

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Blind Flange Valve**

with type designation(s)

Fig. S7

Issued to

Treade AS**FREDRIKSTAD, Norway**

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems**DNV GL rules for classification – Ships Pt.5 Ch.7 Liquefied gas tankers****DNV GL class programme DNVGL-CP-0186 – Type approval – Valves****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Max. working temp.:** -50°C to 200°C (dep. on body material, see cert.)**Max. working press.:** PN10, PN16, PN25; JIS 10K, JIS 16K, JIS 20K (see certificate)**Sizes:** DN 50, 65, 80, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 550 and 600.Issued at **Høvik** on **2017-04-27**This Certificate is valid until **2021-12-31**.for **DNV GL**DNV GL local station: **Kaohsiung**Approval Engineer: **Maheshraja Venkatesan**

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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.



Product description

Blind flange valves with three different pressure ratings: PN10/ JIS10K, PN16/ JIS16K & PN25/ JIS20K.

Design:

- Valve with removable disc. Tightening of disc with separate wrench on tightening nut between the two discs. The valve cover is off when the valve is closed.
- Pressure-temperature ratings & minimum wall thickness of body are in accordance with EN 12516-1.
- Other standards applied:
 - o EN 12516-2 : Design of pressure components – Top cover & bolting
 - o EN 1092-1 : Design & construction of valve ends

Material of construction:

Body	ASTM A216 Gr. WCB	ASTM A351 Gr. CF8M
Top cover	ASTM A216 Gr. WCB	ASTM A351 Gr. CF8M
Disc & tightening nut	ASTM A351 Gr. CF8M	
Disc seal & drain plug seal	PTFE	
Drain plug & top cover bolting	AISI 316	

Manufacturing location:

Kevin Steel Corp,
No.9, Wugong 6 th. Road ,Wufeng District
Taichung City 413, Taiwan

Application/Limitation

Valves covered by this certificate are approved to be used in:

- ship piping, machinery piping & cargo piping systems
- LNG/ LPG systems (with CF8M as body material)

The valve may be used as blind flange.

Valves covered by this certificate are not to be used in machinery spaces of category A & shall not be installed in systems where fire safe application is required.

Valves are not permitted for use in sea water systems.

Type Approval documentation

Tests carried out

N/A

Certification

- For LNG/LPG applications:
Valve bodies shall be delivered with material certificates in accordance with DNV GL Ship Pt.5 Ch.7 Sec.1 Table 8. Materials with VL and W certificates shall be manufactured in a foundry approved by the society.
All valves which $DN \geq 100$ (sizes not smaller than 4") shall be delivered with DNV GL product certificate. For other valves manufacturer's product certificate may be accepted.
- For other applications:
Valve bodies shall be delivered with material certificates in accordance with DNV GL Ship Pt.4 Ch.6 Sec.2 Table 3. Materials with VL and W certificates shall be manufactured in a foundry approved by the society.
DNV GL product certificates are required for valves with $DN > 100$ mm and design pressure ≥ 16 bar, and for ship side valves where $DN > 100$ mm regardless of pressure. For other valves manufacturer's product certificate may be accepted.

Job Id: **262.1-006980-3**
Certificate No: **TAP00000W6**

Production tests

All valves are to be tested as below:

- Hydrostatic test of the valve body at a pressure equal to 1.5 times the design pressure
- Seat leakage test at a pressure equal to 1.1 times the design pressure for valves.

Production testing and acceptance criteria shall be in accordance with EN 12266-1.

Production tests for valves which are to be delivered with a DNV GL product certificate, shall be witnessed by DNV GL surveyor.



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Marking of product

For traceability to this type approval, each valve is to be marked with:

- manufacturer's name or trade mark
- valve type designation
- size
- maximum design pressure and temperature
- arrow to indicate direction of flow on one way flow valves

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform a survey - every second year and before the expiry date of this certificate - to verify that the conditions for the type approval are complied with. Any changes to the design are to be handled as for initial Type Approval, with regards to additional documentation and testing requirements.