



## Confirmation of Product Type Approval

**Company Name:** OLEODINAMICA TOSCANA SRL

**Address:** VIA REDOLONE, 53 51030 Italy

**Product:** Flexible Hose

**Model(s):** D12

<b>Certificate Type</b>	<b>Certificate Number</b>	<b>Issue Date</b>	<b>Expiry Date</b>
Product Design Assessment (PDA)	16-GE1586857-PDA	30-NOV-2016	29-NOV-2021
Manufacturing Assessment (MA)	20-4272157	08-MAY-2020	07-MAY-2025
Product Quality Assurance (PQA)	NA	NA	NA

### **Tier**

3

### **Intended Service**

Hydraulic Oils, Fuel Oil, Water, Compressed Air, Chemicals(\*) and Gases(\*) (\*) Fluid compatibility is to be verified on a case by case basis.

### **Description**

Corrugated metallic (AISI 304/316/321-Aluminium and Carbon Steel) flexible hoses

### **Ratings**

From DN10 to DN150 working pressures from 125 bar to 25 bar.

Temperature Range: -200°C / + 600°C

For additional details refer to attachment.

### **Service Restrictions**

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.

### **Comments**

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

1) Hoses are to be completed with factory assembled end fittings or factory supplied end fittings installed in accordance with manufacturer's specifications.

2) End connections are to comply with applicable requirements and limitations of the Steel Vessel Rules for the intended service (e.g. 4-6-7/3.5.1)

3) 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.

4) Not to be installed in applications where large amount of repeated flexing is expected in combination with pressure pulses.

5) Bend radius has been tested in accordance with ISO10380 Type 3 (pliable test only)

6) 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 Steel Vessel Rules:

- Hose manufacturer's name or trademark.
- Date of manufacture (month/year).
- Designation type reference.
- Nominal diameter.
- Pressure rating
- Temperature rating.

#### **Notes, Drawings and Documentation**

Drawing No. Burst Test - Bend Test 1, Burst Test - Bend Test, Revision: 0, Pages: 1

Drawing No. D12 Rev, D12 Rev dated 01 April 2016, Revision: 0, Pages: 1

#### **Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 29/Nov/2021 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**

2016 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-Appendix 2 and 3 which covers the following:

2016 Mobile Offshore Drilling Unit Rules 4-2-1/11.29

2016 Rules for Conditions of Classification, 1-1-4/7.7, 1-1-Appendix 3 and 4, which covers the following:

2016 Steel Vessel Rules 4-6-2/5.7

2016 Steel Vessel Rules Under 90 Meters 4-4-1/9.19

2016 Offshore Supply Vessel Rules 4-6-2/5.7

2016 Guide for Building and Classing Yachts 4-4-1/9.19

2016 High Speed Craft Rules 1-1-4/11.9, 1-1-Appendix 2 and 3, 4-4-1/9.19

#### **International Standards**

NA

#### **EU-MED Standards**

NA

**National Standards**

NA

**Government Standards**

NA

**Other Standards**

NA



A handwritten signature in black ink, appearing to read 'Joseph W. ...'.

Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 18-Nov-2020 4:33

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.