



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 30-JAN-2024. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Flexible Hose
Model Name(s): 230 AH

Presented to:

ALFAGOMMA INDUSTRIAL S.P.A.
NUCLEO INDUSTRIALE S. ATTO
64020
Italy

Intended Service:

Fire main system, water delivery system, fuel and oil systems.

Description:

Black rubber tube with high tensile steel cords covered by fiberglass fabric, abrasion, ozone and hydrocarbon resistant. Treaded or flanged stainless steel or carbon steel fittings.

Tier:

3

Ratings:

Internal Diameters. 32 mm, 38 mm, 51 mm, 76 mm, 102 mm, 127 mm, 152 mm, 203 mm Maximum Working Pressure: 20 bar Fluid Working Temperature: from -30°C to +100 °C

Service Restrictions:

1) Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. 2) Hoses are to be complete with factory assembled end fittings or factory supplied end fittings installed in accordance with manufacturer's specifications. 3) End connections are to comply with applicable requirements and limitation of ABS Steel Vessels and Marine Vessels Rules (4-6-2/5.5.4, 4-6-2/5.5.5, 4-6-7/3.5.1, and 4-6-7/5.3.2). 4) Hose assemblies are to be installed only where flexibility is required, in clearly visible and readily accessible locations, and are not to be subject to torsional deflection under normal conditions; hose length is to be limited to that required by flexibility only. 5) Not to be used in high pressure fuel oil injection systems, steam systems or oil supply lines to boilers. 6) Not to be used for

installations where repeated and/or frequent flexing is expected. 7) Marking for Flexible hoses are to be permanently marked by the manufacturer with the following details as per 4-6-2/5.7.6 of the ABS Steel Vessel Rules: a) Hose manufacturer's name or trademark. b) Date of manufacture (month/year). c) Designation type reference d) Nominal diameter e) Pressure rating f) Temperature rating. 8) The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2. Flexible hoses are to be completed with factory assembled end fittings or factory supplied end fittings installed in accordance with Manufacturer's specifications.

Notes / Documentation:

Drawing No. AG Fittings_ABS TypeAppr_230AH_WaterSysFireR_Nov2018, AG Fittings_ABS TypeAppr_230AH_WaterSysFireR_Nov2018, Revision: 0, Pages: 1 Drawing No. AG_ASA150FlangedFitt_SubcompCodes_230AH_nov2018., AG_ASA150FlangedFitt_SubcompCodes_230AH_nov2018., Revision: 0, Pages: 1 Drawing No. Data sheet 230AH rev 1 27-11-2018, Data sheet 230AH rev 1 27-11-2018, Revision: 1, Pages: 1 Drawing No. Fittings carbon steel, Fittings carbon steel, Revision: 0, Pages: 1 Drawing No. Program test prop, Program test prop, Revision: 0, Pages: 1 Drawing No. REQUESTED STANDARDS, REQUESTED STANDARDS, Revision: 0, Pages: 1 Drawing No. TEC 5-U-TA-01 - Material Equivalence specification_97128821_98157114_revisionato, TEC 5-U-TA-01 - Material Equivalence specification_97128821_98157114_revisionato, Revision: 0, Pages: 1 Drawing No. fittings_stainless steel, fittings_stainless steel, Revision: 0, Pages: 1 Drawing No. flanged fittings_subcomponents carbon steel, flanged fittings_subcomponents carbon steel, Revision: 0, Pages: 1 Drawing No. flanged fittings_subcomponents_stainless steel, flanged fittings_subcomponents_stainless steel, Revision: 0, Pages: 1 Test report No. 1042-18 at LAPI Laboratory dated 31 May 2018 Test report No. 1043-18 at LAPI Laboratory dated 31 May 2018 Test report No. 1044-18 at LAPI Laboratory dated 31 May 2018 Test report No. 1045-18 at LAPI Laboratory dated 31 May 2018 Test report No. COMP14122018 at ALFAGOMMA Plant dated 14 Dec 2018 Test report No. 230A-H032-03256 at ALFAGOMMA Plant dated 10 Jan 2019 Test report No. 230AH102-10232 at ALFAGOMMA Plant dated 10 Jan 2019 Test report No. 230AH203-20343 at ALFAGOMMA Plant dated 10 Jan 2019 Data Sheet 230 AH, Revision: 0

Term of Validity:

This Product Design Assessment (PDA) Certificate 19-GE1816213-PDA, dated 31/Jan/2019 remains valid until 30/Jan/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

2019 Rules for Condition of Classification 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2019 Rules for Building and Classing Steel Vessel 4-6-2/5.7, 4-6-7/3.5.2 2019 Rules for Condition of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2019 Rules for Building and Classing Facilities on Offshore Installations 3-8/5.1.1(b)vi and 4-8/5.1.1(b)vi 2019 Mobile Offshore Drilling Units 4-2-1/11.29 2019 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/5.7, 4-6-2/3.5.2 2019 Marine Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-1/11.29

National Standards:**International Standards:**

ISO 15540:2016

Government Authority:**EUMED:****Others:****Model Certificate****Model Certificate No****Issue Date****Expiry Date**

PDA

19-GE1816213-PDA

31-JAN-2019

30-JAN-2024



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.