

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hydraulic pipe system for watertight doors

with type designation(s)
Hydraulic piping system for sliding watertight doors

Issued to

Schoenrock Hydraulik Marine Systems GmbH
Schenefeld, Germany

is found to comply with
DNV GL rules for classification – Ships

Application :

Hydraulic piping systems for sliding doors approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2018-03-07**

This Certificate is valid until **2023-03-06**.

DNV GL local station: **Hamburg**

for **DNV GL**

Approval Engineer: **Frank Poetsch**

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Burkhard Lilienthal
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.



Product description

Hydraulic piping system for opening and closing of watertight sliding doors. Pipe material is carbon steel E235 according to EN 10305-4 (DIN 2391-1/-2).

The system is optionally fitted with an accumulator and also one or two handpumps for emergency operation.

Application/Limitation

For opening and closing of watertight sliding doors on ships.

Pipes are of size 10x1.5 mm.

Max light opening old door type: 2100(h) x 1000(w)

Max light opening new door type: 2000(h) x 1200(w)

For old door type:

Opening/closing action is performed by a hydraulic cylinder.

The system according to drawing no. N-20-07A can be used for cargo ships.

The system according to drawing no. N-20-11A can be used for cargo ships.

The system according to drawing no. N-20-14 can be used for cargo ships.

The system according to drawing no. N-20-08B can be used for passenger ships.

Working pressure: 180 bar

Design pressure 200 bar

Accumulator precharge pressure: 70 +/- 3 bar

For new door type:.

Opening/closing action is performed by a hydraulic motor motor (Torq motor TE130) connected to a pitch rack.

The system according to drawing no. N-20-10 can be used on passenger ships

The system according to drawing no. N-20-06 can be used on cargo ships

The system according to drawing no. N-20-12 can be used on cargo ships

The system according to drawing no. N-20-13 can be used on cargo ships

Working pressure: 160 bar

Design pressure 180 bar

Accumulator precharge pressure: 70 +/- 3 bar

Type Approval documentation



Job Id: **262.1-008123-9**
Certificate No: **TAP00001AY**

Tests carried out

Each system is to be tested for tightness through hydrostatic testing at design pressure at the manufacturer's premises. The DNV GL surveyor is to witness the test.

The complete installation to be tested onboard, in the presence of a DNV GL Surveyor.

Marking of product

For traceability to this type approval the system is to be marked with:

- Certificate number TAP00001AY

Periodical assessment

For retention of this type approval a DNV Surveyor shall perform a survey – before the expiry date of this certificate – to verify that the conditions for the type approval are complied with.

END OF CERTIFICATE