DNV·GL

Certificate No:
TAP00000MF

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Vent Head for Tank

with type designation(s)
533HF

Issued to
Changzhou Huifeng Marine Accessory Manufacture Co., Ltd.
Changzhou, 100, China

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition January 2018
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: DN50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, and 600

This Certificate is valid until **2022-06-30**.

Issued at **Høvik** on **2018-05-14**
DNV GL local station: **Shanghai** for **DNV GL**

Approval Engineer: **Adel Samiei**

Zeinab Sharifi
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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Product description

Air vent heads with metallic float and protected by wire screen.
Material of the body:Nodular cast iron – QT400-15 or Q235B–HT200.
Float is made of Duplex stainless steel 022Cr25Ni7Mo4N (S25073).

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).

Size	80% of blocking velocity resulted from Discharge test	Dynamic coefficient resulted from flow characteristic tests (ΔP=250 mbar)
DN50	29,85 m/s	20.647
DN65	21,20 m/s	13.488
DN80	12,64 m/s	9.2815
DN100	11,55 m/s	8.1575
DN125	12,20 m/s	7.9204
DN150	12,22 m/s	7.1697
DN200	10,89 m/s	6.655
DN250	13,95 m/s	4.8913
DN300	13,94 m/s	6.0425
DN350	15,34 m/s	6.7453
DN400	13,00 m/s	7.6706
DN450	10,50 m/s	5.1849
DN500	9,58 m/s	6.7981
DN600	7,74 m/s	9.1224

Type Approval documentation

Tests carried out

Flow Characteristics test, leakage test, discharge/reverse flow test, float impact 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.