

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Miscellaneous Fittings for Pressurised Equipment**with type designation(s)
DKFN003

Issued to

Dae Kyung Chemical Inc.
Gimhae Gyeongsangnam-do, Republic of Koreais found to comply with
DNV GL rules for classification – Ships**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature range:** Fluid temperature maximum 150 degrees Celsius
Design pressure: For use with piping of maximum 22 bar internal pressure
Operating media: AllThis Certificate is valid until **2021-05-10**.Issued at **Høvik** on **2016-05-11**for **DNV GL**DNV GL local station: **Gimhae MC & FIS**Approval Engineer: **Ole Henrik Kverndal Pedersen**-----
Torill Grimstad Osberg
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

This type approval covers multilayer aluminium / composite tape with following dimensions:

Thickness	Width	Length
[mm]	[mm]	[mm]
0.28±0.1	35	10000
0.28±0.1	50	10000
0.28±0.1	75	10000
0.28±0.1	100	10000
0.28±0.1	140	10000
0.28±0.1	250	10000
0.28±0.1	500	10000
0.28±0.1	1000	10000

The anti-splash tape is used in engine rooms or other enclosed spaces as wrapping around possible sources of leakage in oil piping to help prevent fuel spray in event of a leak, as a means of meeting the requirements of the IMO SOLAS, Chapter II-2, Reg.4, 2.2.5.3.

Application/Limitation

The extent of use is limited to spray shielding applications on oil piping located above the floor plates and which have no insulation in way of the joints. Use is also restricted to readily accessible positions where the integrity of the application may be inspected regularly, and new covering will be applied after removal for maintenance purposes.

The installation of the DKFN003 is to be carried out in accordance with the Manufacturer`s instructions.

DKNF003 shall not be used for pipe insulation, or as replacement for pipe gaskets and sealings.

The DKNF003 is to be renewed at least each fifth year.

Type Approval documentation

- PRODUCT DESIGN - Technical information of DKFN003, dated March 2016.

Tests carried out

- Fire Insurers Laboratories of Korea, report no.: A2016-0372 dated 2016-03-09. Test report of the results in fire test according to IMO Res. MSC.307(88), 2010 FTP Code Annex 1 Part 5.
- Daekyung Chemical Co., Ltd dated 2016-03-17. Full scale leakage test.
- Korea Testing & Research Institute dated 2016-03-23. Strength test.

Marking of product

Each product shall be provided with visible marking, giving at least following information:

- Manufacturer`s name and model number
- Type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available

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- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Review of possible changes in design materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE