



TYPE APPROVAL CERTIFICATE

Certificate No:
TAP00002EE
Revision No:
0

This is to certify:

That the **Life-support System for Hyperbaric Lifeboat**

with type designation(s)
SPHL-18-300

Issued to

IHC Hytech B.V.
Raamsdonksveer, Noord-Brabant, The Netherlands

is found to comply with

DNVGL-OS-E402 – Diving systems, Edition July 2019

Application :

The system approved by this certificate is accepted for installation on Hyperbaric Lifeboats for DNV classed vessel with DSV notation.

Issued at **Høvik** on **2021-09-10**

This Certificate is valid until **2026-09-09**.

DNV local station: **Netherlands CMC**

for **DNV**

Approval Engineer: **Patrice Massicard**

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Inger-Helene Hals
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.

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: 2021-03

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Product description

This approval covers the piping systems and electrical arrangements required to provide a safe environment for the divers in an hyperbaric evacuation unit.

The following sub-systems are included :

- On board Pressurization
- Depth monitoring
- Oxygen Make up
- Gas Analysation
- BIBS supply and exhaust
- Hyperbaric Toilets
- Heating and Cooling
- CO2 removal
- Fire Fighting
- SPHL Crew Breathing system
- Electrical systems
- Communication systems

Application/Limitation

Maximum depth: 300m
Number of Occupants: 18
Operating time: min. 72 hrs

Type Approval documentation

3.20.1425	D	Partlist electrical diagram hyperbaric vessel IHC SPHL
3.20.1425	D	Electrical diagram hyperbaric vessel IHC SPHL
3.20.1413	D	Partlist electrical diagram SPHL
3.20.1413	D	Electrical diagram SPHL
2.80.3083	-	Safety medical lock 300msw
3.80.4776	A	Air over pressure system Partslist Hytech
3.80.4776	A	Air over pressure system
3.80.5554	-	Overview P&ID SPHL-18-300-DNV
3.80.5549	-	IHC SPHL-DSV interfacing L.S.S
SP-082-100-003-30	01	IHC PROTOTYPE SPHL COMPLIANT INTERCONNECTED SYSTEM EQUIPMENT
3.20.1413	A	Electrical Block diagram SPHL
SP-041-125-001-51	A	DDCS Electrical diagram
SP-010-356-002-30	01	DDCS General Arrangement
3.80.5435	-	Optional 2nd supply lock
3.80.5435	-	Optional 2nd supply lock Partlist
3.80.5195	A	Cooling water circuit generators Partslist
3.80.5195	A	Cooling water circuit generators
3.80.5164	A	Breathing system SPHL crew
3.80.5164	A	Breathing system SPHL crew Partslist
3.80.5161	D	Firefighting
3.80.5161	D	Firefighting Part List
3.80.5160	B	Hyperbaric toilet
3.80.5160	B	Hyperbaric toilet Part list
3.80.5159	C	Oxygen make-up
3.80.5159	C	Oxygen Make-up Partslist

3.80.5158	C	Analysation Partlist
3.80.5158	C	Analysation
3.80.5157	B	BIBS supply
3.80.5157	B	BIBS Supply Partslist
3.80.5156	B	BIBS Exhaust
3.80.5156	B	BIBS Exhaust Part List
3.80.5155	C	(De)-Press. & Depth mon.
3.80.5155	C	(De)-Press. & Depth mon. Partlist
3.80.5154	B	Onboard pressurisation
3.80.5154	B	Onboard pressurisation Part list
3.80.4622	C	IHC SPHL Cooling & Heating system
3.80.4622	C	IHC SPHL Cooling & Heating system Partslist

Tests to be carried out

Each system shall be tested according to the rules in presence of a DNV surveyor.

Marking of product

The SPHL's chamber shall be marked in fixed identification nameplate with :

- DNV certificate no
- Fabricant ID
- Year of build
- Test date
- Design pressure
- Test pressure
- Empty weight
- Hytech ID no.

Conditions / Comments

Each system is to be certified by DNV surveyor in accordance with the rules.

Materials and components shall be provided with relevant certificates as required in DNV-OSS-0375.

The compression chamber shall be separately certified according to a recognized pressure vessel standard.

The Life boat shall be separately certified according to IMO LSA code.

The certificate for the SPHL's Life-support system to refer to the certificate for the life boat and certificate for the chamber.

END OF CERTIFICATE