

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00005N7

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Materials other than steel for pipes conveying oil or fuel oil: flexible pipe assemblies and compensators

with type designation(s)
Smart Fuel Hose

Issued to

DUNLOP HIFLEX OY
Vantaa, Finland

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2022/1157,

item No. MED/3.15c. SOLAS 74 as amended, Regulation II-2/4 & X/3 and 2000 HSC Code 7 & 10 and IMO MSC/Circ.1120

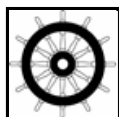
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2027-11-21**.

Issued at **Høvik** on **2022-11-22**

DNV local station:
Finland CMC

Approval Engineer:
Maheshraja Venkatesan



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Double layered hose assemblies containing first layer having type designation '1SN' and second layer as '142AK' with couplings according to the manufacturer's drawings.

Size : DN32 (inner hose) / DN63 (outer hose)
Coupling material : 1.4404 AISI 316L
Fire protection sleeve : Pyrojacket® Firesleeve

Couplings manufacturer:

- Alfagomma Hydraulic S.p.A., Zona Industriale Piano Lago, 87050 Mangone (CS)

Hoses manufacturer:

- Alfagomma Hydraulic S.p.A., Via Enrico Mattei no.6, 64020 – Castelnuovo, Vomano(TE)
- Alfagomma Hydraulic S.p.A., Area Industriale Piano Lago, 87050 Figline Vegliaturo (CS)

Application/Limitation

Hose assemblies covered by this certificate are tested according to:

- 1) NS-EN ISO 15540-2016: Fire resistance of hose assemblies- Test methods
- 2) NS-EN ISO 15541-2016: Fire resistance of hose assemblies - Requirements for the test bench

Maximum working pressure of the inner hose is 16 bar. The outer hose is non pressurized.

Type Examination documentation

Tests carried out

Fire tests carried out according to ISO 15540/15541

Marking of product

As a minimum, the final product to be marked with at least the following particulars:

- Hose manufacturer's name or trademark
- Date of manufacture (month/year)
- Designation type reference
- Nominal diameter
- Pressure & temperature rating
- Mark of conformity according to Article 10 of the Council Directive 2014/90/EU

Mark of Conformity may only be affixed to the product when the corresponding certification related to production-control phase module (D, E, or F) is valid.