DNV·GL

TYPE EXAMINATION CERTIFICATE

Certificate No:
TALB000000U

This is to certify:

That the Immersion suits and anti-exposure suits designed to be worn in conjunction WITHOUT a lifejacket: Immersion suit with inherent insulation

with type designation(s)
SeaAir1/SeaAir Barents

Issued to
Hansen Protection AS
MOSS, Norway

is found to comply with
SOLAS 74 as amended, Regulation III/4, III/7, III/22, III/32, III/34 & X/3, LSA Code and 2000 HSC Code 8

Application :

Immersion suit satisfying Norwegian Maritime Directorate Regulation 02 February 2016 nr. 90 concerning life-saving appliances and evacuation on mobile offshore units §25

Issued at **Høvik** on **2016-07-05**

for **DNV GL**

This Certificate is valid until **2021-07-04**.
DNV GL local station: **Sandefjord**

Approval Engineer: **Tessa Biever**

Petter Langnes
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 Examination Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-022349-1**
Certificate No: **TALB000000U**

Product description

"SeaAir1/SeaAir Barents" is an insulated immersion suit designed to be worn without a lifejacket. The immersion suit is equipped with an inflatable collar for comfort purposes and may be equipped with a removable self-righting unit, helicopter underwater breathing system and HPL-1 emergency locator beacon.

Main fabric:	Uretek 4530 M	by Uretek Inc.
Zipper:	TIZIP Super Seal	by TITEX Vertriebs-Gmbh
Buoyancy foam:	Airex S32	by Alcan Airex AG

Application/Limitation

Position indicating light and retro-reflective materials shall be approved in accordance with the Marine Equipment Directive and be "wheelmarked".

The design assessment is based on IMO Res. MSC 48(66) as amended by IMO Res. MSC 207(81) and IMO Res. MSC 218(82).

Production and installation testing shall be carried out according to IMO Res. MSC. 81(70), part 2 as amended.

Type Examination documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

The following documentation is basis for the approval:

- Technical Documentation Hansen Protection File SeaAir 1, version 1-1; 2007-06-29 approved by DNV 2007-07-16.
- Reports from prototype testing in Trondheim on 2007-01-23~25, 2007-03-27~29, 2007-05-04, 2007-06-01, 2007-06-05 witnessed by DNV.
- Test report project no 804021.68 dated 2007-06-28, SINTEF, Trondheim, Norway
- Test report no. F20629 dated 2011-09-23, SINTEF, Trondheim, Norway
- DNV Statement of Compliance (our ref. 344.1-000459 J68)

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC 81(70) part 1, including IMO Res. MSC.200(81), IMO Res. MSC.226(82) and IMO Res. MSC.323(89).

Norwegian Maritime Directorate – Rundskriv 05-2013 Procedure for testing of the self righting function when certifying immersion suits to be used on mobile offshore units.

Marking of product

The product is to be indelibly marked with name of manufacturer, type designation, dimensions and date of manufacture. The marking shall comply with the LSA Code (IMO Res. MSC.48(66)), item 1.2.2.9.

Certificate Retention Survey

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.