

Rpt. 13.

No. 109824

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report SEPT. 24th 1952 When handed in at Local Office - 6 OCT 1952 Received at London Office 8 OCT 1952No. in Survey held at BLYTH Date, First Survey MAY 22nd Last Survey SEPT. 19th 1952
Reg. Book. (No. of Visits 12)90212 on the S.S. "ISAAC CARTER"
Tons { Gross 5625.76
Net 2987.38

Built at BLYTH By whom built BLYTH D.D. & SHIPBUILDING CO. LTD. Yard No. 352 When built 1952

Owners BARBERYS S.S. CO. LTD. (RUNCIMAN (LONDON) LTD. MGRS.) Port belonging to LONDON. (BRITISH)

Installation fitted by MESSRS CLARKE CHAPMAN & CO. LTD. GATESHEAD When fitted 1952

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES BTH RADAR SUB. FITTED

Plans, have they been submitted and approved YES System of Distribution TWO WIRE Voltage of Lighting 220

Heating 220 Power 220 D.C. or A.C., Lighting DC Power DC 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 IN ENGINE ROOM

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

NEAR GENERATORS

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 INTEROHM, 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 SWITCH AND FUSES

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DOUBLE POLE SWITCH AND FUSES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES 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

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

make of fuses ARTIC, 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 LESS THAN 6%, 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 YES, if so, are they

adequately protected YES Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit —

or of the "HR" type — State how the cables are supported or protected

CLIPPED TO STEEL TRAYS, WOODWORK OR METALWORK AND PROTECTED BY PIPES OR PLATING

AS NECESSARY

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 —

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

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 — are they adequately ventilated —

state battery capacity in ampere hours —

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 NO

if so, how are they protected —

and where are the controlling switches fitted — Are all fittings suitably ventilated YES

Searchlight Lamps, No. of —, 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 YES are the frames effectually earthed YES 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 — 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 as per Rule — 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 — are all fuses of an Approved Cartridge Type — make of fuse — Are the fittings for pump 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 SUNDERLAND SIG. CO. LTD. location of transmitter Frs. 154-155 (Port) and receiver Frs. 154-155 (Port)

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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	SUNDERLAND FORGE & ENG. CO. LTD.	30	220	136.5	650	STEAM ENGINE	SUNDERLAND FORGE & ENG. CO. 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 ...	30	1	0.1	136.5	260	45	M.I.	PYROTENAX.
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.								
From Main Switchboard.	MIDSHIP LIGHTING	S.B.1.	1	7.064	69.68	80	VC	LC
	CARGO LIGHTING	S.B.2.	1	7.044	24.55	31	VRI	LC
	MECHANICAL VENTILATION	S.B.3.	1	7.064	40	46	VRI	LC
	Dom. FRIDGE MACHINERY	S.B.4.	1	7.044	23.26	31	VRI	LC
	ENGINEERS WORKSHOP	S.B.5.	1	0.007	14.6	55	MI	PYROTENAX
	GALLEY EQUIPMENT	D.B.10.	1	7.052	18.44	37	VRI	LC
	ENGINE ROOM PUMPS	D.B.9.	1	0.007	18	55	MI	PYROTENAX
	AFT. LIGHTING	D.B.7.	1	7.044	15.73	31	VRI	LC
	ENGINE ROOM LIGHTING.	D.B.8.	1	0.007	16.73	55	MI	PYROTENAX.

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.			
NAVIGATION	D.B.1. From Main Sw.B.	1	7.036	5.07	24	405	VRI	LC
CHARGING BOARD	From S.B.1.	1	7.029	8.00	15	50	VRI	LC
CAPTAIN & BRIDGE LTG.	D.B.2. From S.B.1.	1	7.029	13.3	15	195	VRI	LC
MIDSHIP LTG. (PORT)	D.B.3. From S.B.1.	1	7.044	26.14	31	105	VRI	LC
MIDSHIP LTG. (STARBOARD)	D.B.4. From S.B.1.	1	7.036	22.24	24	6	VRI	LC
FORW. CARGO LTG.	D.B.5 From S.B.2.	1	7.036	15.46	24	6	VRI	LC
AFT. CARGO LTG.	D.B.6 From S.B.2.	1	7.036	9.09	24	405	VRI	LC
WIRELESS	From Main Sw.B.	1	7.064	26.00	46	380	VRI	LC
GYRO COMPASS	From Main Sw.B.	1	7.044	26.00	31	290	VRI	LC
NAVIGATION IND. BOARD.	From D.B.1	1	3.029	1.00	5	12	VRI	LC
RADAR	From Main Sw.B.	1	7.064	21.5	46	425	VRI	LC
D.A. REFRIGERATOR.	From D.B.10	1	3.036	2.0	10	90	VRI	LC
TOASTER.	From D.B.10.	1	7.029	13.64	15	90	VRI	LC
D.G. SUPPLY	From Main Sw.B.	1	19.093.	93.00	118	40	VRI	LC

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.					INSULATION.	PROTECTIVE COVERING.
WHEELHOUSE VENT. FAN.	From S.B.3	1	1.5	1	7.036	7	24	210	VRI LC
MIDSHIPS. VENT. FANS.	" S.B.3	2	3	1	7.036	13	24	100	VRI LC
Dom. F.W. PUMPS.	" D.B.9	3	1.5	1	0.003	6	15	75	MI PYROTENAX.
PORTABLE WINCH COMMS.	" Main Sw.B.	1	—	1	7.036	17	24	420	VRI LC
WORKSHOP DRILL	" S.B.5	1	1.5	1	0.003	7.2	15	30	MI PYROTENAX
WORKSHOP LATHE	" S.B.5	1	1.5	1	0.003	7	15	30	MI PYROTENAX
WORKSHOP GRINDER	" S.B.5	1	—	1	0.003	2.8	15	30	MI PYROTENAX
Dom. FRIDGE COMPRESSOR	" S.B.4	1	4	1	7.036	17	24	30	VRI LC
AFT. ACCOM. VENT. FAN.	" S.B.3	1	1.5	1	7.036	7	24	450	VRI LC
Dom. FRIDGE FAN.	" S.B.4	1	0.5	1	3.036	2.8	10	45	VRI LC
POTATO PEELER	" D.B.10	1	0.5	1	3.036	2.8	10	260	VRI LC

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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 CLARKE, CHAPMAN & Co. LTD.

L. D. Harrison Electrical Contractors. Date 30.9.52
Director.

COMPASSES.

Have the compasses been adjusted under working conditions. YES

W. B. Webb Builder's Signature. Date Oct 2nd 1952

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. SEE LIST ATTACHED.

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 fitted on board under special survey, been under working conditions. Generators and insulation tests carried out and all found to be satisfactory.

The materials and workmanship are good.

The equipment as installed is suitable in my opinion for a class ship.

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

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... £ 47 : 10 : 0

When applied for,
7 OCT 1952

Travelling Expenses (if any) £ : : 19

When received,
19

W. H. Harris
Surveyor to Lloyd's Register of Shipping.

Committee's Minute. FRI. 24 OCT 1952

Assigned Sen F. E. Mchly, rpt



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Foundation