

29 JUN 1955

Dundee No. 9974

Rpt. 13.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 20th JUNE 1955 When handed in at Local Office 24.6.1955 Port of GLASGOW

No. in Survey held at DUNDEE Date, First Survey 1st MARCH Last Survey 3rd JUNE 1955
Reg. Book. (No. of Visits 7)

96156 on the M.V. WOOLWICH Tons Gross 7669
Net 4145

Built at DUNDEE By whom built CALEDON S.B. & E. CO. LTD Yard No. 491 When built 1955

Owners BRITAIN S.S. CO. LTD Port belonging to LONDON

Installation fitted by SUNDERLAND FORGE & ENGINEERING CO. LTD When fitted 1955

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

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 D.C. Power 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

Are the generators arranged to run in parallel YES Is the compound winding connected to the negative or positive pole NEGATIVE

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing YES Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule ✓ Position of Generators STARBOARD SIDE OF

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 ON FLAT ABOVE

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 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 500 AMP TRIPLE POLE CIRCUIT BREAKER, FITTED WITH OVERLOAD AND REVERSE CURRENT TRIPS.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DOUBLE POLE KNIFE PATTERN SWITCHES AND FUSES.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard THREE ammeters THREE voltmeters ✓ synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection YES Earth Testing, state means provided ✓

EARTH LAMPS

Preference Tripping, state if provided No, and tested ✓

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

make of fuses G.E.C., are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate 150% FULL LOAD CURRENT, and at what current do the reverse current protective devices operate 10% - 15% FULL LOAD CURRENT 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 FIVE volts. 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 ✓ State type of cables (if in conduit this should also be stated) in machinery spaces L.C.B., galleys L.C.B.

and laundries L.C.B. State how the cables are supported or protected MAINS - LC. CABLES CLIPPED TO

STEEL PLATE WITH COVERPLATE FITTED. MACHINERY SPACE. LCB. CABLES CLIPPED TO PERFORATED STEEL TRAY OR STEELWORK. ACCOMMODATION: HRB TYPE OR LCB. CABLES CLIPPED TO WOODWORK

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 ✓

Have refrigeration fan motors been constructed under survey ✓ and test certificates supplied ✓

Are the motors accessible for maintenance at all times ✓



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

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 YES to the officers on watch YES is an automatic indicator fitted YES Is an alternative supply provided YES

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule YES, state battery capacity in ampere hours YES Where required to do so does it comply with 1948 International Convention YES

Lighting, is fluorescent lighting fitted No If so, state nominal lamp voltage YES and compartments where lamps are fitted YES

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

Searchlights, No. of ONE, whether fixed or portable PORTABLE, are they of the carbon arc or of the filament type CARBON ARC

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 YES 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 YES

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

Lightning Conductors, where required are they fitted as per Rule YES

Ships carrying Oil having a Flash Point of 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 YES Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships YES Are all cables lead covered as per Rule YES

E.S.D., if fitted state maker KELVIN HUGHES location of transmitter and receiver FRAME SPACE 145/6

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.		
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	3	SUNDERLAND FORGE & ENG CO LTD	100	220	454	450	DIESEL	RUSTON & HORNSEY.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	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	3	100	2	37/072	454	520	50	V.C.	LCB.
" " EQUALISER	1		1	37/072	-	260	25	V.C.	LCB.
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
WIRELESS GYRO ETC. S.B.	1		1	19/064	50	143	330	V.C.	LCB.
LIGHTING SECTION BOARD.	1		1	19/083	155	202	280	V.C.	LCB.
VENT. FAN SECTION BOARD.	1		1	19/064	76	143	200	V.C.	LCB.
GALLEY AND PANTRY GEAR BOARD.	1		1	19/083	143	202	250	V.C.	LCB.
ENGINE ROOM AUXILIARY BOARD N°1	1		1	19/064	65	143	50	V.C.	LCB.
ENGINE ROOM AUXILIARY BOARD N°2	1		1	19/064	63	143	130	V.C.	LCB.
ENGINE ROOM AUXILIARY BOARD N°3	1		1	19/064	113.6	143	242	V.C.	LCB.
ENGINE ROOM AUXILIARY BOARD N°4	1		1	7/064	44	80	104	V.C.	LCB.
AIR CONDITIONING BOARD.	1		1	19/064	97	143	200	V.C.	LCB.
DOMESTIC REFRIGERATOR BOARD.	1		1	7/064	56.4	80	190	V.C.	LCB.

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
WIRELESS	1	7/044	15	31	40	RUBBER	LCB.
NAVIGATION	1	7/044	12	31	12	RUBBER	LCB.
UPPER + LOWER BRIDGE DECK LT'S PART D.B.	1	7/064	18	80	60	V.C.	LCB.
SHELTER + UPPER DECK LT'S D.B. PORT.	1	7/044	22	31	110	RUBBER	LCB.
SHELTER + UPPER DECK LT'S D.B. STBD.	1	7/044	18.2	31	100	RUBBER	LCB.
SHELTER DECK LT'S D.B. FWD.	1	7/044	15	31	140	RUBBER	LCB.
AFT CARGO LT'S D.B.	1	7/044	21.6	31	100	RUBBER	LCB.
FORWARD CARGO LT'S D.B.	1	7/044	22.2	31	150	RUBBER	LCB.
ENGINE ROOM LT'S D.B. PART	1	7/044	16	31	300	RUBBER	LCB.
ENGINE ROOM LT'S D.B. STBD.	1	7/044	8	31	70	RUBBER	LCB.
GALLEY AND PANTRY D.B.	1	7/064	26.2	80	42	V.C.	LCB.
RADAR	1	7/044	20	31	35	RUBBER	LCB.
Gyro	1	7/029	5	15	60	RUBBER	LCB.
SEARCHLIGHT	1	7/064	80	80	480	V.C.	LC.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
AIR CONDITIONING COMPRESSORS	2	10	1	7/064	40	80	30	V.C.	LCB.
AIR COND. COMP. CIRC. PUMP.	1	4	1	7/044	17	31	200	RUBBER	LCB.
FUEL OIL PURIFIERS	3	7.5	1	7/064	30.6	80	60	V.C.	LCB.
LUB. OIL PURIFIER	1	3.5	1	7/044	14.5	31	56	RUBBER	LCB.
DOM. FW. + SW. PUMPS.	3	5.5	1	7/044	21.8	31	90	RUBBER	LCB.
HUX. BOILER FANS.	2	3.5	1	7/044	15.4	31	208	RUBBER	LCB.
PRIMING PUMP.	1	1.5	1	7/029	6.5	15	72	RUBBER	LCB.
OIL BOOSTER PUMP	1	2	1	7/029	9	15	85	RUBBER	LCB.
ENGINE ROOM VENT. FANS.	2	4.3	1	7/044	17.6	31	140	RUBBER	LCB.
DOMESTIC REFRIG. COMPS.	2	5	1	7/044	21	31	32	RUBBER	LCB.
DOMESTIC REFRIG. PUMPS.	2	6.5	1	3/036	2.65	10	60	RUBBER	LCB.

13/7/55

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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.

per pro. THE SUNDERLAND FORGE & ENGRG. CO. LTD., Electrical Contractors. Date 21.6.55.

J. B. Shank
 Director.

COMPASSES.

FOR AND ON BEHALF OF THE CALTON SHIPBUILDING & ENGINEERING CO. YES
 Have the compasses been adjusted under working conditions.

[Signature]
 Managing Director

Builder's Signature.

Date 23rd June 1955

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

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

Plans. Are approved plans forwarded herewith. No If not, state date of approval 6th March 1952, 5th May 1953.

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) The electrical installation of this vessel has been fitted on board under Special Survey tested under working conditions and found satisfactory. The quality of materials and workmanship is good.

Total Capacity of Generators 300 Kilowatts.

The amount of Fee ... £ 87 : 0 :
 1/5 FEE TO SUNDERLAND £ 17-8-0
 4/5 FEE TO GLASGOW. £ 69-12-0
 Travelling Expenses (if any) £ : - : 10

When applied for,
 At Dundee 19
 When received,
 10

J. M. Gardiner
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute. GLASGOW 28 JUN 1955

Assigned SEE ACCOMPANYING MACHINERY REPORT

Sum 24/6/55

[Handwritten notes]

Sm.1251.—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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