

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00006JH

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Devices to prevent the passage of flame into the cargo tanks in tankers

with type designation(s)
N-NHV-SCS-65, N-NHV-SCS-80

Issued to

Niikura Kogyo Co., Ltd.
Gotenba, Shizuoka Pref., Japan

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2020/1170,
item No. MED/3.12. SOLAS 74 as amended, Regulation II-2/4 & II-2/16, IMO Res.MSC.98(73)-(FSS Code) 15

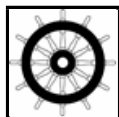
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-04-26**.

Issued at **Høvik** on **2021-04-27**

DNV local station:
Yokohama

Approval Engineer:
Maheshraja Venkatesan



Notified Body
No.: **0575**

for **DNV AS**

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Sverre Olav Bergli
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

High Velocity valve type N-NHV-SCS, size DN65 & 80 with flanged connection (JIS 5K), designed and tested according to:

- IMO MSC/Circ. 677 (as amended by MSC.1/Circ. 1324) Revised Standards for The Design, Testing and Locating of Devices to Prevent the Passage of Flame into Cargo Tanks in Tankers
- ISO 16852:2016: Flame arresters - Performance requirements, test methods and limits for use
- ISO 15364:2016 – Standard for ships and marine technology – Pressure/vacuum valves for cargo tanks

Material of construction:

Body : SCS14
Seat : SCS14
Disc : SUS316
Weight : SUS316

Application/Limitation

Products covered by this certificate may be used as vents on tanks for cargo on board ships having class notation "Tanker for Oil", "Tanker for Oil Products" or "Tanker for Chemicals" for the carriage of products with an MESG not less than 0.65 (Apparatus Group IIA & IIB).

Type	Size	Set Pressure (kPa)	Max pipe length (m)	Minimum pipe size	Maximum ice thickness (mm)	Maximum allowable leakage rate (bubble/min.)
N-NHV-SCS-65	DN65	20	102.8	DN100	0	15
N-NHV-SCS-80	DN80	20	102.8	DN125	0	18

Maximum loading rate to be established according to the latest revision of MSC/Circ. 731.

Sizing and location to be in accordance with the latest revision of MSC/Circ. 731.

Cargo tanks connected to the combined pressure-vacuum main vent line must carry the same type of cargo.

Each high velocity valve device to be visually and dimensionally checked and pneumatically leakage tested according to ISO15364:2016 [6.1] & [10]. No leakage is permitted.

A copy of the instruction manual shall be kept on board, and is to include:

- Installation instructions
- Operating instructions
- Maintenance requirements including cleaning
- A copy of the laboratory report
- Copy of test reports
- Flow test diagrams

Type Examination documentation

Tests carried out

Corrosion test, Hydrostatic pressure test, Flow test, Endurance burning test, Flash-Back test, Ice test, Oscillation test, set pressure test

Marking of product

Each device shall be permanently marked indicating the following:

- manufacturer's name or trademark;
- manufacturer's designation;
- approved location for installation, including maximum or minimum length of pipe, if any, between the device and the atmosphere and the apparatus group assigned to the tested device;
- size of connections;
- serial number;
- direction of flow through the device.