DNV·GL

Certificate No:
TAP000019A

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings

with type designation(s)
Biofuel hose MK1 1432-80

Issued to
HYDROSCAND AS
OSLO, Norway

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018
DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV GL.

Temperature range:	**- 20°C to + 100°C**
Max. working press.:	**1,0 MPa**
Sizes:	**3/16", 5/16" and 3/8" ID**

Issued at **Høvik** on **2019-04-02**
This Certificate is valid until **2022-12-31**.
DNV GL local station: **Oslo Maritime and CAP**

Approval Engineer: **Sinisa Sedlan**

for **DNV GL**

Marianne Spæren Marveng
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-007270-6**
Certificate No: **TAP000019A**

Product description

HYDROSCAND article number 1432-80 MK1 with permanently attached couplings.

Inner tube: Fluoroelastomer (FPM)
Intermediate tube: Epichlorohydrin rubber (ECO)
Reinforcement: One layer of braided synthetic textile
Cover: Chlorosulfonated polyethylene (CSM)

Couplings: Hydroscand design 5800 / Cohline Type 8010 [1.0718 (11SMnPb37), St 37.4/E235+N EN 10305-4]
Ferrule: Cohline Type 8001 [steel DC04 (1.0338)]

Hoses made by: Veritas, Germany

Couplings made by: Cohline, Germany

Application/Limitation

This certificate is valid for the specific assembly of hose and coupling type as specified, assembled and delivered by the holder (named as manufacturer) of this certificate.

Flexible hoses are only to be used where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required and must only be fitted in places where they are always accessible.

Hose assemblies covered by this certificate may be used in fuel oil, hydraulic oil, lube oil, water, and compressed air applications.

Hoses covered by this certificate shall not be installed in systems with pressure below atmospheric or vacuum conditions.

The hoses are not to be used in systems where pressure pulsations may occur.

For use in gas applications the hose cover is to be pin pricked.

The hoses are to be mounted in accordance with the manufacturer's instructions.

Part number	Hose ID		Wall thickness (mm)	Max. working pressure (bar)	Min. bend radius (mm)	Weight (kg/m)
	(mm)	(inch)				
1432-80-03	5,0 ± 0,2	3/16"	3,5 ± 0,3	10	35	0,18
1432-80-05	7,5 ± 0,4	5/16"	3,5 ± 0,3	10	40	0,23
1432-80-06	9,5 ± 0,4	3/8"	3,5 ± 0,3	10	50	0,25

Production testing

All hose assemblies delivered under the DNV GL type approval scheme shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to this type approval certificate.

Type Approval documentation

Tests carried out

Static burst test, Dimensional check test, Change in length test, Leakage test, Cold flexibility test as per EN ISO 7840, Oil resistance test as per EN ISO 7840, Fire test

Marking of product

Flexible hoses are to be permanently marked by the manufacturer with the following details:
- Hose manufacturer's name or trademark;
- Date of manufacture (month/year);
- Designation type reference;
- Nominal diameter;
- Pressure rating;
- Temperature rating.

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.