DNV·GL

Certificate No:
TAP000013Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Air Reservoir

with type designation(s)
Air Receiver 11 bar - Horisontal, Air Receiver 11 bar - Vertical, Air Receiver 33 bar - Horisontal, Air Receiver 33 bar - Vertical

Issued to
Sperre Sveis AS
SØVIK, Norway

is found to comply with
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition July 2015
DNV GL rules for classification – Ships Pt.4 Ch.7 Pressure equipment

Application :

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

Type:	Temperature range:	Design pressure:	Sizes:
Air Receiver 11 bar - Vertical	0°C/50°C	11 bar	100 to 3000 litre
Air Receiver 11 bar - Horisontal	0°C / 50°C	11 bar	100 to 3000 litre
Air Receiver 33 bar - Vertical	0°C/50°C	33 bar	100 to 3000 litre
Air Receiver 33 bar - Horisontal	0°C / 50°C	33 bar	100 to 3000 litre

Issued at **Høvik** on **2017-11-14**
This Certificate is valid until **2021-12-31**.
DNV GL local station: **Ålesund**

Approval Engineer: **Iselinn Vindstad**

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.

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Job Id: **262.1-003597-5**
Certificate No: **TAP000013Y**

Product description
Vertical and horizontal air receivers.

Main data:

Low Pressure Air Receivers		High Pressure Air Receivers	
Design pressure	11 bar	Design pressure	33 bar
Operating pressure	10 bar	Operating pressure	30 bar
Test pressure	16.5 bar	Test pressure	49.5 bar
Design temperature	0°C / 50°C	Design temperature	0°C / 50°C
Corrosion allowance	1 mm	Corrosion allowance	1 mm
Joint efficiency	0.85	Joint efficiency	0.85
Medium	Air	Medium	Air
DNV GL pressure vessel class	II	DNV GL pressure vessel class	I
Material shell	P235GH/P265 GH (EN 10028-2)	Material shell	P235GH/P265GH/P355NL1 (EN 10028-2/EN 10028-3)
Material dished end	P265 GH (EN 10028-2)	Material dished end	P265GH/P355NL1 (EN 10028-2/EN 10028-3)

Application/Limitation
Each air receiver shall be hydraulically pressure tested to at least 1.5 times the design pressure in the presence of a DNV GL Surveyor.

Each air receiver is to be certified by DNV GL.

Materials shall be delivered with certificates as per DNVGL-RU-SHIP Pt. 4 Ch. 7 Sec. 1 Table 5 for class I pressure vessels and Table 6 for class II pressure vessels.

NDT shall be performed as per DNVGL-RU-SHIP Pt. 4 Ch. 7 Sec. 7 [4.1.2].

Type Approval documentation

Tests carried out
N/A

Marking of product
Each pressure vessel shall be permanently and legibly marked on the pressure part or on a nameplate permanently attached to a principal pressure part to show its identity and origin.

The marking of pressure vessels shall show at least the following particulars:
— manufacturer's name and address
— type designation and serial number
— year of manufacture
— maximum allowable working pressure
— hydrostatic test pressure.

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.