



Certificate no.:
TAS000046V

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Seats**

with type designation(s)

MS Sea Crown Double Seat, MS Sea Crown 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 **2024-01-30**

This Certificate is valid until **2029-01-29**.

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 a completed back- 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.

The Type approval covers the unbelted seat MS Sea Crown.

Type Approval documentation

Drawing No.	Rev.	Title
23-10430	01	MS Sea Crown Triple Seat
VS/A/17-JUN8022	00	MS Sea Crown Double Seat
24-10578	01	MS Sea Crown Assembly of MS Sea Crown Seat
23-10459	02	MS Sea Crown Assembly of MS Sea Crown Double Seat
VS/L/16-MAY7356	05	MS Sea Crown Aluminium Reinforced Seat Leg h230mm
23-10438	00	MS Sea Crown Completed Back Frame
23-10436	00	MS Sea Crown Back Frame Under Support Tube
23-10435	00	MS Sea Crown Alu Back Frame
23-10437	00	MS Sea Crown Marine Underfloor lever
23-10487	00	MS Sea Crown back foam part
23-10460	00	MS Sea Crown seat cushion foam part
23-10458	00	MS Sea Crown Aluminium Angle Stopping Bracket
23-10457	00	MS Sea Crown Completed Back Frame
23-10444	00	MS Sea Crown Fixing materials of MS Sea Crown
23-10439	00	MS Sea Crown Marine Seat Angle

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_05 for MS SEA CROWN double seat without belt dated 2023-12-20

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.