

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Vent Head for Tank**with type designation(s)
FSH-01

Issued to

Jiangsu Xinzhou Ship Fitting Co., Ltd.
JINGJIANG Jiangsu, China

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNV GL class programme DNVGL-CP-0187 – Type approval – Air vent heads****Application :****Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV GL.****Sizes: DN65, DN100, DN400, DN500**Issued at **Høvik** on **2018-01-10**This Certificate is valid until **2023-01-09**.for **DNV GL**DNV GL local station: **Jiangyin**Approval Engineer: **Mehdi Rowshan**

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: **262.1-027318-1**
Certificate No: **TAP0000163**

Product description

Air vent heads with stainless steel float.

Openings protected by screen mesh welded to screen frame, air pipe head insect net is 8 meshes and oil tank fire prevention nets 80 meshes.

Body and side cover with material Q235B are to be hot dip galvanized, the zinc layer shall be 70 to 100 microns. For areas susceptible to erosion an aluminum containing epoxy coating shall be applied over the zinc.

Materials:

Part	Material
Body	Q235B
Float	S32205
Side Cover	Q235B
Sealing Ring	NITRILE RUBBER
Protection Screen	GB H62

Application/Limitation

The certificate covers design assessment of air vent heads. Installation and other additional requirements related to installation are out of scope of this certificate.

The air vent heads are not considered as devices to prevent the passage of flame into cargo tanks. They shall not be installed on oil tanks (flash point < 60°C).

Product certificate is not required for air vent heads installed in ship class vessels.

Results of Discharge test and flow test on air vent heads with wire mesh:

Size	80% of blocking velocity (m/s)	Model:FSH-01	
		Flow resistance coefficient (ζ)@ pressure drop (ΔP)	
		ΔP (kPa)	ζ
DN65	5,02	2,834	14,479
DN100	11,54	3,434	6,737
DN400	9,51	2,312	10,384
DN500	9,25	2,410	8,762

Type Approval documentation

Tests carried out

Flow characteristics test (pressure drop), float impact test, tightness tests, discharge/reverse flow test

Marking of product

For traceability to this type approval the products are to be marked:

- Manufacturer's name or trade mark
- Type designation
- Size

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.