

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Automatic Telephone System

with type designation(s)
OAE-7200 Series

Issued to

NIPPON HAKUYO electronics, ltd.
Yokohama KANAGAWA, Japan

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
OAE-7200 Series	D	B	A	B	A
ODA-1110			A		A
ODA-1310			B		B
ODA-1780			A		A
ODA-1980			A		B
ODZ-9209			A		B
ODZ-9211			A		B

This Certificate is valid until **2021-08-03**.

Issued at **Busan** on **2016-08-04**

DNV GL local station: **Yokohama**

Approval Engineer: **Kwang Whan Cho**

for **DNV GL**

Baeg Soon Choi
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.

Product description

The Automatic Telephone System, OAE-7200 Series, consists of the following components :

Component	Description	Module number
Automatic telephone exchange	-	OAE-7200
Handset	Desk type handset	ODA-1110
	Wall type handset	ODA-1310
	Flush type handset	ODA-1780
	Portable type handset	ODA-1980
Headset	-	ODZ-9209
		ODZ-9211

OAE-7200 Series are available in 8 types depending on the capacity.

Type	Description (Line capacity)
OAE-7224	Exchange with 24 extension lines
OAE-7232	Exchange with 32 extension lines
OAE-7240	Exchange with 40 extension lines
OAE-7248	Exchange with 48 extension lines
OAE-7256	Exchange with 56 extension lines
OAE-7264	Exchange with 64 extension lines
OAE-7272	Exchange with 72 extension lines
OAE-7280	Exchange with 80 extension lines, maximum

Application/Limitation

- The system shall be installed in accordance with the operation & installation manual.
- The components except for ODA-1110 and ODA-1780 shall be positioned more than 5 meters away from a standard or a steering magnetic compass.

Type Approval documentation

DNVGL No.	Document No.	Rev. No.	Title
7	RA1164-9530	1.2	Instruction Manual for Marine Automatic Exchange OAE-7200 SERIES
9	RA1164-9035-1	-	Technical Specification
12	RA1116-9531	1.2	Instruction manual for handset
14	RA1164-9532	1.2	Installation & Maintenance manual
18	152380	-	EMC Test report (OEG)
19	EMC15305	-	EMC Test report (IPS)
20	ENN12052	-	EMC test report(Hitachi)
22	16S-OKI 01-0011	-	OAE-7200 : Report on Vibration Test
23	16S-OKI 01-0012	-	OAE 7200 : Report on Temperature/Humidity Test
24	15-572(E)	-	Test report on power supply variation test
25	15-486(E)	-	Test report on insulation resistance, electrical power supply failure, high voltage and enclosure test
26	15-488(E)	-	Test report on Enclosure test (for handset and headset)
27	16S-OKI 02-0011	-	ODA1110 : Report on Vibration test
28	16S-OKI 02-0012	-	ODA1110 : Report on Temperature/Humidity Test
29	15-569(E)	-	Test report on acoustic noise and compass safe distance for ODA-1780 and ODA-1110

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Certificate No: **TAA00000HS**

30	16S-OKI 02-0013	-	ODA1310 : Report on Vibration Test
31	16S-OKI 02-0014	-	ODA1310 : Report on Temperature/Humidity Test
32	16S-OKI 02-0015	-	ODA1780 : Report on Vibration Test
33	16S-OKI 02-0016	-	ODA1780 : Report on Temperature/Humidity Test
34	16S-OKI 02-0017	-	ODA-1980-1 : Report on Vibration Test
35	16S-OKI 02-0018	-	ODA1980 : Report on Temperature/Humidity Test
36	16S-OKI 04-0011	-	Headset ODZ9209-1B : Report on Vibration Test
37	16S-OKI 04-0012	-	Headset ODZ9209-1B : Report on Temperature/Humidity Test
38	16S-OKI 04-0013	-	Headset ODZ9211-1B : Report on Vibration Test
39	16S-OKI 04-0014		Headset ODZ9211-1B : Report on Temperature/Humidity Test
40	RA1164-9536-1	3	Performance Test report

Tests carried out

- Performance Test : DNV Type approval Program No.848.25
- Environmental Test : DNV Standard for Certification No.2.4

Marking of product

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

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are :

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that system, software versions, components and/or materials used comply with type approved documents and/or referenced system, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.