

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report... 13.7.1947 When handed in at Local Office... 17 July 1947 Port of... Sunderland

No. in Survey held at... Sunderland Date, First Survey... 14-8-47 Last Survey... 26-6-1947
Reg. Book. on the M.V. "ARMILLA"

Built at... Newcastle-on-Tyne By whom built... Hawthorn Leslie & Co Ltd Tons { Gross... 3385 Net... 1873

Owners... NED. INDISCHE TANKSTOOMBOOT-MAATS Port belonging to... Willemstad - Nederland

Electrical Installation fitted by... Sunderland Forge & Engineering Co Ltd Contract No... When fitted... 1947

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

Have plans been submitted and approved... See endorsement System of Distribution... Two-Wire insulated Voltage of supply for Lighting... 110

Heating... Power... 110 Direct or Alternating Current, Lighting... Yes Power... Yes If Alternating Current state periodicity... Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... Yes Are turbine emergency governors fitted with a trip switch as per Rule... Generators, are they compound wound... Yes, are they level compounded under working conditions... Yes,

if not compound wound state distance between generators... and from switchboard... Where more than one generator is fitted are they arranged to run in parallel... No, are shunt field regulators provided... Yes Is the compound winding connected to the negative or positive pole

Negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... Have certificates of test for machines under 100 kw. been supplied... and the results found as per rule... Are the lubricating arrangements and the construction of the generators as per rule... Yes

Position of Generators... engine room at back of stateroom Main engine

is the ventilation in way of generators satisfactory... Yes are they clear of inflammable material... Yes, if situated near unprotected combustible material state distance from same horizontally... and vertically... are the generators protected from mechanical injury and damage from water, steam and oil... Yes, are the bedplates and frames earthed... Yes and the prime movers and generators in metallic contact... Yes

Switchboards, where are main switchboards placed... On angle framework adjacent to generator

are they in accessible positions, free from inflammable gases and acid fumes... Yes, are they protected from mechanical injury and damage from water, steam and oil... Yes, if situated near unprotected combustible material state distance from same horizontally... and vertically... what insulation material is used for the panels... Heavy "Amalgam"

if of synthetic insulating material is it an Approved Type... Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... Is the frame effectually earthed... Yes

Is the construction as per Rule... Yes, including accessibility of parts... Yes, absence of fuses on the back of the board... Yes, individual fuses to pilot and earth lamps, voltmeters, etc.,... Yes locking of screws and nuts... Yes, labelling of apparatus and fuses... Yes, fuses on the "dead" side of switches... Yes

Description of Main Switchgear for each generator and arrangement of equaliser switches... a double-pole quick-break Rupture Switch and double-pole fuse

and for each outgoing circuit... as per generator

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

ammeters... Yes voltmeters... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection... Earth Testing, state means provided... E lamps connected to E through two fuses

Switches, Circuit Breakers and Fuses, are they as per Rule... Yes, are the fuses an approved type... Yes, are all fuses labelled as per Rule... Yes

If circuit breakers are provided for the generators, at what overload current did they open when tested... are the reversed current protection devices connected on the pole opposite to the equaliser connection... have they been tested under working conditions, and at what current did they operate... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules... Yes, if otherwise than as per Rule are they of an approved type... state maximum fall of pressure between bus bars and any point under maximum load... > 60, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets... Yes

Are paper insulated and varnished cambric insulated cables sealed at the ends... Yes

less than 150° F. Have all the special requirements of the Rules for such ships been complied with yes, are all fuses of the cartridge type yes are they of an approved type yes. Are the fittings for pump rooms; tween deck spaces, etc., in accordance with the special requirements for such ships yes. Are the cables lead covered as per Rule yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule yes, are they suitably stored in dry situations yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory yes.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. Per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	12	110	109	350	Steam Engine		
	1	12	110	109	350	Diesel "		
EMERGENCY								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR 1...	12	1	19/083	109	191	42	V.C.	L.C.A. in pipe
" " EQUALISER 2.	12	1	19/083	109	191	60	"	" "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

[illegible]

WIRELESS
NAVIGATION LIGHTS
LIGHTING AND HEATING
Work Kikapo DB.	1	7-064	30	46	188
Alt. Lighting DB. R-1	1	7-064	2	46	420
" " 2	1	"	8	"	32
" " 3	1	"	12	"	114
" " 4	1	"	12	"	122
Snap off DE-1	1	7-064	5	46	150
" Fuel - 2	1	7-052	9	64	403
Fuel valve lighting D.H. 55	1	7-014	12.4	31	252
Bridges " D.B.	1	7-036	10.5	24	42
Mechanism " D.I.T.2.	1	"	17	24	30-16
Engine Room " F.L. 9 F.2.	1	"	14	24	24-24
" " F.S. 9 F.4	1	"	5	24	72-72
" " P.S. 7 F.L.	1	"	9	24	210-210

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Lab. Principal	1	2	1	7/036	17.4	24	150	V.I.R.	L.C.A.B.
Generator for Pump	1	1 1/2	1	"	10	"	40	"	"
Lathe Motor	1	1 1/2	1	"	10	"	30	"	"
Grinder "	1	3	1	7/044	21	31	36	"	"
Drilling "	1	2	1	7/036	13.5	24	38	"	"

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.

Sunderland Long Eng Co Ltd.

Electrical Engineers.

Date *14-4-1947*

A. J. Garney

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....

6'

Minimum distance between electric generators or motors and steering compass.....

8'

The nearest cables to the compasses are as follows:—

A cable carrying *15* Ampères *9'* feet from standard compass *or 12'* feet from steering compass.

A cable carrying *15* Ampères *or 12'* feet from standard compass *9'* feet from steering compass.

A cable carrying Ampères feet from standard compass 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* course in the case of the standard compass, and *Nil* degrees on *any* course in the case of the steering compass.

FOR AND ON BEHALF OF
JOSEPH L. THOMPSON & SONS, LIMITED

Builder's Signature.

Date *16-7-47.*

JOINT MANAGING DIRECTOR

Is this installation a duplicate of a previous case..... If so, state name of vessel.....

No.

Plans. Are approved plans forwarded herewith..... If not, state date of approval.....

"as fitted" - 4/47

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

No.

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

REWIRE.

The generators, motor, main switchboard and the metal distribution fuseboards originally in the vessel have been retained, and the main cables between generator and switchboard have not been disturbed. All the wiring otherwise has been removed and replaced in the same routes by new cable, both in old and new portions; as shown in the accompanying "as fitted" diagram. The installation conforms to the "Rules for Electrical Equipment" and upon completion tests of the generators and insulation resistances were satisfactorily carried out. This equipment is in my opinion eligible to remain as classed.

Total Capacity of Generators *(2 x 12)* *24* Kilowatts.

The amount of Fee £ *10/-* :

When applied for,

.....19.....

Travelling Expenses (if any) £ :

When received.

.....19.....

Committee's Minute.....

29 AUG 1947

Assigned.....

See Id 34722

S. J. Khan
Surveyor to Lloyd's Register of Shipping.