



Confirmation of Product Type Approval

Company Name: ALFAGOMMA HYDRAULIC S.P.A.

Address: VIA E. MATTEI 6 I-64020 Italy

Product: Drilling Equipment (Hoses)

Model(s): Cementing Hoses 5K 2" FSL0 T RANGE III 5000 psi Cementing Hoses 10K 2" FSL0 T RANGE III 10000 psi

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-2008535-PDA	03-AUG-2020	02-AUG-2025
Manufacturing Assessment (MA)	20-4430198	08-SEP-2020	07-SEP-2025
Product Quality Assurance (PQA)	NA	NA	NA

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Intended Service

Marine and Offshore Application - Hose specially designed to handle corrosive and abrasive cement to convey Cementing Slurries between the Cementing Pump Manifold and the Cementing Head of the Drilling Equipment

Description

Hose Inside Diameter: 2 in.

Construction Tube: Oil and Abrasion Resistant Synthetic Rubber (NBR Rubber Based)

Construction Reinforcement: Six High Tensile Steel Spirals

Construction Cover: Minetuff and Supertuff Cover

Coupling: Crimped Alfagomma H1T Series with Integral 2" FIG. 1502 Hammer Union

Ratings

Cementing Hoses - 5000 psi:

Working pressure: 5,000 psi

Test pressure: 7,500 psi

Burst pressure: 12,500 psi

Temperature range III: -20 °C to 121 °C (-4°F to +250 °F)

API 7K, Grade D, Flexible Specification Level (FSL): 0 (zero)

Minimum bend radius: 900 mm

Cementing Hoses - 10000 psi:

Working pressure: 10,000 psi

Test pressure: 15,000 psi

Burst pressure: 22,500 psi

Temperature range III: -20 °C to 121 °C (-4°F to +250 °F)

API 7K, Flexible Specification Level (FSL): 0 (zero)

Minimum bend radius: 900 mm

Service Restrictions

1) Unit Certification is required for this product as per 3-2/5 and 3-2/Table 1 of "Guide for the Classification of Drilling Systems 2020".

2) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

3) Hoses are to be completed with factory assembled end fittings or factory supplied end fittings installed in accordance with manufacturer's specifications. In addition, end connectors that are attached to the hose couplings with line pipe threads in accordance with API 5B shall not be used in hose assemblies with rated working pressures exceeding 34.5 MPa (5000 psi). For hose assemblies with rated working pressure exceeding 34.5 MPa (5000 psi), the end connector shall either be butt-welded onto the hose coupling, or it may be machined from the same piece of material that the hose coupling is made of (integral).

4) Not for use in Choke & Kill Service.

5) Hose assembly cannot be located in hazardous areas, irrespective of fluid category, except as permitted in 4-2/7.3(i) of ABS Guide for Classification of Drilling System.

6) Flexible hoses are to be permanently marked by the manufacturer with the following details: month, and year of manufacture, the working pressure, the test pressure, the working temperature range, FSL level, and the manufacturer's identification.

Comments

1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2) Hose assemblies which can pose risk to personnel upon end failure are to be properly restrained. High pressure hoses are to be appropriately secured and fastened.

Notes, Drawings and Documentation

This Product Design Assessment (PDA) is valid only 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.

Drawing No. 5-G-U-TA-288, Crimping Table Cementing - H1T, Revision: 0, Pages: 1

Drawing No. Declaration ABS_Cementing 10K - 5K, Declaration ABS_Cementing 10K - 5K, Revision: -, Pages: 1

Drawing No. Design Verification , Design Verification Testing, Revision: 0, Pages: 1

Drawing No. H0T00600-320010, Ferrule H1T00600 2", Revision: 0, Pages: 1

Drawing No. H0TC3F10-323210, Insert Integral 2" FIG.1502 Female, Revision: 0, Pages: 1

Drawing No. H0TC3F13-323210, Insert Integral 2" FIG.1502 Male, Revision: 0, Pages: 1

Drawing No. PDA, Request for Product Design Assessment (PDA), Revision: 0, Pages: 3

Drawing No. TDS n.367, Data Sheet Cementing 10K Supertuff 2", Revision: 1, Pages: 1 and TDS n.366, Data Sheet Cementing 5K 2", Revision: 0, Pages:1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 02/Aug/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2020 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2 and 1-1-A3

2020 Rules for Conditions of Classification, 1-1-4/7.7, 1-1-A3 and 1-1-A4,

2020 ABS Guide for the Classification of Drilling Systems, 3-2, 4-2/7 and A7-1/27

International Standards

API Specification 7K, 6th edition, 2015

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "Joseph W. ...".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 24-Sep-2020 2:42

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 is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. 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.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

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.

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.