



Certificate no.:
TAS000045Z

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Seats**

with type designation(s)
Pacific Sleeper 1000 (PS1000)

issued to

Georg Eknes Industrier AS
EIKANGERVÅG, Norway

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.

Issued at **Høvik** on **2024-01-24**

This Certificate is valid until **2029-01-23**.

for **DNV**

DNV local unit: **West Norway FiS**

Approval Engineer: **Per Annar Sandaune**

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 mounted on beam and leg assembly on base rails fixed to the deck of the craft.

Type/model designation:

- Pacific Sleeper 1000 (PS 1000)

The basic construction consists of bottom/back with upholstery, beam, legs and deck rails. Basic materials are aluminium-profiles/plates and steel bolts/details. Seat upholstery consists of foams and fabrics composed of different types and quality.

Application/Limitation

The type approval covers strength and mounting of seats according to 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} from 3 to 12g.

The seats are approved for the following conditions relative to the craft:

- Forward facing for g_{coll} up to and including 9g

The seats are to be mounted to deck as tested (ref. PS1000 Foot Assembly drawing in documentation list overleaf):

- Fixation by 6 off DIN EN 24018 M10x25 bolts (3 on each foot)

The deck structure of craft is not part of this approval.

Seat/lap belts are not required to be installed for Design level 1.

Other mounting and g_{coll} may be accepted based on case-by-case approval.

Approval conditions

The Type Approval is issued based on Class Programme DNV-CP-0140 "Passenger and crew seats". The approval covers requirements to seats in Ch. 4.4, Ch. 4.5 and Appendix 10 of the "International Code of Safety for High-Speed Craft, 2000", as referred to in Sec. 9 of DNV-SI-0364 - "Statutory Interpretations – SOLAS interpretations" at date of issue.

The approval covers the strength of seat and mounting with respect to collision only.

Note: Restricted use of combustible materials according to 2000 HSC Code Ch. 7.4.3 is not part of this approval.

Any changes which may influence the strength or safety of the seats shall be reported for evaluation of the possible need for revision of the approval.

Any additional equipment may be accepted based on documentation and/or survey prior to installation, showing that strength and/or safety will not be influenced.

Type Approval documentation

Tests carried out

Static tests according to 2000 HSC Code, Annex 10, Section 2 was undertaken by Georg Eknes Industrier AS:

- Static test documentation dated 2023-09-07
 - o Covering configurations with 1, 2 and 3 seats on 2 legs

Dynamic test according to the 2000 HSC Code Annex 10 section 3 was undertaken by Autoliv Sverige AB:

- Test date 2023-06-12
 - o Tested with seat/lap belts, covering configurations with 1, 2 and 3 seats on 2 legs

Note: Fire test of combustible materials in accordance with the 2000 HSC Code Ch. 7.4.3 is not part of this approval.

Marking of product

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

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

Periodical assessment

DNV may perform Certificate Retention Surveys at any time during the validity period of this certificate. The arrangement is to be in accordance with the scope described in DNVGL-CP-0338.



END OF CERTIFICATE

Job ID: **262.1-040814-1**
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