



Certificate no.:
TAS000046D

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Seats

with type designation(s)
MS 17 Double Seat, MS 17 Triple Seat

issued to

Vogel Industries (M) Sdn. Bhd.
Johor Bahru, Johor, Malaysia

is found to comply with

International Code of Safety for High-Speed Craft, 2000 - Annex 10

Application:

Passenger seat for design level 1 and 2 (collision acceleration up to 8 g)

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2024-01-31**

This Certificate is valid until **2029-01-30**.

for **DNV**

DNV local unit: **Kuala Lumpur Verification**

Approval Engineer: **Mark-Oliver Wobig**

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.

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.



Form code: TA 251

Revision: 2023-09

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Product description

Passenger Seats

- Double seat mounted in transversal direction of craft, fixed to the deck of craft by means of 4 bolts and nuts M10 grade 8.8.
- Triple seat mounted in transversal direction of craft, fixed to the deck of craft by means of 6 bolts and nuts M10 grade 8.8.

Main parts consist of seat bottom/back with upholstery of foams/fabrics composed of different types and quality. Basic construction is made from Aluminium tubes/plates and steel bolts/details.

The seats are equipped with backrest and headrest.

Application/Limitation

Type approval covers strength and mounting of Seat with respect to collision only in accordance with the 2000 HSC Code:

- Design level 1 as specified for collision acceleration (g_{coll}) up to 3g.
- Design level 2 as specified for collision acceleration (g_{coll}) up to 8g.

Deck structure/ legs are not part of this approval, but is assumed separately approved, if applicable.

Any changes which may influence the strength or safety of seat shall be reported for evaluating the need of further documentation/testing and updating of approval.

Fire test of combustible materials in accordance with HSC-Code Section 7.4.3 is not part of this approval.

Seat/Lap- belts are assumed separately approved according to relevant/recognised standard.

Type Approval documentation

Drawing No.	Rev.	Title
23-10434	00	MS 17 Double Seat
23-10433	01	MS 17 Triple Seat
24-10577	01	MS 17 Assembly of MS 17 Triple Seat
23-10496	02	MS 17 Assembly of MS 17 Double Seat
VS/L/13-OCT5702	02	MS 17 Spot weld position at aluminium Angle Set
VS/L/13-OCT5691	02	MS 17 Aluminium Seat Angle
VS/L/17-MAR7854	02	MS 17 REVO SL-17 Alu. back frame
VS/L/17-MAR7849	02	MS 17 REVO SL-17/440 Headrest Frame
VS/S/17-JUN8016	03	MS 17 REVO SL17 Grab Handle
VS/A/17-DEC8302	00	MS 17 REVO SL-17440/ 480mm Headrest Box Foam
VS/L/17-APR7914	02	MS 17 Headrest support / 440
VS/L/16-MAY7355	07	MS 17 Aluminium Reinforced Seat Leg h303mm
23-10498	00	MS 17 Fixing Materials of MS17
23-10497	00	MS 17 alu. seat frame

Materials used are specified/referred in drawings/documents above.

Tests carried out

Dynamic test in accordance with 2000 HSC Code (2008 Edition), Annex 10, Section 3 was undertaken by IWW, Trier.
Test reports :

Test report vim23_03 for MS 17 double seat without belt dated 2023-12-20

Test report vim23_04 for MS 17 double seat with lap belt dated 2023-12-20

Test report vim23_08 for MS 17 triple seat without belt dated 2023-12-20



Job ID: **262.1-024778-2**
Certificate no.: **TAS000046D**

Marking of product

Seats are to be marked with type/model designation and name of manufacturer.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey after 2 and 3.5 years, to verify that the Type Approval is complied with.

The arrangement is to be in accordance with scopes described in the DNV Class Programme CP-0140 Passenger and crew seats.