



## Confirmation of Product Type Approval

**Company Name:** DIESSE RUBBER HOSES SPA

**Address:** VIA PROVINCIALE, 8 FILAGO BERGAMO 24040 Italy

**Product:** Flexible Wire Braided Rubber Hose Assembly

**Model(s):** DS5, DS1-T, DS2-T, JACK HOSE, FAHERENHEIT 302/2, FAHERENHEIT 302/5, DS-17, DS-19, FIGHTER DS 2SC/R16, 2 STARK, OVERMASTER

**Endorsements:**

| <b>Certificate Type</b>         | <b>Certificate Number</b> | <b>Issue Date</b> | <b>Expiry Date</b> |
|---------------------------------|---------------------------|-------------------|--------------------|
| Product Design Assessment (PDA) | 23-2384826-PDA            | 30-JUN-2023       | 29-JUN-2028        |
| Manufacturing Assessment (MA)   | 23-6027312                | 08-SEP-2023       | 07-SEP-2028        |
| Product Quality Assurance (PQA) | NA                        | NA                | NA                 |

### **Tier**

3 - Type Approved, unit certification not required

### **Intended Service**

Medium/high pressure hoses for hydraulic applications, suitable for mineral and vegetable oils, water-based solutions, water, air and inert gas.

### **Description**

Black synthetic rubber resistant tube with one or more high tensile steel braids covered by black synthetic rubber, resistant to oil, abrasion and weather condition.

### **Ratings**

DS5: from DN5 to DN46, from 207 bar to 24 bar

DS1-T: from DN5 to DN51, from 250 bar to 40 bar

DS2-T: from DN5 to DN51, from 415 bar to 80 bar

JACK HOSE: from DN6 to DN10, 700 bar

FAHERENHEIT 302/2: from DN5 to DN51, from 415 bar to 80 bar

FAHERENHEIT 302/5: from DN5 to DN46, from 210 bar to 24 bar

DS-17: from DN6 to DN25, 210 bar

DS-19: from DN6 to DN25, 280 bar

FIGHTER DS 2SC/R16: from DN6 to DN38, from 420 bar to 135 bar

2 STARK: from DN6 to DN31, from 450 bar to 175 bar

OVERMASTER: DN16, 350 bar

Temperature range: -40 / +150 degC.

See attachment.

### Service Restrictions

- 1) Unit Certification is not required for this product. 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.
- 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 Rules (4-6-2/5.5.4, 4-6-2/5.5.5, 4-6-7/3.5.1, 4-6-7/5.3.2).
- 4) Hose assemblies are to be installed only where flexibility is required 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 for installations where repeated and/or frequent flexing is expected.
- 6) Flexible Hoses are to be permanently marked by the manufacturer with the following details: Hose manufacturer's name or trademark, date of manufacturer (month/year), designation type reference, nominal diameter, pressure and temperature rating in accordance with Steel Vessel Rules 4-6-2/5.7.6

The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006.

### Comments

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

- Only the Manufacturer's approved end fittings are to be used, as per the Manufacturer's recommendations.

### Notes, Drawings and Documentation

DATASHEET\_FAHRENHEIT\_302-5

FIRE TEST 112/2020 dated 06 Jul 2020 at DIESSE

FIRE\_TEST 116/2020 dated 06 Jul 2020 at DIESSE

IMPULSE TEST 154/20 dated 03 Dec 2020 at DIESSE

IMPULSE TEST 110-111-118-130-146/20 dated 14 Oct 2020 at DIESSE

TEST REPORT 486 dated 05 Jul 2022 at DIESSE

TEST REPORT 493 dated 05 Jul 2022 at DIESSE

FIRE TEST FOR DS5 dated 24 Feb 2005 at LAPI Laboratory

Test report DS5 dated 19 April 2005 at DIESSE Plant

FIRE TEST 101 - DS117 FIRE TEST 101 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 102 - DS117 FIRE TEST 102 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 103 - DS117 FIRE TEST 103 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 117-06-04 - DS117 dated 19/11/2016 at DIESSE Plant  
IMPULSE TEST 117-10-06 - DS117 dated 22/10/2016 at DIESSE Plant  
IMPULSE TEST 117-16-10 - DS117 dated 21/10/2016 at DIESSE Plant  
IMPULSE TEST 117-31-20 - DS117 dated 23/09/2015 at DIESSE Plant  
TEST REPORT DS117 - DS117 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 104 - DS19 FIRE TEST 104 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 105 - DS19 FIRE TEST 105 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 106 - DS19 FIRE TEST 106 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST R19-10-09 - DS19 dated 02/12/2016 at DIESSE Plant  
IMPULSE TEST R19-19-12 - DS19 dated 23/12/2016 at DIESSE Plant  
TEST REPORT DS19 - DS19 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 107 - FIGHTER DS 2SC-R16 FIRE TEST 107 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 108 - FIGHTER DS 2SC-R16 FIRE TEST 108 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 109 - FIGHTER DS 2SC-R16 FIRE TEST 109 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST FGT16-06-04 - FIGHTER DS 2SC-R16 dated 22/12/2016 at DIESSE Plant  
IMPULSE TEST FGT16-10-06 - FIGHTER DS 2SC-R16 dated 02/12/2016 at DIESSE Plant  
IMPULSE TEST FGT16-16-10 - FIGHTER DS 2SC-R16 dated 20/03/2014 at DIESSE Plant  
TEST REPORT FIGHTER DS 2SC-R16 - FIGHTER DS 2SC-R16 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 110 - 2STARK FIRE TEST 110 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 111 - 2STARK FIRE TEST 111 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 112 - 2STARK FIRE TEST 112 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 2STK-08-05 - 2STARK dated 02/07/2014 at DIESSE Plant  
IMPULSE TEST 2STK-12-08 - 2STSRK dated 18/11/2014 at DIESSE Plant  
IMPULSE TEST 2STK-25-16 - 2STARK dated 25/11/2015 at DIESSE Plant  
TEST REPORT 2STARK - 2STARK dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 1SN-06-04 - DS1-T dated 18/02/2015 at DIESSE Plant  
IMPULSE TEST 1SN-10-06 - DS1-T dated 18/02/2015 at DIESSE Plant  
IMPULSE TEST 1SN-19-12 - DS1-T dated 15/12/2016 at DIESSE Plant  
IMPULSE TEST 1SN-38-24 - DS1-T dated 09/10/2015 at DIESSE Plant

TEST REPORT DS1-T - DS1-T dated 16/12/2016 at DIESSE Plant  
FIRE TEST 113 - DS1-T FIRE TEST 113 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 114 - DS1-T FIRE TEST 114 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 115 - DS1-T FIRE TEST 115 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 2SN-06-04 - DS2-T dated 26/09/2014 at DIESSE Plant  
IMPULSE TEST 2SN-10-06 - DS2-T dated 21/10/2014 at DIESSE Plant  
IMPULSE TEST 2SN-19-12 - DS2-T dated 13/03/2015 at DIESSE Plant  
IMPULSE TEST 2SN-38-24 - DS2-T dated 15/10/2015 at DIESSE Plant  
FIRE TEST 116 - DS2-T FIRE TEST 116 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 117 - DS2-T FIRE TEST 117 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 118 - DS2-T FIRE TEST 118 dated 16/12/2016 at DIESSE Plant  
TEST REPORT DS2-T - DS2-T dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST JCK-06-04 - JACK HOSE dated 15/12/2016 at DIESSE Plant  
IMPULSE TEST JCK-10-06 - JACK HOSE dated 16/12/2016 at DIESSE Plant  
FIRE TEST 119 - JACK HOSE FIRE TEST 119 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 120 - JACK HOSE FIRE TEST 120 dated 16/12/2016 at DIESSE Plant  
TEST REPORT JACK HOSE - JACK HOSE dated 19/10/2016 at DIESSE Plant  
FIRE TEST 121 - FAHRENHEIT 302-2 FIRE TEST 121 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 122 - FAHRENHEIT 302-2 FIRE TEST 122 dated 16/12/2016 at DIESSE Plant  
FIRE TEST 123 - FAHRENHEIT 302-2 FIRE TEST 123 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 2FF-06-04 - FAHRENHEIT 302-2 dated 21/01/2016 at DIESSE Plant  
IMPULSE TEST 2FF-10-06 - FAHRENHEIT 302-2 dated 25/01/2016 at DIESSE Plant  
IMPULSE TEST 2FF-19-12 - FAHRENHEIT 302-2 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST 2FF-38-24 - FAHRENHEIT 302-2 dated 09/02/2016 at DIESSE Plant  
TEST REPORT FAHRENHEIT 302-2 - FAHRENHEIT 302-2 dated 16/12/2016 at DIESSE Plant  
IMPULSE TEST FGT16-31-20 - FIGHTER DS 2SC-R16 dated 23/02/2015 at DIESSE Plant

## CRIMPING PROCEDURE

### **Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 29/Jun/2028 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**

ABS Rules for Building and Classing Marine Vessels (2023): 1-1-4/7.7, 1-1-A3, 1-1-A4, 1-1-4/7.7, 4-6-2/5.7, 4-6-7/3.5.2

ABS Rules for Building and Classing Mobile Offshore Units (2023): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-1/11.29.

**International Standards**

NA

**EU-MED Standards**

NA

**National Standards**

NA

**Government Standards**

NA

**Other Standards**

NA



A handwritten signature in blue ink, appearing to read 'Joseph W. ...', is written over the printed name and title.

Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 25-Sep-2023 9:20

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.