DNV·GL

Certificate No:
TAS00001EF
File No:
499.50
Job Id:
262.1-028613-1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Seats

with type designation(s)
Transit Super Nova 1400, Transit Super Nova 1400+, Transit Super Nova 1410, Transit Super Nova 1420, Transit Premier 1500, Transit Premier 1500+, Transit Atlantic, Transit Voyage, Transit Comfort

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 GL.

Passenger Seat for Design level 1: gcoll = 3g
Passenger Seat for Design level 2: gcoll = 3 to 12g

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2018-04-03**
DNV GL local station: **Bergen** for **DNV GL**

Approval Engineer: **Espen Kultorp**

Christine Adal
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.

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Product description

Passenger Seats of "*Reclining*"-design mounted on legs/rails fixed to deck of craft.
Number of legs depends on number of Seats and actual level of collision design acceleration.

Type designation: "Transit Super Nova 1400" and "Transit Super Nova 1400 +",
"Transit Super Nova 1410" and "Transit Super Nova 1420",
"Transit Premier 1500" and "Transit Premier 1500+",
"Transit Atlantic", "Transit Voyage" and "Transit Comfort".

Basic construction consists of: Back/Bottom, Beam, Legs and Floor-Rails.
Basic materials are aluminium-profiles/plate/casting and steel bolts/details.
Upholstery 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 approved for the following conditions *relative to the craft:*
- *Forward* facing ('G-foot 4 bolts') for g_{coll} up to 12g:
  - All types/models except 'Transit Comfort' up to 4 seats in row when placed on 2 legs without belt
  - All types/models except 'Transit Comfort' up to 4 seats in row when placed on 4 legs with belt

- *Aftward* facing ('G-foot 4 bolts') for g_{coll} up to 9g:
  - All types/models except 'Transit Comfort' up to 4 seats in row when placed on 3 legs

- *Forward and Aftward* facing, for g_{coll} up to 3g;
  - All types/models up to 4 seats in row when placed on 2 legs

Seats are to be mounted to deck as tested (ref. documentation overleaf):
- Fixation by 5 mm rivets A2 spaced according drwg.no.421/01-A.

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

Seat/Lap-belts are *not* required to be installed for *Design Level 1*.

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

Approval conditions

Type Approval is issued based on Class Programme DNVGL-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 DNV GL Rules for Classification: High Speed and Light Craft, Pt.3 Ch.7 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 HSC-Code sec.7.4.3 is not part of this approval.

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

Any changes which may influence the strength or safety of the Seat, shall be reported for evaluating the need for revision of the approval.

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

Type Approval documentation

Seats/mounting is covered by the following main drawings/documents, reference:

Materials used are specified/referred to in the drawings/documentation above.

Any Seat/Lap-belts are assumed separately approval according to relevant standard.

Tests carried out

Dynamic test according to '2000 HSC-Code' Annex 10 section 3 was undertaken by Autoliv Sverige AB, reference:
- Report TO-11008568, project 90210, test T-11053365, 11053366 and 11053368 dated 10.06.2011; Covering forward and aftward tests of Seats mounted on typical aluminium deck panel.

Static test according to '2000 HSC-Code' Annex 10 section 2 was undertaken by Georg Eknes Industrier AS, reference:
- Procedure and Jig; drwg.no. 173/54, date 31.01.1996
- Statiske tester…. : document 340021, date 31.05.2006
- Skjema for reg…test (Leg/Rail): 'G-foot 4bolts'/drwg.no. 421/33-A, date 02.03.2006
- Test.."Tr. Super Nova" (Bottom/Back): drwg.no.053/98,-97,-96,-99 and 063/01, date 11.09.1991
- Technical report Mongstad Test og Inspeksjon AS: M-52316, date 21.02.2001/18.06.2002.

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/model-designation(s) and name of manufacturer.

Note: MED-marking (acc. to Maritime Equipment Directives 2014/90/EC) does not apply for strength of Seats, but applies to fire safety of combustible materials, which are not part of this approval.

Certificate retention survey

DNV GL 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 DNVGL-CP-0338.

END OF CERTIFICATE