

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000023U
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Integrated navigation system (INS)

with type designation(s)
HLD-INS600

Issued to

Jiangsu Highland Integration Technology Co.,Ltd.
Nantong, Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2023/1667**,

item No. MED/4.59. SOLAS 74 as amended, Regulations V/15, V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.252(83), IMO Res. MSC.302(87)

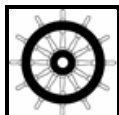
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-02-26**.

Issued at **Hamburg** on **2024-02-27**

DNV local station:
Dalian NB & CMC

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for DNV SE

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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.



Product description

The integrated navigation system (INS) type HLD-INS600 comprises of:

No.	Designation	Type Designation
1	Not used	
2	Main Processing Unit Display Electronics	as defined in separate certificate [†]
3	Display Units 250mm (for Radar CAT 2 & ECDIS, alternatively)	as defined in separate certificate [†]
4	Display Units 320mm (for Radar CAT 1 & ECDIS alternatively)	as defined in separate certificate [†]
5	Operator Units (alternatively)	as defined in separate certificate [†]
6	Sensor Interfaces (alternatively)	as defined in separate certificate [†]
7	Network Switches (alternatively)	as defined in separate certificate [†]
8	Optional Components	as defined in separate certificate [†]

Software:

No.	Designation	Version no.
1	Application software	V2.0.x with x ≥ 22562
2	Operating system of Display Electronics	Microsoft Windows 7 SP1

[†] Version numbers as defined in separate certificate[†]

Application/Limitation

[†] The Type Approval certificate TAA000035G for HLD-INS600 system platforms in its latest revision at the date of placing the system on the market is part of this certificate, for the relevant revision see also <https://approvalfinder.dnv.com/>.

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016), IEC 61162-2 (1998) and IEC 61162-450 (2018)
- Presentation testing: IEC 62288 (2021)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: IEC 61924-2 (2021)

Type Examination documentation

9065-16-39255-61924 – INS IEC 61924 Edition 1.0, 60945 test report-SIPAI – A15-006-ZC,
9065-16-39255_Network, 9065-16-39266-61162,
DNV-2-19-HLD-INS600-01 Rev V01C (IEC 61162-450 Ed. 2), DNV-2-19-HLD-INS600-02 Rev V01C (IEC 62923-1/-2),
DNV-2-19-HLD-INS600-03 Rev V01C (IEC 62288 Ed. 3 and MSC.452(99)).

DNV No.	Document ID	Rev.	Description
36	HLD10100CZ	1.4	Operation manual for HLD-RADAR900S
35	HLD10100AZ	1.3	Installation manual for HLD-RADAR900S
34	HLD0800CZ	2.3	Installation & operation manual for HLD-TCS600
33	HLD0700CZ	1.0	Operation manual for HLD-SC600

DNV No.	Document ID	Rev.	Description
32	HLD0700AZ	1.1	Installation manual for HLD-SC600
27	HLD5100UM	2.4	User manual for HLD-INS600
26	HLD5100AZ	2.3	Installation manual for HLD-INS600
23	HLD1800CZ	2.2	Operation manual for HLD-RADAR900C
22	HLD1800AZ	2.3	Installation manual for HLD-RADAR900C
20	HLD3400CZ	3.0	Operation manual for HLD-ECDIS600
19	HLD3400AZ	2.6	Installation manual for HLD-ECDIS600
18	TAA000035G	Latest rev.	Certificate: DNV, HLD navigation systems platforms

Marking of product

According to IEC 60945, Sect.4.9:

The product to be marked with following information, where practicable:

- Identification of the manufacturer,
- Equipment type number or model identification under which it was type tested,
- Serial number of the unit,
- Compass safe distance.

Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual.

END OF CERTIFICATE