

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Vent Head for Tank

with type designation(s)
533HF-L

Issued to

Changzhou Huifeng Marine Accessory Produce Co., Ltd.
Changzhou, 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 all vessels classed by DNV GL.

Sizes: DN50 - DN500

Issued at **Hamburg** on **2019-10-24**

This Certificate is valid until **2024-10-23**.

for **DNV GL**

DNV GL local station: **Nanjing**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

Olaf Drews
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

The air vent heads 533HF-L consist of a body with soft sealing, metallic float (ball shape) made of stainless-steel wire mesh for application on water tanks and oil tanks.

The main components and their materials are as follows:

Part	Remark
Body Cover, Body	ZL104/101, (Cast Aluminium Alloy) comparable to EN AC-41000 and EN AC-42100 ¹
	QT400-15 (Nodular Cast Iron)
Float, Plate, Net cover	0.22Cr25Ni7Mo4N (Stainless Steel)
Seal Gasket	NBR
Wire mesh	0.22Cr25Ni7Mo4N (Stainless steel) Size Mesh 8 for water tanks; Size Mesh 30 for oil tanks

Note

Refer to DNVGL Rules Pt.2 Ch 2 section 10 listed in table 7.

Application/Limitation

The air vent heads are type approved for application on air/overflow pipes of tanks as required by DNVGL Rules Pt.4 Ch.6 Sec. 4 - 11 "Air, overflow and sounding pipes".

The air vent heads are not approved:

- as devices to prevent the passage of flame into cargo tanks. Further they shall not be installed on oil tanks containing oil with flash point <60°C.
- permanent discharge/exchange of ballast water flowing through the closing device of the air pipe heads.

On fuel oil service tanks, settling tanks and any other oil tanks with heating temperature above 60°C, the air vent heads are to be fitted with flame screens. Refer to Pt.4, Ch.6 – Section5.

Flow characteristics, Discharge / reverse flow

To prevent blocking of the air vent head by a float during tank discharge the following maximum allowable air velocity shall be observed.

Size\ Type	Flowrate at 0.25 bar pressure drop [m ³ /h]	80% of blocking velocity [m/s]
DN50	18	28
DN65	28	20
DN80	53	27
DN100	76	20
DN125	129	21
DN150	169	17
DN200	281	14
DN250	420	15
DN300	676	15
DN350	1000	23
DN400	1902	21
DN450	2703	17
DN500	4318	14

Manufacturer's instructions are to be observed for selection and installation of the air vent heads.

Tests carried out

Job Id: **262.1-029372-1**
Certificate No: **TAP00001Y5**

1. Flow characteristics test;
2. Float impact test;
3. Tightness test;
4. Discharge/reverse flow test;
5. Calculations of wall thickness

Marking of product

For traceability to this type approval each air vent head is to be provided with a name plate specifying at least the following data:

Content	Example
Manufacturer's name	Changzhou Huifeng Marine Accessory Produce Co., Ltd
Type	Changzhou Huifeng Marine Accessory Produce Co., Ltd
Type Code	533HF-L-300
Date	0070-11
Valve No.	2019.07
Weight (kg)	ASF36
Material code	84
Working pressure	ZL104

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 Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>.

Type Approval documentation