

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office - 7 APR 1933

Date of writing Report 13th Mar 1933 When handed in at Local Office 13th Mar 1933 Port of NAGASAKI,

No. in Survey held at NAGASAKI. Date, First Survey 14th Nov. 32 Last Survey 4th March 1933
Reg. Book. (Number of Visits 9)64026 on the Steel Twin Screw Motor Vessel "HOKKAI MARU". Tons { Gross 8416.19
Net 5114.29

Built at Nagasaki. By whom built Mitsubishi Zosen Kaisha Yard No. 502 When built 1933

Owners Osaka Shosen Kabushiki Kaisha. Port belonging to Osaka.

Electric Light Installation fitted by Mitsubishi Zosen Kaisha, Ltd. Contract No. / When fitted 1933

System of Distribution Two wire system. ✓

Pressure of supply for Lighting 225 volts, Heating / volts, Power 225 volts. ✓

Direct or Alternating Current, Lighting Direct current ✓ Power Direct current ✓

If alternating current system, state frequency of periods per second / ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes ✓

Generators, do they comply with the requirements regarding overload Yes ✓, are they compound wound Yes ✓

are they over compounded 5 per cent. Yes ✓, if not compound wound state distance between each generator /

Where more than one generator is fitted are they arranged to run in parallel Yes ✓, is an adjustable regulating resistance fitted in series with each shunt field Yes ✓

Are all terminals accessible and clearly marked Yes ✓, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited Yes ✓ Are the lubricating arrangements of the generators as per Rule Yes ✓

Position of Generators In Engine Room. ✓

is the ventilation in way of the generators satisfactory Yes ✓, are they clear of all inflammable material Yes ✓

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators / and /, are the generators protected from mechanical injury and damage from water, steam or oil Yes ✓

are their axis of rotation fore and aft Yes ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes ✓ are the prime movers and their respective generators in metallic contact Yes ✓

Main Switch Boards, where placed At forward end of Machinery Space. ✓

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard /

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes ✓

are they protected from mechanical injury and damage from water, steam or oil Yes ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards / and /

are they constructed wholly of durable, incombustible non-absorbent materials Yes ✓, is all insulation of high dielectric strength and of permanently high insulation resistance Yes ✓, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework Yes ✓, and is the frame effectively earthed Yes ✓ Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

Yes ✓, accessibility of all parts Yes ✓, absence of fuses on back of board Yes ✓, proportion of omnibus

bars Yes ✓, individual fuses to voltmeter, pilot or earth lamp Yes ✓, connections of switches Yes ✓

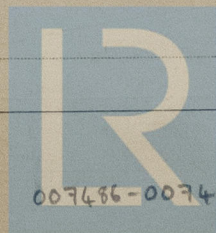
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches A double pole circuit breaker with overload trip, time-lag device and reverse current trip & single pole equalizer switch interlocked with the circuit breaker as per rule and a double pole knife switch for each of 200 K.W. Generators: A double pole circuit breaker with overload trip, time-lag device or a double pole switch and fuse for each of out going circuit. ✓

Instruments on main switchboard 6 ammeters 2 ✓ voltmeters 2 ✓ synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Lamp. ✓

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules. Yes ✓

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes ✓



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007486-007495-00733

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office..... /

[illegible]

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
The foregoing is a correct description.

NAGASAKI WORKS, MITSUBISHI ZUSEN KAISHA, LTD.

N. Motora
GENERAL MANAGER.

Electrical Engineers.

Date MAR 14 1933

COMPASSES.

Distance between electric generators or motors and standard compass 15 feet from Gyro pilot motor.

Distance between electric generators or motors and steering compass 2 feet 3 inches from Gyro pilot motor.

The nearest cables to the compasses are as follows:—

A cable carrying 0.1 Amperes 1 feet from standard compass 1 feet from steering compass.

A cable carrying 3 Amperes 15 feet from standard compass 2.2 feet from steering compass.

A cable carrying 1 Amperes 1 feet from standard compass 1 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on Any and Every course in the case of the standard compass, and About 10 degrees on Easterly or Westerly course in the case of the steering compass. due to Gyro pilot motor.

NAGASAKI WORKS, MITSUBISHI ZUSEN KAISHA, LTD.

N. Motora
GENERAL MANAGER.

Builder's Signature.

Date MAR 14 1933

Is this installation a duplicate of a previous case Yes If so, state name of vessel M.V. "Nankai Maru"
Nagasaki Rpt. No. 1869.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good and the installation has been fitted in accordance

with the Rules, tested under full working conditions and found satisfactory.

*It is submitted that
this report is eligible for
THE RECORD.*

Electric Light

CW
21.4.33

Total Capacity of Generators 600 Kilowatts

The amount of Fee ... £ 773:00 : When applied for, 6. 3 19. 33

Travelling Expenses (if any) £ : When received, 274 19. 33

Committee's Minute

Assigned

Elec. Lt.

T. T. Kuroishi *H. Buchanan*
Surveyors to Lloyd's Register of Shipping.

Rpt. 9a.

Port of NAGASAKI.

Continuation of Report No. 1878 dated 13th March 1933 on the

Steel Twin Screw Motor Vessel "HOKKAI MARU".

Ref. No.	Description.	No. of Cond.	Effective size of each sq. in.	Composition of strand No.	Dia.	Total Maximum current amperes	Approximate length L&R ft.	Insulated with	How Protected.
1	No.1 Dynamo	4	.75	91	.103	888	170	Rubber	L.C.A.
2	Equalizer for above	1	"	"	"	85	85	"	"
3	Magnet clutch	2	.007	7	.036	2.5	170	"	"
4	No.2 Fuse board	4	.5	61	.103	1500	300	Paper	L.C.A.B.
5	No.1 "	2	"	"	"	720	184	"	"
6	Windlass motor	2	.3	37	"	266	300	Rubber	"
7	No.1, 5 ton winch	2	.2	"	.083	179	75	"	"
8	No.10 3 ton "	2	.12	"	.064	130	176	"	L.C.
9	No.3 Fuse board	4	.5	61	.103	1322	345	Paper	L.C.A.B.
10	No.4 "	2	"	"	"	802	180	"	"
11	No.12, 3 ton winch	2	.12	37	.064	130	75	Rubber	L.C.
12	No.19 mooring "	2	.25	"	.093	222	70	"	"
13	Aux. Switchboard	2	.4	61	"	332.4	157	"	L.C.A.
14	No.2 Ref. compressor	2	.12	37	.064	123	40	"	"
15	No.2 brine pump motor	2	.007	7	.036	17.5	115	"	"
16	No.1 cooling pump motor	2	"	"	"	12.2	"	"	"
17	Cooling air circulator fan	2	"	"	"	13.5	200	"	"
18	Steering motor starter	2	.12	37	.064	60	105	"	"
19	Steering motor	2	.04	19	.052	"	700	"	"
20	Junct. box for cook. fan	2	.007	7	.036	9	250	"	"
21	No.2 cooking fan motor	2	"	"	"	4.5	10	"	"
22	Wireless switchboard	2	.0145	"	.052	17	185	"	"
23	Second batt. for Wl. tel.	4	.007	"	"	19	96	"	"
24	Motor side for 2 K.V.A.M.G.	3	"	"	.086	17	110	"	L.C.
25	Generator side "	3	"	"	"	10	"	"	"
26	Motor side for 1/2 K.V.A.M.G.	3	"	"	"	19	"	"	"
27	Generator side "	3	"	"	"	2.5	"	"	"
28	Gyro comp. control panel	2	"	"	"	6	250	"	L.C.A.
29	Second batt. for Gyro comp.	2	"	"	"	18	30	"	"
30	M. side for MG of Gyro comp.	40	.003	1	.064	6	40	"	L.C.
31	A.C. Generator side "	"	"	"	"	3	"	"	"
32	D.C. " "	"	"	"	"	6.3	"	"	"
33	No.1 J & P cooling pump	2	.75	91	.103	373	165	"	L.C.A.
34	No.1 lub. oil pump.	2	.12	37	.064	128	130	"	"
35	No.1 M.E. turning motor	2	.0225	7	"	42	400	"	"
36	Bilge ballast pump	2	.12	37	"	95	200	"	"
37	General service & fire pump	2	"	"	"	"	230	"	"
38	Bilge sanitary pump	2	.0145	7	.052	31	200	"	"
39	No.1 fuel oil shift. pump	2	.12	37	.064	86	"	"	"
40	Junct. box for L.O. shaft pump	2	.007	7	.036	14.6	130	"	"
41	Lub. oil shift. pump	2	"	"	"	7.3	40	"	"
42	F.O. drain shift. pump	2	"	"	"	"	60	"	"
43	Work shop motor	2	"	"	"	28	230	"	"
44	No.1 fuel oil purifier	2	"	"	"	13.1	75	"	"
45	Junct. box for L.O. purifier	2	"	"	"	16	215	"	"
46	No.1 lub. oil purifier	2	"	"	"	8	50	"	"
47	No. E. Rm. vent. fan motor	2	.0145	"	.052	29	400	"	"
48	Junct. box for oil burn	2	.007	"	.036	25.5	240	"	"
49	Oil burning fan motor	2	"	"	"	13.75	30	"	"
50	Oil " heater	2	"	"	"	11.8	"	"	"
51	No.1 submain board	2	.0145	"	.052	23.53	162	"	"
52	No. distribution board	20	.003	1	.064	4.45	116	"	"
53	No.2 " "	"	"	"	"	7.44	"	"	"
54	No.3 " "	"	"	"	"	6.33	20	"	"
55	No.4 " "	"	"	"	"	5.31	"	"	"
56	No.2 Submain board	2	.007	7	.036	14.3	162	"	"
57	No.5 Dist. board.	20	.003	1	.064	7.54	140	"	"
58	No.6 " "	"	"	"	"	6.76	20	"	"
59	No.3 Submain board	2	.007	7	.036	17.4	80	"	"
60	No.7 Dist. board	20	.003	1	.064	4.45	20	"	"
61	No.8 " "	"	"	"	"	5.64	"	"	"
62	No.9 " "	"	"	"	"	5.95	"	"	"
63	Socket for Eng. Rm. Cargo lamp.	"	"	"	"	8.36	120	"	L.C.A.
64	Flex. cord for 300 W. cargo lamp	"	.00475	168	.006	"	80	"	H.B.F.C.
65	Bus-bar lamp circuit	"	.00181	1	.048	0.82	120	"	L.C.A.
66	No.4 Submain board	2	.007	7	.036	16.42	250	"	L.C.A.B.
67	Cargo lamp circuit	20	.00181	1	.048	3.63	150	"	"
68	Flex cord for cargo lamp	"	.00475	168	.006	1.36	80	"	H.B.F.C.
69	Flex cord for cargo cluster	"	"	"	"	1.09	"	"	"
70	Cargo lamp circuit	"	.00181	1	.048	5	150	"	L.C.A.B.
71	Flex cord for pendant lamp	"	.00171	61	.006	0.09	60	"	H.B.F.C.
72	No.5 Submain board	2	.007	9	.036	17.42	220	"	L.C.A.B.
73	Cargo lamp circuit	20	.00181	1	.048	5	30	"	"
74	" " "	"	"	"	"	"	"	"	"
75	" " "	"	"	"	"	3.53	150	"	"
76	Navigation lamp circuit	2	.007	7	.036	0.91	224	"	L.C.A.
77	Fore mast lamp	30	.003	1	.064	0.27	620	"	L.C.A.B.
78	Main " "	"	"	"	"	"	700	"	"
79	Side lamp	"	"	"	"	"	120	"	"
80	Stern lamp	"	"	"	"	"	740	"	"
81	Cabin fan circuit	2	.007	7	.036	6.44	80	"	L.C.A.
82	Battery lamp circuit	"	"	"	"	6.25	60	"	"

L.C.A. Lead covered armoured.
L.C.A.B. Lead covered armoured & braided.
H.B.F.C. Hemp braided flexible cord.



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