Certificate no.:
TAP0000367

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)
EN853 2SN, EN857 2SC, EN856 4SH, EN856 4SP

issued to

Hengyu Group Hydraulic Fluid Technology Hebei Co., Ltd.

Hengshui, Hebei Province, China

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV class programme DNV-CP-0183 – Type approval – Flexible non-metallic hoses

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Type:	Temperature range:	Max. working press.:	Sizes:
EN853 2SN	-40 °C to +100 °C	40 MPa / 400 bar	1/4" to 1"
EN857 2SC	-40 °C to +100 °C	40 MPa / 400 bar	1/4" to 1"
EN856 4SH	-40 °C to +100 °C	42 MPa / 420 bar	3/4" to 1 1/2"
EN856 4SP	-40 °C to +100 °C	44.5 MPa / 445 bar	3/8" to 3/4"

Issued at **Hamburg** on **2026-04-20**

This Certificate is valid until **2031-04-19**.

for **DNV**

DNV local unit: **Dalian NB & CMC**

Approval Engineer: **Christian Kaemmer**

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.

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 USD 300 000.

Product description

Flexible non-metallic hose consisting of synthetic rubber inner tube, wire braid / spirally wrapped steel plies reinforcement and synthetic rubber cover.

Type	Description
EN 853 2SN	Synthetic rubber hose with two internal steel wire braids according to DIN 853 2SN.
EN 857 2SC	Synthetic rubber hose with two internal steel wire braids according to DIN 857 2SC.
EN 856 4SP	Synthetic rubber hose reinforced with four spirally wrapped steel plies according to EN 856 4SP.
EN 856 4SH	Synthetic rubber hose reinforced with four spirally wrapped steel plies according to EN 856 4SH.

Size and pressure range:

DN	**6**	**10**	**12**	**16**	**19**	**25**	**32**	**38**
inch	**1/4”**	**3/8**	**½”**	**5/8”**	**¾”**	**1”**	**1 ¼”**	**1 ½”**
Type:	**Maximum working pressure [bar]**							
2SN	400	330	275	250	215	165		
2SC	400	330	275	250	215	165		
4SP		445	415		350			
4SH					420	380	325	290

Couplings made of 10# steel, 20# steel, 45# steel, 304 and 316L Stainless Steel.

Manufactured by:

- Hengyu Group Hydraulic Fluid Technology Hebei Co., Ltd. Hengshui, Hebei Province China

Application/Limitation

Hose assemblies covered by this type approval certificate are type approved for piping systems on board of vessels classed by DNV. Not type-approved for flammable media and not for seawater systems.

Installation

The hose assemblies must only be fitted in places where they are always accessible. Flexible hoses are not to be used on boiler fronts. It must be possible to shut off from the system all flexible hoses used in systems for compressed air, fresh water cooling applications. Cover on hoses for gaseous applications shall be pin-pricked.
Flexible hoses are only to be used in short lengths where it is necessary and are only to be used where vibrations occur or for flexible mounting of the machinery. The hoses shall not be used where permanent piping is possible/required.

For temperatures below 0°C the supplementary material requirements acc. to DNV-Rules “Ships” /Metallic Materials, part 2 chapter 2 section 5 item 4 are to be observed.

Type Approval documentation

Tests carried out

Production testing

All hose assemblies 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 the type approval certificate.

Marking of product

For traceability to this type approval, each hose assembly is to be marked with:

Content
Manufacturer's name / trade name
Standard
Type designation
Hose size
Working pressure
Production date

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV-CP-0338, Sec.4.
To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com