

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

211 JUL 1951

Date of writing Report 16th July, 1951. When handed in at Local Office \_\_\_\_\_ 19\_\_\_\_ Port of PLYMOUTH

No. in Survey held at DARTMOUTH. Date, First Survey 18. 4. 51. Last Survey 27th June, 1951.

Reg. Book. \_\_\_\_\_ (No. of Visits Eight)

on the "LANDAK" Tons } Gross \_\_\_\_\_ Net \_\_\_\_\_

Built at Dartmouth By whom built Philip & Son Ltd. Yard No. 1220 When built 6.51

Owners The Shell Co. of Singapore Ltd. Port belonging to Singapore

Installation fitted by Philip & Son Ltd. When fitted 6.51.

Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.F. -- E.S.D. -- Gy.C. -- Sub.Sig. -- Radar --

Plans, have they been submitted and approved Yes System of Distribution Parallel Constant Voltage of Lighting 110

Heating --- Power 110 D.C. or A.C., Lighting D.C. Pressure 2 Wire D.C. If A.C. state frequency ---

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

Generators, are they compound wound Yes, and level compounded under working conditions Yes, if not compound wound state distance between generators --- and from switchboard ---

Are the generators 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 Yes and the results found as per Rule Yes

Position of Generators Engine Room. One port side (No.1) & One Starboard (No.2)

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes

Switchboards, where are main switchboards placed Engine Room - Port aft.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels Sindanyo

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 construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Double Pole Double Throw Knife switches and D.P. fuses

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double Pole knife switches & D.P. fuses

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

ammeters 2 voltmeters -- synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection ---

Earth Testing, state means provided Earth lamps and switches

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

make of fuses Zed (Siemens), are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate ---

and at what current do the reversed current protective devices operate ---

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

Cables, are they insulated and protected as per Rule 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 3 volts, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets Yes

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

Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes

are any cables laid under machines or floorplates No, if so, are they adequately protected ---

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

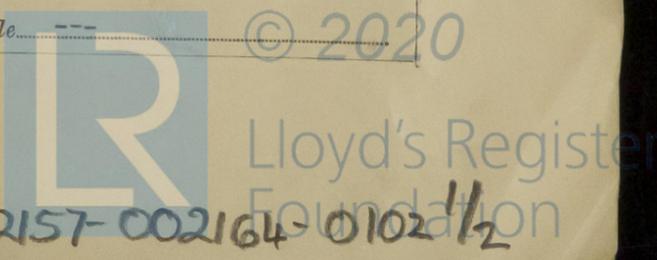
of the "HR" type --- State how the cables are supported or protected Clipped to trays or run in channel on deck

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes

where unarmoured cables pass through beams, etc., are the holes effectively 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 Yes Emergency Supply, state position None

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes Are the switches and fuses in a position accessible only to the officers on watch Yes is an automatic indicator fitted Yes Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes are they adequately ventilated Yes state battery capacity in ampere hours 78 amp/hr. for W.I. etc.,

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present --- if so, how are they protected ---

and where are the controlling switches fitted --- Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of None, whether fixed or portable ---, are they of the carbon arc or of the filament type ---

Heating and Cooking, is the general construction as per Rule None, are the frames effectually earthed ---, are heaters in the accommodation of the convection type --- Motors, are all motors constructed and installed as per Rule and placed in well-ventilated 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 pump compartment Yes 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 Yes

Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Not Req'd Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes, are all fuses of an Approved Cartridge Type Yes, make of fuse Zed (Siemens) 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

E.S.D., if fitted state maker No 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 Yes

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				TYPE.	PRIME MOVER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN ...	2	Clarke Chapman	20	110	182	1000	Heavy Oil	Crossley Bros. Ltd.
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	20	One	19/083	182	202	80	V.C.	L.C.
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR...								

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

DESCRIPTION.								
(1) Crews Accommodation Acen.	One	7/029	10.2	15	40	V.I.R.	L.C.	
(2) Captain " & General Lighting	One	7/064	47.5	80	60	V.C.	"	
(3) Engine Room Lighting	One	7/029	6.8	15	40	V.I.R.	"	
(4) Navigation	One	7/029	2	15	100	"	"	
Navigation Alternative from No.2 Box	One	7/029	2	15	40	"	"	
(5) Small Motor	One	7/036	24	24	40	"	"	

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
All Lighting Circuits	One	3/029	3.1 Max	5	200	V.I.R.	L.C. *
Navigation Circuits	One	3/029	0.35 Max	5	200	"	"
NAVIGATION FLEXIBLES	One	70/0076	035 Max	10	6	"	C.T.S.
12 Volt Electric starting Circuits for Aux. Engines	One	61/044			2	"	C.T.S.

\* All Circuits to for'd are also armoured.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Hydraulic Capstan Pump	1	2.5	One	7/044	124	245	60	V.C.	L.C.
" Steering Pump	1	20	"	19/083	155	202	60	V.C.	"
Ventilating Fan	1	3	"	7/044	26	45	80	"	"
From Fuel Pump	1	3/4	"	7/029	9	15	30	V.I.R.	"
Box Fresh Water Pump	1	1/2	"	"	6	15	30	"	"
No.5 Refrigerator	1	3/4	"	"	9	15	80	"	"
For'd Ballast Pump	1	3	"	7/044	26	45	250	V.C.	" & Armd.

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.

FOR PHILIP & SON, LIMITED.

*Philip*

Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under working conditions Yes

FOR PHILIP & SON, LIMITED.

*Philip*

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 Yes If not, state date of approval ---

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

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

This Electrical Installation has been fitted on board under Special Survey in accordance with or equivalent to the Rules, approved plans and Secretary's Letters. The workmanship and materials are good and when tested under working conditions it was found satisfactory in every respect.

*Noted sub 10/8/51*

Total Capacity of Generators 40  Kilowatts.

The amount of Fee ...	£ 37 : 10	} When applied for, 19. 7. 19. 51.
Travelling Expenses (if any) £	4 : 13	

*[Signature]*  
 Surveyor to Lloyd's Register of Shipping.

FRI. 17 AUG 1951

Committee's Minute

Assigned *See F.E. mchly. rpt.*

2m. 9. 46.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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