-foamer agent in various industrial processes. There are two Common types of antifoams in gas industry; alcoholic based and silicone base.

3.2 Technical Approval

Getting technical approval is the first step for qualification of antifoam in which technical information should be evaluated and approved by technical division.

3.3 Laboratory Approval

Getting laboratory approval is the second step for qualification of antifoam in which it should pass the laboratory tests.

3.4 Accredited laboratory

In this standard, an accredited laboratory is any laboratory acceptable by NIGC.

3.5 Field Test Approval

Getting field test approval is the third step for qualification of antifoam in which it should pass the operational test.

4. Requirements

The supplier shall give full details of the proposed antifoam including types, chemical base and its properties. The proposed antifoam shall also meet the following requirements:

- To be able to depress foaming in gas treating plants as specified in annex C (INFORMATIVE).
- It shall not cause any side effect such as corrosion, erosion, precipitation, fouling, etc to the system.

5. Qualification Procedure

The supplier shall pass following steps respectively as well as all requirements of this standard specification:

5.1 Technical Approval (Step 1)

The supplier of antifoam shall provide information including original technical catalogue, MSDS and manufacturing product data sheet. The technical division shall evaluate information. The antifoam shall be approved by technical division.

5.2 Laboratory Approval (Step 2)

The supplier whom is approved by technical division shall provide sufficient sample for laboratory tests. The laboratory tests should be performed in an accredited laboratory. The antifoam shall be passed these tests.

Note 1: The laboratory test of the silicone based antifoam will be performed in accordance with IGS-M-CH-059 using actual amine solution taken from the nominated gas sweetening plant as specified in annex A .

Note 2: The Laboratory tests for EO/PO based antifoams are given in Table B-1 of annex B. Table B-1 provides typical properties for EO/PO based antifoams that have been used in natural gas treating plants.

The Laboratory tests present guidelines for establishing minimum requirements for entering to step 3.

5.3 Field Test Approval (Step 3)

After getting the laboratory approval, the supplier shall provide sufficient amount of antifoam for a period of 90 days field test. The antifoam shall pass the field test successfully.

Note: The field test of silicone based antifoam shall be according to annex B (Instruction for Monitoring Performance of Silicone-Based Antifoam during the Field Test)

6. Samples

Sampling for laboratory and field tests shall be performed according to ISO 3951-1 and ISO 2859-10.

Samples shall consist of sufficient amount of antifoam that shall be forwarded to the purchaser for tests. Samples shall be plainly identified by attached durable tag marked with at least the following information: