

No. 595-D

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Writing Report 19. When handed in at Local Office 19. Port of YOKOHAMA
 Survey held at NANAO, JAPAN. Date, First Survey 12th July Last Survey 2nd Oct., 1951.
 (No. of Visits 22)
 on the M.V. "BANDON 1" Tons { Gross 395.18
 Net 245.21
 at Nanao, Japan. By whom built Nanao Shipyard & Engine Works Ltd. Yard No. NG/30 When built Oct., 1951
Thai Navigation Co. Ltd. Port belonging to Bangkok.
 fitted by Nanao Shipyard & Engine Wks., East Japan Heavy Ind., Ltd. When fitted Oct., 1951.

el equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. No E.S.D. No Gy.C. No Sub.Sig. No Radar No

have they been submitted and approved Yes System of Distribution 2-wire Voltage of Lighting 220 V

Power 220 V D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -

Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted

trip switch - Generators, are they compound wound Yes, and level compounded under working conditions Yes

compound wound state distance between generators - and from switchboard - Are the generators arranged to run

parallel No, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

negative pole Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of

for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

ion of Generators 30 kw: Portside. 60 kw: Starboard in engine space

ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and

age from water, steam and oil Yes Switchboards, where are main switchboards placed On the platform of the after

the engine space

hey in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

n and oil Yes, what insulation is used for the panels Synthetic phenol resin if of synthetic insulating

erial is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as

Rule - Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear

each generator and arrangement of equaliser switches Main switchgear: 300A. Air circuit Breaker: 150 Amp

or 30 kw: 300 Amp for 60 kw generator.

the switch and fuse gear (or circuit breakers) for each outgoing circuit For winch: 100 Amp. For windlass: 60 Amp

r engine power: 100 Amp. For general lamp: 20 Amp. For wireless room: 15 Amp.

r cabin fan, projector, spares: 10 Amp. For cargo lamp, engine room power: 5 Amp. For navigation

compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2

meters 2 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current

tection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided Earth

mp is provided with for each generator.

itches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

ke of fuses Cartridge type, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

erload do they operate 50%, and at what current do the reversed current protective devices operate -

nt Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes

bles, are they insulated and protected as per Rule Yes, if otherwise than as per Rule are they of an Approved Type -

ate maximum fall of pressure between bus bars and any point under maximum load 1 V, are the ends of all cables having a sectional

rea of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambric insulated

ables sealed at the ends - Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,

gh temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates Yes, if so, are they

lequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes

of the "HR" type No State how the cables are supported or protected Cables are secured by metal clips

having rounded edges and they are protected by sheet-iron plating where exposed to risk of

mechanical damage.

re all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

ulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes

ffectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. - Emergency Supply, state

Wireless room only

Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches and fuses. Yes Are the switches and

a position accessible only to the officers on watch. Yes, is an automatic indicator fitted. Yes Is an alternative supply provided.

Secondary Batteries, are they constructed and fitted as per Rule. Yes (Radio only), are they adequately ventilated. Yes

state battery capacity in ampere hours. 60 AH. and 120 AH.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof.

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. No

if so, how are they protected. - Are all fittings suitably ventilated. Yes

and where are the controlling switches fitted. - Are the frames effectually earthed. - are heated

Searchlight Lamps, No. of 1, whether fixed or portable. fixed, are they of the carbon arc or of the filament type. filament

Heating and Cooking, is the general construction as per Rule. - are the frames effectually earthed. - are heated

accommodation of the convection type. - Motors, are all motors constructed and installed as per Rule and placed in well-

compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil. Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the

compartment. - Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. -

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule. -

Control Gear and Resistances, are they constructed and fitted as per Rule. Yes Lightning Conductors, where required are they fitted

Rule. Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships

complied with. - are all fuses of an Approved Cartridge Type. - make of fuse. - Are the fittings

rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. - Are the cables lead covered as per Rule.

E.S.D., if fitted state maker. - location of transmitter. - and receiver. -

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations. -

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. Yes

PARTICULARS OF GENERATING PLANT.

PARTICULARS OF GENERATING PLANT.							PRIME MOVER.	
DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				TYPE.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN ...	1	Shinko Electric Co. Ltd.	60	D.C.	266	720	Heavy Oil engine	East Japan Heavy Industries Co.
		Toba Plant		220 V				Koga Factory.
	1	Shinko Electric Co. Ltd.	30	D.C.	133	750	Heavy Oil	East Japan Heavy Industries Co.
EMERGENCY ... ROTARY TRANSFORMER		Toba Plant		220 V				Koga Factory.

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COV
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	60	1	0.75 " "	266	461	66	15 Meg-ohm	Rubber, lead, armoring
" " EQUALISER ...								
Auxiliary Generator	30	1	0.3 " "	133	240	66	1	Rubber, lead
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.								
Main Switchboard to Section Box S1	1	0.0145	13.5	37	99	4	Rubber, lead,	
Section Box S1 to Fuse Box D3	1	0.003	7.9	10	153	Infinity.	" "	
Fuse Box D3 to Fuse Box D2	1	0.003	5.8	10	50	Inf.	" "	
Fuse Box D2 to Fuse Box D1	1	0.0015	2.7	5	66	Inf.	" "	
Section Box S1 to Fuse Box D4	1	0.0015	1.1	5	273	Inf.	" "	
Section Box S1 to Fuse Box D5	1	0.003	4.5	10	9	Inf.	" "	
Main Switchboard to Fuse Box D6	1	0.003	4.3	10	56	10	" "	
Main Switchboard to Fuse Box D7	1	0.0045	8.9	15	290	Inf.	" "	
Main Switchboard to Fuse Box D8	1	0.003	2.1	10	171	5	" "	
Main Switchboard to Fuse Box D11	1	0.0045	4.8	10	80	7	" "	
Main Switchboard to Electrical Revolution meter	1					8	" "	

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Box D11 to Fuse Box D10	1	0.003	4.8	10	112	Inf.	Rubber, lead, armoring
Box D10 to Fuse Box D9	1	0.003	2.1	10	10	Inf.	" " "
Switchboard to Fuse Box D12	1	0.15	165	152	108	5	" " "
Switchboard to Fuse Box D13	1	0.04	47	64	66	Inf.	" " "
Switchboard to Automatic							
ator for Navigation Light	1	0.0015	0.7	5	290	9	Rubber, lead, armoring
Switchboard to Wireless Room	1	0.007	20	24	230	Inf.	" " "
Box D7 to Search Light	1	0.003	4.4	10		Inf.	" " "
Box D1 to Its' Branches	3	0.0015	0.95	5		60	" " "
Box D2 to Its' Branches	4	0.0015	2.1	5		10	" " "
Box D3 to Its' Branches	3	0.0015	0.7	5		25	" " "
Box D4 to Its' Branches	3	0.0015	0.6	5		5	" " "
Box D5 to Its' Branches	4	0.0015	1.75	5		Inf.	" " "
Box D6 to Its' Branches	4	0.0015	1.6	5		25	" " "
Box D7 to Its' Branches	2	0.0015	5	5		13	Flexible cable "
Box D8 to Its' Branches	4	0.0017	1.2	5		Inf.	" " "
Box D9 to Its' Branches	3	0.0015	3	5		50	" " "
Box D10 to Its' Branches	3	0.0015	1	5		Inf.	" " "
Box D11 to Its' Branches	1	0.0015	0	5			

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Operating Oil Pump	1	1	1	0.003	5	10	36	1	Rubber, lead, armoring
Oil Pump	1	5	1	0.0145	21	37	63	Inf.	" " "
Oil Pump	1	5	1	0.0145	21	37	63	50	" " "
Oil Pump	1	15	1	0.04	60	64	290	Inf.	" " "
Oil Pump	2	10	1	0.0225	44	46	132	1.2	" " "
Oil Pump	1	20	1	0.06	77	83	221	15	" " "

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

J. Glynn

Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

J. Glynn

Builder's Signature.

Date

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case. No If so, state name of vessel. —

Plans. Are approved plans forwarded herewith. No If not, state date of approval. 4-4-51

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. follow

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical equipment of this vessel has been constructed and installed under the supervision of the Society's Surveyors in accordance with the approved plans and the Rules.

The workmanship and materials have been found satisfactory.

Insulation tests carried out on completion of installation and the equipment examined under working condition and found satisfactory.

It is submitted that the Machinery of this vessel is eligible to be classed with this Society and to have the notation of + LMC 10,51

Noted 3-4-52 CSM

Total Capacity of Generators. 90 Kilowatts.

The amount of Fee ... (£133 : 15 : 0) When applied for,

Charged £133, 800.-

When received,

Travelling Expenses (if any) £

Committee's Minute

TUES. 13 MAY 1952

Assigned

See F.E. mch. rpt.

Robert P. Standa
Surveyor to Lloyd's Register of Shipping.



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