

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

26 MAY 1953

Date of writing Report 11th MAY 1953. When handed in at Local Office 08 MAY 1953. Port of NEWCASTLE-ON-TYNE

No. in Survey held at SOUTH SHIELDS-ON-TYNE Date, First Survey 24/2/53 Last Survey 6/5/53 19
(No. of Visits 10)

eg. Book. 75944 on the SS. "RUSHWOOD" Tons { Gross 6208 Net 3944

Built at SOUTH SHIELDS-ON-TYNE By whom built J. READHEAD & SONS LTD. Yard No. 574 When built 1953

Owners Wm. FRANCE FENWICK & Co. LTD. Port belonging to LONDON (BRITISH)

Installation fitted by J. READHEAD & SONS LTD. When fitted 1953

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES D.G. YES 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 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

Are the generators arranged to run in parallel No 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 - Have certificates of test for machines under 100 kw. been supplied 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 INTERDHM, 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 40kw GENERATORS & DOUBLE POLE SWITCH & FUSES.

FUTURE 5kw STANDBY GENERATOR:- DOUBLE POLE CIRCUIT BREAKER WITH TWO O/L TRIPS

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

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

ammeters 3 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 - 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 ARTIC, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate TESTED AT 100% F.L. SET AT 150% F.L., and at what current do the reverse current protective devices operate - 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% 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 YES, if so, are they adequately protected YES State type of cables (if in conduit this should also be stated) in machinery spaces VRILC & VCLC, galleys VRILC

and laundries - State how the cables are supported or protected Clipped to steel trays,

Woodwork or Metalwork & 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 -

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

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, fitted and adequately ventilated as per Rule. **YES**, state battery capacity in ampere hours

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

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 **—**, 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. **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. **—**, 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 all cables lead covered as per Rule. **—**

E.S.D., if fitted state maker. **KELVIN HUGHES** location of transmitter and receiver. **FRS. 121-122 (No. 2 Hold) TRANS. PORT. REC. STAB.**

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.
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.		
MAIN	2	SUNDERLAND FORGE & ENG. CO. LTD.	40	220	187	640	STEAM ENGINE	SUNDERLAND FORGE & ENG. CO. LTD.
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	2	40	1	19/0.093	182	202	66	VC	LC & B.
" EQUALISER									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" GENERATOR									

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

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.			
POWER APT.	1		1	2c 7/0.044	19	31	162	VR1	LC & B
VENT. APT.	1		1	2c 7/0.064	42	46	162	"	"
LTG. APT. (Sal. & Boat Dk.)	1		1	2c 7/0.052	30	37	234	"	"
LTG. APT. (RAISED Q'DK)	1		1	2c 7/0.044	20	31	138	"	"
LTG. APT. (CABIN FLAT)	1		1	2c 7/0.044	22	31	60	"	"
E.R. & B.R. LTG.	1		1	7/0.044	26	45	109	VC	"
E.R. POWER	1		1	7/0.044	37	45	84	"	"
VENT. & POWER MIDSHIPS	1		1	2c 7/0.064	37	46	659	VR1	"
CARGO LTG.	1		1	2c 7/0.064	20	46	750	"	"
MIDSHIP LTG & RADAR	1		1	2c 7/0.064	42	46	648	"	"
DOM. FRIDGE M.C.	1		1	2c 7/0.052	22	37	84	"	"

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.			
W.T.	1	19/0.052	25	64	690	VR1	LC & B
NAV. & GYRO	1	2c 7/0.052	21	37	750	"	"
LTG. APT. (Saloon & Boat Dk.)	1	7/0.029	10.5	15	69	"	LC.
LTG. APT. (")	1	7/0.029	6.1	15	60	"	"
LTG. APT. (")	1	7/0.029	7.4	15	96	"	"
LTG. APT. (")	1	7/0.029	6	15	114	"	"
LTG. APT. (RAISED Q'DK)	1	7/0.029	5	15	30	"	"
LTG. APT. (")	1	7/0.029	4.3	15	120	"	"
LTG. APT. (")	1	7/0.029	5.5	15	60	"	"
LTG. APT. (")	1	7/0.029	5.2	15	165	"	"
LTG. APT. (CABIN FLAT)	1	7/0.029	6.8	15	96	"	"
LTG. APT. (")	1	7/0.029	4.7	15	54	"	"
LTG. APT. (")	1	7/0.029	4.8	15	120	"	"
LTG. APT. (")	1	7/0.029	6	15	168	"	"
LTG. ENGINE ROOM	1	7/0.029	10	15	66	VC	LC & B
LTG. ENGINE ROOM	1	7/0.029	9	15	66	"	"
LTG. BOILER ROOM	1	7/0.029	7	15	228	"	"
CARGO LTG.	1	2c 7/0.036	7.4	24	420	VR1	"
CARGO LTG.	1	7/0.029	4.8	15	6	"	LC
CARGO LTG.	1	2c 7/0.036	7.4	24	390	"	LC & B
N.I.B.	1	7/0.029	1	15	10	"	LC
LTG. MIDSHIPS	1	7/0.036	9	24	60	"	"
LTG. MIDSHIPS	1	7/0.036	9	24	36	"	"
LTG. MIDSHIPS	1	7/0.036	14	24	9	"	"
LTG. FORECASTLE	1	2c 7/0.036	3	24	321	"	LC & B
RADAR	1	7/0.036	7	24	114	"	LC
DG. SUPPLY	1	19/0.064	57.5	83	30	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.			
GALLEY BLOWER FROM SB.P.A.	2	—	1	3/0.036	1.1	10	72	VR1	LC
DOM. FRIDGE	1	—	1	3/0.036	2.8	10	48	"	"
VENT. HEAT UNIT (AFT)	2	3.5	1	7/0.036	14	24	78	"	"
GALLEY SUPPLY FAN	2	1	1	7/0.036	4.5	24	84	"	"
E.R. SUPPLY FAN	2	1.75	1	7/0.029	7	15	78	VC	LC & B
WORKSHOP MOTOR	1	3	1	7/0.036	13	30	66	"	"
OIL PURIFIER	1	0.5	1	3/0.036	2.9	10	96	VR1	"
GRINDER	1	0.5	1	3/0.036	3	10	30	"	"
VENT. & HEAT UNIT (MID) FROM SB.P.A.	1	3.5	1	7/0.036	14	24	84	"	LC
DOM. F.W. PUMP	1	0.165	1	3/0.036	1	10	60	"	"
DOM. FRIDGE COMP.	2	4	1	7/0.044	17	31	20	"	"
DOM. FRIDGE CIRC. PUMP	1	1	1	3/0.036	3	10	175	"	LC & B
DOM. FRIDGE FAN	1	1	1	3/0.036	5	10	200	"	"

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.

FOR JOHN READHEAD & SONS LTD.

J. H. Payne
MANAGING DIRECTOR

Electrical Contractors.

Date

14. 5. 53

COMPASSES.

Have the compasses been adjusted under working conditions

FOR JOHN READHEAD & SONS LTD.

J. H. Payne
MANAGING DIRECTOR

Builder's Signature.

Date

14. 5. 53

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 Generally similar to SS. "Rookwood".

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 and materials, opinions as to class, etc.)

The electrical equipment of this vessel has been fitted on board under Special Survey, seen under working conditions 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.

Noted ABU 10-6-53

Total Capacity of Generators 80 Kilowatts.

The amount of Fee ... £ 54. : When applied for, 25 MAY 1953

Travelling Expenses (if any) £ : When received, 19

W. W. Lewis
Surveyor to Lloyd's Register of Shipping.

FRI. 19 JUN 1953

Committee's Minute

Assigned

See FE. mch. rpt