



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAP0000225**  
Revision No:  
**2**

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## This is to certify:

that the **Flexible Hoses and Hose assemblies of Non-Metallic Material**

with type designation(s)

**Fire Sleeve F88SC with Hoses Type 2TE; 3TE; 2SN**

issued to

**Schauenburg Industrietechnik GmbH**  
**Bremen, Germany**

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:

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

Issued at **Hamburg** on **2025-05-22**

This Certificate is valid until **2030-05-21**.

DNV local unit: **Hamburg – CMC North/East**

for **DNV**

Approval Engineer: **Christian Kaemmer**

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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

### 2TE / 3TE -Series:

Flexible non-metallic hose of textile-reinforced hydraulic type acc. to EN854.  
Equipped with Fire Sleeve F-88SC, fire resistant acc. to ISO 15540.

### 2SN-Series:

Flexible non-metallic hose of steel wire braid reinforced hydraulic type acc. to EN853.  
Equipped with Fire Sleeve F-88SC, fire resistant acc. to ISO 15540.

### Fire Sleeve:

F 88SC; Extruded fire sleeve with silicone coating, high resistance and material density.

## Application/Limitation

Flexible hoses with fire sleeves F-88SC are only to be used in short lengths up to 1.5 m 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.

## Installation

Flexible hoses with fire sleeves F-88SC of these types are not to be used on boiler fronts.  
The hoses are to be mounted in accordance with the manufacturer's instructions.  
It must be possible to shut off from the system all flexible hoses used in systems for compressed air, fresh water cooling applications, lube oil, fuel oil and petroleum base hydraulic oil. The hoses are not to be used for suction. The use of hose assemblies is not permitted in permanently pressurized starting air lines of diesel engines.

## 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:

- Manufacturer
- Date of Manufacturing
- Maximum Allowable Working Pressure

### 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, Section 4.  
In addition, burst pressure testing on selected sizes to be carried out in the course of renewal of the certificate. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>