

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the hardware modules

with type designation(s)
assigned for Transas ECDIS/Radar/BAM/BNWAS/Conning

Manufactured by
Transas Marine Limited
Cork, Ireland

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 :

See page 2

This Certificate is valid until **2020-01-28**.

Issued at **Høvik** on **2016-01-29**

DNV GL local station: **Gothenburg**

Approval Engineer: **Rolf Heger**

for **DNV GL**

Jan Tore Grimsrud
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.

Product description

The following table describes five different hardware profiles (HW1 – HW5). These profiles are equipped in the applications listed under type designation at page 1.

“X” indicates that the component included in the profile

Item/ System	HW1	HW2	HW3	HW4	HW5
Main processor unit					
RS6 <i>or</i>	X	X	X	X	X
RS6B <i>or</i>	X	X	X	X	X
HT RS7GE TRC-A3J-M100 <i>or</i>	X			X	X
TPC24 (type HD 24T21 TEC-MJD-AAB2) <i>or</i>	X			X	X
19"PanelPC i7 (type HD19T21 xyC-Mxx-xxx) ¹⁾ <i>or</i>	X		X	X	X
24"PanelPC i7 (type HD24T21 xyC-Mxx-xxx) ¹⁾ <i>or</i>	X		X	X	X
26"PanelPC i7 (type HD26T21 xyC-Mxx-xxx) ¹⁾ <i>or</i>	X	X	X	X	X
24"PanelPC (Type MPC-2240)	X		X	X	X
Operating and control unit					
ES2 keyboard and trackball ²⁾ <i>or</i>	X			X	X
ES3 keyboard and trackball ²⁾ <i>or</i>	X	X	X	X	X
ES4 keyboard and trackball ²⁾ <i>or</i>	X			X	X
ES6 keyboard and trackball ²⁾ <i>or</i>	X	X	X	X	X
ES 6 w/trackball only <i>or</i>	X	X	X	X	X
NSI laser trackball TSX50YZ-XXXX-MCW ³⁾ <i>or</i>	X	X	X	X	X
KSML92YXXXX-Z-MCW ⁴⁾ <i>or</i>	X	X	X	X	X
KSLM106F1USB-WLED <i>or</i>	X	X	X	X	X
KSMX106Ybbbb-Z(ED)-MC1 ⁵⁾ <i>or</i>	X	X	X	X	X
Raytheon Trackball FTT 2802 <i>or</i>	X	X	X	X	X
NSC900-048 NG001 <i>or</i>	X	X	X	X	X
NSC900-048 NG004	X	X	X	X	X
Display unit Hatteland					
all units via DVI					
or in combination with RS6 or with RS6B or with HT RS7GE TRC-A3J-M100⁶⁾ via VGA					
JH19T02MMD-E1/E2 <i>or</i>	X		X	X	X
JH19T14MMD-DAE/AAE <i>or</i>	X		X	X	X
JH19T14 aaD-MzE-zxxA ¹⁰⁾ <i>or</i>	X		X	X	X
JH19T14 aaD-DzE-zxxA ¹⁰⁾ <i>or</i>	X		X	X	X
JH20T17-DAE/AAE <i>or</i>	X		X	X	X
JH23T12MMD-AAE <i>or</i>	X	X	X	X	X
JH23T14TRD-MAE <i>or</i>	X	X	X	X	X
JH23T14 aaD-MzE-zxxA ¹⁰⁾ <i>or</i>	X	X	X	X	X
JH26T11 aaD-MzE-zxxA ¹⁰⁾ <i>or</i>	X	X	X	X	X
JH27T11MMD-AA1 <i>or</i>	X	X	X	X	X
JH27T11TRD-AAE <i>or</i>	X	X	X	X	X
HD19T03xTxE+HDMMD01-A <i>or</i>	X		X	X	X
HD 19T21 aan-xxE-Fxxy ¹⁰⁾ <i>or</i>	X		X	X	X
HD 24T21 aan-xxE-Fxxy ¹⁰⁾ <i>or</i>	X		X	X	X
HD 26T21 aan-xxE-Fxxy ¹⁰⁾ <i>or</i>	X	X	X	X	X

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Item/ System	HW1	HW2	HW3	HW4	HW5
Display unit ISIC					
all units via DVI or in combination with RS6B via VGA					
DuraMON 19" GLASS, type 07019-001 <i>or</i>	X		X	X	X
DuraMON WS 24" GLASS, type 07024-001 <i>or</i>	X		X	X	X
DuraMON WS 26" GLASS, type 07026-001 <i>or</i>	X	X	X	X	X
Display unit MOXA					
all units via DVI or in combination with RS6B via VGA					
MD-219X <i>or</i>	X		X	X	X
MD-224X <i>or</i>	X		X	X	X
MD-226X	X	X	X	X	X
Reset button					
RB-1				X	
RB-1-1 (with dimmer)				X	
I/O modules					
WAGO 750-314 RS232 <i>or</i>				X	
WAGO 750-882 PLC- ETHERNET ⁸⁾				X	
WAGO 750-513 WAGO 2 ch relay output module				X	
WAGO 750-403 4 ch digital input module				X	
WAGO 750-600 end module				X	
Buzzer					
AB-1				X	

Optional components					
RIB6 <i>or</i>	X	X	X	X	X
RIB6B	X	X	X	X	X
Data Collector Unit DCU 6	X	X	X	X	X
Raytheon Nautoplex 8PLUS8	X	X	X	X	X
Log pulse machine BABOONE4 – RS	X	X	X	X	X
NMEA isolated RS422/RS232C RABBIT 6	X	X	X	X	X
Serial Line Splitter UPC3002 ⁷⁾	X	X	X	X	X
Serial Line Splitter UPC3005 ⁷⁾	X	X	X	X	X
Serial Line Splitter UPC5000P ⁷⁾	X	X	X	X	X
Serial interface PCA100293-1 LTC1535 Isolated RS485	X	X	X	X	X
Moxa Nport (serial to Ethernet) Nport 5430I	X	X	X	X	X
Ethernet switches					
Moxa EtherDevice Switch EDS 308	X	X	X	X	X
Moxa EtherDevice Switch EDS 316	X	X	X	X	X
Moxa EtherDevice Switch EDS 208A	X	X	X	X	X
Moxa EtherDevice Switch EDS G308	X	X	X	X	X
Moxa EtherDevice Switch EDS G509	X	X	X	X	X
Weidmuller Ethernet Switch IE-SW-BL08-8TX	X	X	X	X	X
HP Procurve Ethernet Switch HP2312	X	X	X	X	X
HP Procurve Ethernet Switch HP2512	X	X	X	X	X
IES-0104FT- DNV	X	X	X	X	X
IES-0204FT-DNV	X	X	X	X	X

Item/ System	HW1	HW2	HW3	HW4	HW5
IES-1204FT-DNV	X	X	X	X	X
IES-2008B-DNV	X	X	X	X	X
IES-2208F-DNV	X	X	X	X	X
IGS-2404-E-DNV	X	X	X	X	X
LGS-2624C-DNV	X	X	X	X	X
LGS-2816C-RPS-DNV	X	X	X	X	X
Media Converters					
Moxa Video Server Vport 351					X
Moxa Video Server Vport 364A					X
Moxa Media Converter IMC-101	X	X	X	X	X
Veinland KVM switch VL-66112	X	X	X	X	X
Firewall & Antivirus Protector					
Transas gateway(type UTM-1 Edge N)	X			X	X
TFAP	X			X	X
Uninterruptible Power Supply					
UPS6 ⁸⁾	X	X	X	X	X
Weidemuller UPS ⁹⁾	X	X	X	X	X
I/O modules					
WAGO 750-314 RS232	X	X	X	X	X
WAGO 750-882 PLC- ETHERNET ⁸⁾	X	X	X	X	X
WAGO 750-454 2-Channel Analogue Input Module 4-20 mA					X
WAGO 750-476 2-Channel Analogue Input Module +/- 10V					X
WAGO 750-468 4-Channel Analogue Input Module 0-10V					X
WAGO 750-403 4 ch digital input module				X	X
WAGO 750-513 WAGO 2 ch relay output module				X	X
WAGO 750-600 end module				X	X

¹⁾ Integrated display and main processing unit can replace a combination of a main processor unit and a display. X = M or T, y= M or E

²⁾ Keyboard may be waived when the following panel computers with buzzer is installed;
TPC24 or 19"PanelPC i7 or 24"PanelPC i7 or 26"PanelPC i7
Alternatively one of the following displays with buzzer shall be installed in combination with the RS6/RS6B/ HT RS7GE TRC-A3J-M100 unit:
JH19T14MMD-xxx-xxBx or JH20T17MMD-xxx-xxBx or JH23T14MMD-xxx-xxBx
or JH27T11MMD-xxx-xxBx or JH19T14TRD-xxx-xxBx or JH20T17TRD-xxx-xxBx
or JH23T14TRD-xxx-xxBx or JH27T11TRD-xxx-xxBx or JH26T11 TRD-xxx-xxBx
or HD 19T21 aan-xxE-Fxxy or HD 24T21 aan-xxE-Fxxy or HD 26T21 aan-xxE-Fxxy

³⁾ Y= F or N or C or S, Z= 1 or 2 or 4 or 8, XXXX = 4 digit code, W = 1 or 2 or 3

⁴⁾ Y= F or S, XXXX = 4 digit code, Z= W or R or G or B or Y or C or M, W= 1 or 2 or 3

⁵⁾ Y = F or B, bbbb = 4 digit code, Z=W or R or G or B or Y or C or M

⁶⁾ HT RS7GE TRC-A3J-M100 will not be used with Navi-Radar 4000

⁷⁾ The splitter has to be duplicated where a redundant component or sub-system is required to be interfaced

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- 8) The UPS6 can consist of: EMC filter: ME-MAX/NEF/QUINT20A, Power supply: QUINT-PS/1AC/24DC/20, Quint-Diode or QUINT-DC-UPS/24DC/20 with QUINT-BAT/24DC/3.4AH (7.2 or 12 AH) or
a combination of EMC filter: ME-MAX/NEF/QUINT20A, Power supply: QUINT-PS/1AC/24DC/20Quint-Diode with QUINT-DC-UPS/24DC/20 with QUINT-BAT/24DC/3.4AH (7.2 or 12 AH)
- 9) The Weidmuller UPS can consist of:
Power supply: CP M SNT3 500W 24V 20A or Pro MAX 480W 24V 20A,
UPS control unit: CP DC UPS 24V 20A/10A or CP DC UPS 24V 40A, Diode module: CP M DM20,
Battery module: CP A Battery 24V DC 1.3 Ah or CP A Battery 24V DC 3.4Ah or
CP A Battery 24V DC 7.2Ah or CP A Battery 24V DC 12Ah
- 10) Hatteland Displays
aa= AL or TR or MM, n= D or S, y= A or P, x= any character

Type Examination documentation

DNV GL No	Doc. Ref.	Rev.	Description
64	BSH/4542/001/0042823/14	-	Certificate BSH, Type Examination Certificate Raytheon Nautoplex 8plus8
63	A-13794	-	Certificate, DNC, Type Approval Certificate for Moxa Displays, M-Vision Series, MD-219, MD-224 and MD-226
110	581	1	certificate-BSH, Compas Safe Distance UPS6 components
82	A-13202	-	Certificate-DNV, Lantech industrial Switch IES-0104FT, IES-0204FT, IES-1204FT, IES-2008B, IES-2208F, IGS-2404-E, LGS-2624C, LGS-2816C-RPS
72	A-11405	-	Certificate-DNV, Type Approval Certificate -MOXA Ethernet switches and video servers
71	A-13541	-	Certificate-DNV, Type Approval Certificate MOXA NPorts and MGate
76	20 513 - 11 HH	-	Certificate-DNVGL, Type Approval Certificate Veinland VL-66112 DVI-KVM Switch
75	61934-14 HH		Certificate-GL, Weidmuller UPS Type approval Certificate
26	11224007/AA/00	-	Certificate-telefication, IEC60945 test report NSI Trackball TS50YZ-XXXX-MCW
17	IND00780-4	06	Document-Hatteland, Series X panel Computer Type No Coding
31	---	-	Document-transas, Corrosion Test ES3 Statement
32	---	-	Document-Transas, ES2 Cross Refernce Table IEC 60945 Test Reports
29	---	-	Document-Transas, ES3 Crossreference IEC60945 Reports

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DNV GL No	Doc. Ref.	Rev.	Description
105	-	Feb. 2014	Manual-Moxa, MPC-2240 series Hardware Manual
104	-	2.00.01 2	Manual-Transas, MFD Installation Guide
106	-	2.01.33 0	Manual-Transas, MFD Installation Guide part I and part II
125	-	3.00.34 0	Manual-Transas, Multi Functional Display Installation Guide Part I & II
120	NAVI-Sailor 4000 ECDIS	2.00.32 0	Manual-Transas, NAVI-Sailor 4000 ECDIS user Manual
102	-	1	Report Tansas, NS 4000 Performance test report
1	20645	0	report-applica, Color Calibration of MD-219, MD-224 and MD-226 Displays
24	20291	02	Report-Applica, Special Purpose Test Report Moxa MPC-2267, MPC-2240, MPC-2190
77	9355/12	-	Report-Aucoteam, EN60945 Environmental test reoport for Veiland VL-66112 DVI-KVMA switch
43	654	-	Report-BSH, Compass Safe Distance Test of NES Keyboard KSML92F1RLED-1077
44	820	-	Report-BSH, Compass Safe Distance Test of NES Keyboard KSMX106B1348-WED-MC1
48	4612/430010 7/06/S3330	1.1	Report-BSH, Conformance Testreport-4300107- 19" TFT- Flat Panel Display JH19T02 MMD rev3_ed_1_1_.pdf
65	414048_3	-	Report-CEcert, EMC test report acc. to IEC60945 for Raytheon Nautoplex 8plus8
67	414048_1	-	Report-CEcert, Klima test report acc. to IEC60945 for Raytheon Nautoplex 8plus8
66	414048_2	-	Report-CEcert, Vibration test report acc. to IEC60945 for raytheon Nautoplex 8plus8
40	DELTA-A506510-2	A	Report-DELTA, IEC60945 report for NSI keyboard KSLM106F1USB-WLED
42	20133319200	1	Report-DELTA, IEC60945 report for NSI keyboard KSMX106Ybbbb-Z(ED)-MC1
30	197446	-	Report-Delta, Type Approval testing ES3 Keyboard Unit
58	2010-3124	1	Report-DNC, EMC AND ENVIRONMENTAL TESTING OF HD 23T14 MMD-MA1-Axxx
87	2008-3464	02	Report-DNC, EMC AND ENVIRONMENTAL TESTING OF JH 27T11 MMD-AA1-AABA-1
6	2011-3206	01	Report-DNV, CLF, Acoustic Noise, Compass Safe, Serial interface Testing RS6B marine Computer

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DNV GL No	Doc. Ref.	Rev.	Description
100	Display Wave application testing	2014-08-21	Report-DNV, Display Wave application testing (Navi-Sailor ECDIS System)
51	2011-3438	1	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD 19T21 MMD-MA1-FAGA
57	2014-20178	0	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD 24T21 MEc-M3K-AAB9
52	2011-3481	1	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD 24T21 MMD-MA1-FAGA
54	2011-3396	1	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD 26T11 MMD-MA1-AOBC
55	2012-3362	0	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD 26T21 MMD-MA1-FAGA
95	2006-3249	01	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF HD19T03xTxE+HDMMD01-A
50	2008-3511	2	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF JH 20T17 - MMD-AA1-AABA
46	2008-3142	1	Report-DNV, EMC and Environmental testing of JH23T12 MMD-AA1-AAAA
12	2011-3538	01	Report-DNV, EMC AND ENVIRONMENTAL TESTING OF MARITIME COMPUTER Type HT RS7GE TRC-A3J M100
28	2008-3521	02	Report-DNV, EMC test report ES6 Maritime Keyboard with Trackball
41	2008-3528	01	Report-DNV, IEC60945 report Hatteland JH 19T14 MMD-AA1-AOAA Display
16	2012-3302	02	ReportDNV, IEC60945 test report HD 19T21 MMD-MA1-FAGA
81	2013-3135	01	Report-DNV, Serial Interface module PCA100293-1 LTC1335 Isolated RS485 tested in Hatteland PC HT B22GE STC-M100
15	2012-3362	00	Report-DNV, test report HD 26T21 MMD-MA1-FAGA
83	2011-3538	01	Report-DNV, Transas TFAP (Transas Fire Wall and Antivirus Protector) with RS7 Computer
33	KBD.P0222	1.0	Report-EAE Electronics, ES4 IEC 60945 Test Report
34	EMV001308e.doc	-	Report-EMI, EMC test report according to IEC 60945 for Rayton Trackball FTT 2802
78	G0M-1202-1759-EU01-V04	-	Report-Eurofins, EN60945 EMC test reoport for Veiland VL-66112 DVI-KVMA switch
88	DOC100629-1	1	Report-Hatteland, Conformance test eport of LCD for use in RADAR and ECDIS - JH27T11MMD-AA1-AABA

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45	DOC100505-1	1	Report-Hatteland, Conformance test report of JH19T14 for use in ECDIS and RADAR
49	DOC100692-2	1	Report-Hatteland, Conformance test report of JH20T17 for use in ECDIS and RADAR
111	DOC100538-1	1	Report-Hatteland, Conformance test report of JH23T02 for use in ECDIS and RADAR
47	DOC100504-1	1	Report-Hatteland, Conformance test report of JH23T12MMD-AA1-AAAA for use in ECDIS and RADAR
114	DOC100876-2	1	Report-Hatteland, Conformance test report of LCD JH19T01MMD-E1 for use in RADAR and ECDIS
113	DOC100876-1	1	Report-hatteland, Conformance test report of LCD JH23T14MMD-MA1-AOBA for use in RADAR and ECDIS
56	DOC100829-13	13	Report-Hatteland, Flicker test HD19T21
59	DOC100829-6	6	Report-Hatteland, Flicker test HD23T14MMDMA1AOBA
96	DOC100540-1	1	Report-Hatteland, Transas Conformance test report of HD19T03 for use in ECDIS and RADAR
115	DOC100960-1	1	Report-Hatteland, TRANSAS GPU Colour Performance Comparison
5	VT-110411-1	-	Report-King design, 3 3Reliability Test Report RS6B Marine Computer
21	VT-140320-4	-	Report-King Design, Reliability Test report Moxa Panel Computer and Display, M-Vision series, MPC-2267
22	VT-141105-4	-	Report-King Design, Vibration Test report Desktop Bracket , M-Vision series, MPC-2240
7	CE-MED-0203-110222	-	Report-Ming-Technology, Type Approval
73	TL1316	-	Report-MS Testing, MOXA managed and unmanaged Ethernet switches plus Videoo server
109	257667&257903&257904	00	Report-Nemco, IEC62288 & 61174 Test reports for 19, 24, 26-DuraMON WS LED ECDIS Display
18	E12086.01	01	Report-Nemko, EMC test report HD 12T21MMC-MWF-AABA
23	278365/Vi04	-	Report-Nemko, IEC62288 Ed 2.2_7.2.3(Flicker) Moxa Panel Computer MPC-2240
85	E08255E1		Report-Phoenix, EN60945 EMC test report USP6 (Quint modules)
84	U08255E1	-	Report-Phoenix, EN60945 Environmental test report USP6 (Quint modules)
74	1430120R-ITCEP16V00	-	Report-QieTeck, IEC60945 test report -MOXA VPort 364A-T video encoder

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19	1410142R-ITCEP16V00	-	Report-QuieTeck, EMC Test Report MOXA Panel Computer and Display, M-Vision series, covering MPC-2240
2	113115r-ITCEP26V01	V1.0	Report-QuiTek, EMC Test Report -RS6B Marine Computer - QuiTek Corp.
35	ET01-12-08, ET02-12-08	-	Report-Rayton, Environmental test report according to IEC 60945 for Rayton Trackball FTT 2802
36	TA08-09-04.doc	-	Report-Rayton, Rayton TA report for Trackball NSC900-48 NG001 and NG002 covering IEC 60945 Environmental and EMC testing
4	HC30223/2011	-	Report-SGS, RS6B Marine Computer IP test report
70	4P00875-01A	2014	Report-SP, Compass safe distance of Transas UTM-1
93	4P04054-E2	2014-09-02	Report-SP, Compass Safe Distance test of Radar Integrator Board RIB6B, according to IEC60945
117	MTkP801312-03	-	Report-SP, Determination of compass safe distance for a magnetic and electric equipment (DCU and R5)
119	MTkP804517-01b	-	Report-SP, Determination of compass safe distance for magnetic and electric equipment (ES6)
118	MTkP804517-01a	-	Report-SP, Determination of compass safe distance for magnetic and electric equipment (RIB6)
116	F813527	1	Report-SP, EMC Test of DCU
92	4P04054-E1	2014-08-20	Report-SP, EMC test of Radar Integrator Board RIB6B, according to IEC60945
91	5P00686	2015-02-10	Report-SP, EMC test of WAGO 750 series modules 882, 454, 476, 468, 600 - RF immunity test
68	4P00875-01E1	2014	Report-SP, EMC test report acc. 60945 Transas Gateway UTM-1
27	P804517	-	Report-SP, Environmental test of ES6 keyboard, trackball and RIB6
11	P906296	-	Report-SP, Environmental test of marine computer RS6
69	4P00875	2014	Report-SP, Environmental test report acc. 60945 Transas Gateway UTM-1 and GEM ASU-41000
60	4P01898	-	Report-SP, IEC 60945 Test report for 19, 24, 26-DuraMON WS LED ECDIS Display
121	P600282	-	Report-SP, Low temperature test of WAGO plc system
8	MTkP804227-03	-	Report-SP, RS6 Compass safe distance test report
9	P804227-01	-	Report-SP, RS6 EMC test report
10	P804227	-	Report-SP, RS6 Environmental test report

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122	4P04054, P804517, div	-	Reports-SP, RIB6 - IEC60945 test reports and statement
39	20094390200	01	Report-Telefication, IEC60945 report for NSI Keyboard KSML92F0001-R-MC3 (similar to KSML92F1RLED-1077, see statement)
38	20113784200	01	Report-Telefication, IEC60945 report for NSI Keyboard KSML92YXXXX-Z-MCW
25	20113167200	-	report-telefication, IEC60945 test report NSI Trackball TS50YZ-XXXX-MCW
112	DOC100858-1	1	report-Transas, Conformance test report of LCD JH23T14MMD-MA1-AOBA for use in RADAR and ECDIS
89		2015-08-13	Report-transas, ECDIS Test Report for NAVI-Sailor 4000/4100 ECDIS MFD and Alpha Chart-T
108	-	2011-04-06	Report-Transas, Perf. Test_report_ECDIS_HW-2011-04-06.doc
94	20141003-1	2014-10-02	Report-transas, RIBB IEC60945 environmnetal testing program, dry heat, damp heat, low temperature
107	-	208-11-21	Report-Transas, RS6 and DCU IEC61162 compliance test report
103	-	-	Report-Transas, Transas Firewall & Antivirus Protector (TFAP) Navi-Sailor 4000 ECDIS MFD Technical data
90	21/15	1	Report-Transas, WAGO 750 series modules, Low temperature test, Vibration test
3	UT100030	-	Report-universal Testing, Environmental test Report RS6B Marine Computer
14	2011-3475	01	Repport-DNV, IEC60945 Test report Panel PC HD 24T21 MJD-AAB2
20	UT103003	-	Repport-Universal Testing, Safety Test Report MOXA Panel Computer and Display M-Vision Series, covers MPC-2240
13	DOC101124-7	7	Series X MMC 12-15-17-19-24-26 inch name/abbrevations
79	--	-	Statement-BSH, Compass Safe Distance Certificate for Veinland VL-66112 DVI-KVMA switch
99	DOC100732-14	12	Statement-Hatteland, Corrosion statement covering Display Series 1 and Series X, Computer, Panel PC, Brackets
98	PDF100150-1_corrosion statement.pdf	2006-11-24	Statement-Hatteland, Corrosion statement covering HD1903FTBE+HDMMD01-A02

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DNV GL No	Doc. Ref.	Rev.	Description
37	-	-	Statement-Telefication, additional page for Telefication report 20113784200 rev.1, key board KSML92F1RLED-1077 is identical to KSML92F0001-R-MC3
86	A14093	-	Type approval certificate of WAGO-I/O-System

Hardware relates tests carried out

- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010)
- Serial interface testing, IEC 61162-2 (1998)
- Presentation of navigation related information, IEC62288 (2014), Ch.4 & Ch.7

Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Certificate Retention Survey

A retention survey is to be performed at least once every second year, and again upon renewal of this certificate.

The scope of the retention/renewal survey is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.