DNV·GL

Certificate No:
MEDB0000104

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Immersion suits and anti-exposure suits designed to be worn in conjunction WITH a lifejacket: Immersion suit with inherent insulation

with type designation(s)
SeaEco & SeaEco+

Issued to
Hansen Protection AS
MOSS, Norway

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/1.5b and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation III/4, III/7, III/22, III/32, III/34 & X/3, LSA Code and 2000 HSC Code 8
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-04-21**.

Issued at **Høvik** on **2016-04-22**

DNV GL local station:
Sandefjord

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

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Product description

SeaEco & SeaEco+ are insulated immersion suits. The suits and gloves are made of waterproof neoprene. The colour of the suits are orange/black.

Main fabric	Neoprene	by Nam Liong Enterprise Co., Ltd.
Main zipper	Tizip	by TITEX Vertiebs GmbH

SeaEco+ is a SeaEco suit fitted with an buoyant collar, lifting loop, lifejacket light and lifeline.

Application/Limitation

SeaEco shall be worn with a lifejacket approved in accordance with the Marine Equipment Directive and "wheelmarked".

SeaEco+ is approved to be used without a lifejacket.

Position indicating light (SeaEco+) and retro-reflective materials (SeaEco and SeaEco+) 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

The following documentation is basis for the DNV GL approval:

- Materials and component list stamped for information 2011-07-05
- Reports from prototype testing at Thelma on 2011-03-16, witnessed by DNV
- Product standard sheets for "main fabric" dated 2010-12-07 and 2005-07-04
- Reports from prototype testing in Trondheim on 2004-12-08, 2004-12-10, 2004-12-13~16, 2005-02-03, 2005-02-07, 2005-03-04 and 2005-04-05, witnessed by DNV
- Technical Documentation File N6 Basic, N6 Nordic and N6 Arctic offshore as detailed in list of content, Version 1: 18-02-2005, approved by DNV on 2005-04-06
- Test Report No. F25877, Rev. 1, dated 2014-01-28 from SINTEF Technology and Society (SeaEco+)
- Test Report No. 804023.77, Rev. 01, dated 2011-11-29 from SINTEF Materialer og Kjemi (SeaEco+)
- Dwg. "SeaEco+ suit front with buoyancy", Rev. 02, dated 2013-09-18 from Hansen Protection AS
- Dwg. "SeaEco+ suit back with buoyancy", Rev. 05, dated 2013-03-25 from Hansen Protection AS

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).

Marking of product