DNV·GL

Certificate No:
TAP00001ND

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Vent Head for Tank

with type designation(s)
Side mounted type (Disc/Ball)

Issued to
G.S. High-Techer Co., Ltd.
Miryang-si, Gyeongsangnam-do, Republic of Korea

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: DN65 to DN350

Issued at **Høvik** on **2019-02-25**
This Certificate is valid until **2024-02-24**.
DNV GL local station: **Gimhae Station**

Approval Engineer: **Adel Samiei**

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: **262.1-006017-5**
Certificate No: **TAP00001ND**

Product description

Air vent heads of box type with three different floats: Disc, Half Ball and Ball
Material
Body/Chamber/Guide bar/Top Cover: SS400 hot dip galvanized
Disc: SS400 (zink flake) / Duplex Stainless Steel (ASTM A240-UNS S31803)
Rubber seat/Packing: NBR

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 at Discharge test (m/s)		Dynamic coefficient resulted from flow characteristic tests			
			ΔP(mbar)	ζ	ΔP(mbar)	ζ
	Disc	Ball	Disc		Ball	
DN65	11.9	7.4	232	5.00	254	4.88
DN80	10.2	9.8	246	6.15	210	6.43
DN100	11.9	6.9	253	5.82	194	5.69
DN125	11.4	7.8	218	6.68	258	6.48
DN150	11.2	6.7	291	6.09	313	5.46
DN200	10.9	8.6	263	7.09	263	6.38
DN250	13.5	8.6	267	9.61	274	8.40
DN300	10.8	9.8	282	9.09	306	7.42
DN350	11.0	8.6	254	8.68	271	6.50

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.