Certificate No:
TAA000035G

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Miscellaneous

with type designation(s)
HLD navigation systems platforms

Issued to
Beijing Highlander Digital Technology Co., LTD
Beijing, **China**

is found to comply with
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays

Application :

This type approval certificate is only valid as part of the EU type examination certificate MEDB000023W.

Issued at **Hamburg** on **2022-09-06**
This Certificate is valid until **2027-09-05** .
DNV local unit: **Dalian NB & CMC**

Approval Engineer: **Jörg Rebel**

for **DNV**

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Frederik Tore Elter
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.

Product description
See appendix for details of the HLD navigation systems platforms

Application/Limitation
- Installation is to be performed according to the manufacturer's documentation.
- This certificate only identifies hardware and software used in HLD navigation systems and is intended to be read in conjunction with the individual certificates covering the various HLD navigation systems.
- For details on compliance to system requirements, please see individual certificates for HLD navigation systems where reference is made to this certificate.

Tests carried out
- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Presentation testing: IEC 62288 (2014)

Type Approval documentation

DNV No.	Document ID	Rev.	Description
1	HLD-TEST REPORTS FOR NAVIGATION SYSTEMS	V1.3	List of reports for environmental and presentation testing for HLD navigation systems

Marking of product
Marking to be in accordance with requirements in Marine Equipment Directive (MED) 2014/90/EU.
See individual MED-B certificates for details.

Periodical assessment
Periodical assessment is granted by the annual MED module-D audits.

APPENDIX

Product description

No.	Designation	Type Designation	Software version no.
1•	**Transceiver Units**	• **if HLD-RADAR900C is included**	
	Radar Antenna	a) HLD-AT106 (X-Band) b) HLD-AT108 (X-Band) c) HLD-AT 112 (S-Band)	
	Radar Transceiver	a) HLD-TU125 (X-Band) b) HLD-TU130 (S-Band)	1.x 1.x
2	**Main Processing Units** (alternatively)	a) HLD-MCU200 b) HLD-MCU600 c) HLD-MCU770	
	Operating system	Microsoft Windows 7 SP1	
3	**Display Units 250mm** (for Radar CAT 2 & ECDIS, alternatively)	a) HLD-DU134 (Monitor TFT 24") b) HLD-DU140 (Monitor TFT 24")	
4	**Display Units 320mm** (for Radar CAT 1 & ECDIS alternatively)	a) HLD-DU135 (Monitor TFT 26") b) HLD-DU136 (Monitor TFT 26") c) HLD-DU137 (Monitor TFT 26") d) HLD-DU138 (Monitor TFT 27") e) HLD-DU141 (Monitor TFT 26")	
5	**Operator Units** (alternatively)	a) HLD-IU600 (Human Interface Unit)	1.x
6	**Sensor Interfaces** (alternatively)	a) HLD-SCU600 (Signal Convert Unit)	
7	**Network Switches** (alternatively)	a) HLD-LS600 (LAN Switch 24 ports)	
8	**Optional Components**	a) HLD-PCU600 (Power Conversion Unit) b) PC SMART-UPS RT 1000VA 230V (UPS SURT1000 XLIM) c) APC SMART-UPS RT 2200VA 230V (UPS SURTD2200 XLIM) d) SURT023M-APC 3000VA FILTER (EMC Filter SURT023M)	
9	**Track Control Units**	• **if HLD-TCS600 is included**	
	(additional)	a) HLD-NFU200 (Non-Follow-Up Unit) b) HLD-SW200 (Steering Mode Switch)	

Table of combinations of radar equipment

No.	Type designation	CAT 1, CAT 1C		CAT 2, CAT 2C	
		X-Band	S-Band	X-Band	S-Band
1	HLD-MCU 200 or HLD-MCU 600	X	X	X	X
2.1	HLD-TU 125	X		X	
2.2	HLD-TU 130		X		X
3.1	HLD-AT 106 or HLD-AT 108	X		X	
3.2	HLD-AT 112		X		X
4	HLD-PCU 600	X	X	X	X
5	HLD-IU 600	X	X	X	X
6.1	HLD-DU 134 or HLD-DU 140 or HLD-DU 150			X	X
6.2	HLD-DU 135 or HLD-DU 136 or HLD-DU 137	X	X		

END OF CERTIFICATE