

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Seats**

with type designation(s)
MD-150F, MD-300F, MD-300R

Issued to

Seaborn International Limited
Hong Kong, Hong Kong

is found to comply with
International Code of Safety for High-Speed Craft, 2000 - Annex 10

Application :

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

This Certificate is valid until **2019-11-09**.

Issued at **Høvik** on **2015-11-10**

DNV GL local station: **China South CMC/ SIO**

Approval Engineer: **Marcus Gustafsson**

for **DNV GL**

Odd Arne Lyngstad
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

Passenger Seats for different configurations placed on beam(s) supported by legs mounted in floor-rails fixed to the craft's deck.

The number of legs/rails depends on number of Seats in row and actual level of collision design acceleration of the craft.

Seat-design includes the following main parts: Seat/Back including arm-rest/adjusting-mechanism if any, Beam(s) for seat-row, Legs and Floor-Rails.

Models:

MD-150: "MD-150F"

MD-300: "MD-300F" and "MD-300R"

Construction of basic Seat is made of aluminium-profiles/plate/casting and steel bolts/details.

Upholstery of Seat consists of foams/fabrics composed of different types and quality.

Application/Limitation

The approval covers *strength and mounting* of Seats according '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} from 3 to 12g.

Seats are to be mounted/fixed to deck in accordance with "Seaborn Installation Guide".

Deck structure of craft is not part of this approval, but is assumed separately approved.

Seats are approved for the following arrangement/condition relative to the craft:

MD-150:

4 seats on 2 legs up to 3g.

MD-300:

Forward with belt:

	2 seats	3 seats	4 seats
2 legs	12g	10g	8g

Forward without belt:

	2 seats	3 seats	4 seats
2 legs	8g	8g	8g

Rearward with back/bulkhead in front without belt

	2 seats	3 seats	4 seats
2 legs	6g	6g	6g

Other arrangements /mounting/ g_{coll} :

- To be approved in each individual case.

Lap/Seatbelts:

- Belts are assumed to be installed when no protecting structure in front of Seats.
- For g_{coll} less than 3g, lap/seatbelts are not required to be installed.

Job Id: **262.1-019534-1**
Certificate No: **TAS000007F**

Approval conditions

This Approval is issued on basis of Program 3-499.50-1 in DNV's Certification Note 2.9. The Program covers requirements to Seats in Ch. 4.4, 4.5 and Appendix 10 of "International Code of Safety for High-Speed Craft, 2000", as referred in Pt.3 Ch.7 (January 2010) of DNV's: "Rules for Classification of High Speed, Light Craft and Naval Surface Craft".

This Approval covers the strength of Seat and fastening with respect to collision only.

Note: Restricted use of combustible materials according to HSC-Code sec.7.4.3 is not part of this approval.

Lap/seatbelts if any, are assumed to be approved according to relevant/recognised standard.

Any change, which may influence the strength/safety of the Seat, shall be reported for evaluating the need of further documentation/testing and updating of this approval.

Additional Seat-fittings/equipment may be accepted based on documentation and/or survey prior to installation, showing the strength/safety of the Seat is not influenced.

Type Approval documentation

Seats are covered by the following main drawings/documents with relevant references:

Construction:

Materials:

- Aluminium and steel as specified/referred to in the drawings/documentation above.

Lap/Seatbelt:

- Separate approval according to relevant/recognised standard is assumed/accepted.

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Tests carried out

Static test in accordance with the HSC-Code Annex 10 section 2 and

Dynamic test in accordance with the HSC-Code Annex 10 section 3:

- Test Report No. 20949, Issue 3, dated 2015-09-21 by APV-T
Static and dynamic tests for MD150 and MD300 Series.

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

Marking of product

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

Note: MED-marking (acc. to Maritime Equipment Directives 96/98/EC) does not apply for strength of Seats, but applies to fire safety of combustible materials, which are not part of this approval.

Periodical assessment

Det Norske Veritas may perform Certification Retention Surveys at any time during the validity period of this certificate. The arrangement is to be in accordance with scopes described in item 2.6.4 of Certification Note 2.9.

END OF CERTIFICATE