DNV·GL

Certificate No:
TAP00000Z8

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Vent Head for Tank

with type designation(s)
TFM

Issued to
Nantong Ruida Navigation Machinery Co.,Ltd
Nantong 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 approved by this certificate is accepted for installation on all vessels classed by DNV GL.
Sizes: DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN250, DN300, DN350, DN400 and DN500

Issued at **Hamburg** on **2017-06-16**
This Certificate is valid until **2022-06-15**.
DNV GL local station: **Shanghai**

Approval Engineer: **Hagen Markus**

for **DNV GL**

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.

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Product description

The air vent heads of type TFM consist of a cylindrical body made of aluminium alloy with soft sealing and non-metallic float made of PE. Sizes above DN200 are of double floating ball design.
Optional with metallic wire mesh.

Materials

Component	Material designation	Details
Body	ZAlSi7MgA (EN AC – AlSi7 Mg0.3)	Material specification no.: TFM-20X-002/004
Upper cover		
Ball	PE	Colour: yellow Material specification no.: TFM-20X-003
Wire Mesh	0Cr17Ni12Mo2[1]	Mesh types: Potable water :10 by 10 mesh/inch Oil storage and service tanks: 30 by 30 mesh/inch
Soft sealing arrangement ball		
Sealing upper cover	NBR	Colour: black Material specification no.: TFM-20X-001
Sealing ring	HTV (silicone rubber)	Colour: black Material specification no.: TFM-20X-007
Sealing cover + Gland	PA66	Colour: black Material specification no.: TFM-20X-005/006
Screws	0Cr17Ni12Mo2	

Notes
[1] The specified stainless steel grade is considered not suitable for sea water application.
For application in sea water material grades with PREN > 30 should be used.

Application/Limitation

The air vents of type TFM are type approved for application on air/overflow pipes of tanks as required by DNV GL Rules Pt.4, Ch.6 – Section 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 and shall not be installed on oil tanks containing oil with flash point <60°C.

On fuel oil service tanks, settling tanks and any other oil tanks with media temperatures above 60°C, the air vent heads are to be fitted with flame screens of size 30 by 30 mesh/inch.

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

For selection and installation of the of the air vent heads the manufacturer technical manual and installation instructions are to be observed.

Size range

DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN250, DN300, DN350, DN400 and DN500

Job Id: **262.1-023514-1**
Certificate No: **TAP00000Z8**

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

Type Approval documentation

Tests carried out

Visual inspection of test specimen, Tightness test, Flow resistance test, Discharge / Reverse Flow Test, Impact and compression loading test on floating ball

Marking of product

For traceability to this type approval certificate each air pipe head is to be provided with a name plate with at least the following content:

	Example
Manufacturer name or short sign	NTRD
Nominal size of inlet flange	DN65
Type / Drawing number	TFM-202 / TFM-201-001
Float ball drawing	TFM-201-003
Manufacturing date	2017-06-07

Periodical assessment

For retention of the type approval certificate periodical assessments shall be carried out at production places by DNVGL surveyor. The objective of the periodical assessment is to verify that the design and production conditions for the type approval have not been altered.
Main scope of the assessment:
- verification of the production and quality control system
- review of quality control documentation of recent deliveries
- review of drawings in production to verify any design changes which may have an impact on data specified in the type approval certificate, performance and range of application
- verification of the product marking

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

End of certificate