

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 19... When handed in at Local Office 6/4/1950 Port of BELFAST  
 Received at London Office 13 APR 1950  
 No. in Survey held at BELFAST Date, First Survey 17 May 1949 Last Survey 24 March 1950  
 Reg. Book. 4052B (No. of Visits 31)  
 SUP. on the T.S.S. "RUSIC" Tons Gross 13589 Net 7788  
 Built at BELFAST By whom built MESSRS. HARLAND & WOLFF LTD. Yard No. 1414 When built 1950.  
 Owners SHAW SAVILL & ALBION Co. LTD. Port belonging to SOUTHAMPTON  
 Installation fitted by MESSRS. HARLAND & WOLFF LTD. When fitted 1950.  
 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. No. 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 Yes. 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 Yes, 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 Yes. 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 Generator  
 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 J.P. Circuit Breaker with O.L. And R.C. Trips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. Circuit Breaker or D.P. Switch and Fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4  
 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 Yes. 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 Arctic, are all fuses labelled Yes. If circuit breakers are provided for the generators, at what overload do they operate 50%, and at what current do the reversed current protective devices operate 250 & 1900

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 6.1 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 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 Yes. State how the cables are supported or protected V.L.C. or HR. Shipped.

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 Yes.





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.			
Radar	1	19/064	50	✓ 135	450	V.C.	L.C.
W/T.	1	19/083	50	✓ 191	540	"	"
Gyro compass.	1	7/064	20	✓ 46	450.	Rubber	HR.
Mar. Indicator.	1	7/044	2	✓ 31	540	VIR.	LC.
Dist Box No. 1 (Inst. hlg. etc.)	1	7/044	18	✓ 31	75	VIR	"
do. No. 2 (General lighting)	1	7/044	21	✓ 31	75	"	"
do. No. 3 (Heating)	1	19/044	54.5	✓ 87	180	VC	"
do. No. 4 (General lighting)	1	7/044	12.3	✓ 31	15	Rubber	HR.
S&F Box No. 5 (do.)	1	19/044	51.3	✓ 87	165	VC	LC.
Dist Box No. 6 (Heating)	1	19/044	57	✓ 87	165	"	"
do. No. 7 (do.)	1	19/044	50	✓ 87	165	"	"
do. No. 8 (General lighting)	1	7/044	10.6	✓ 31	210	Rubber	HR.
do. No. 9 (Heating)	1	19/064	86.5	✓ 135	210	VC	LC.
S&F Box No. 10 (Eng. Room Vent)	1	19/083	91.5	✓ 191	120	"	"
Dist Box No. 12 (Heating)	1	COPPER BAR	52.5	-	-	-	-
do. No. 13 (do.)	1	do.	47.5	-	-	-	-
do. No. 14 (General lighting)	1	do.	11.5	-	-	-	-
do. No. 15 (do.)	1	do.	7.65	-	-	-	-
Plug panel No. 16 (Cargo lighting)	1	7/044	17.7	✓ 31	30	Rubber	HR.
Dist Box No. 17 (Heating)	1	19/044	77	✓ 87	120	VC	LC.
do. No. 18 (General lighting)	1	7/044	17.6	✓ 31	120	Rubber	HR.
S&F. Box No. 19 (Domestic)	1	7/044	15.5	✓ 31	60	do.	"
Dist Box No. 20 (Ventilation)	1	19/044	18.7	✓ 87	360	VC	LC.
do. No. 21 (Domestic)	1	7/044	12	✓ 31	120	Rubber	HR.
do. No. 22 (General lighting)	1	7/044	5.4	✓ 31	180	"	"
do. No. 23 (do.)	1	7/044	7.4	✓ 31	225	"	"
do. No. 24 (do.)	1	7/044	19.3	✓ 31	90	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Windlass.	1	83	1	37/093	319	✓ 343	75	V.C.	L.C.
Steering gear	2	70	1	37/083	268	✓ 296	540	"	"
Main. Circ. pumps.	2	118	2	37/072	442	✓ 492	210	"	"
Air compressor	1	9	1	7/064	36	✓ 46	90	Rubber	HR.
Turbo gens. S.W. Circ. hfr.	2	17	1	19/044	67	✓ 87	240	VC.	LC.
Ballast	1	36	1	19/083	137	✓ 191	240	"	"
Boiler O.F. Transfer.	2	22	1	19/064	86	✓ 135	330	"	"
Extraction pumps.	2	13 1/2	1	19/044	54	✓ 87	330	"	"
Aux. Feed pump.	1	2 1/2	1	7/029	11	✓ 15	60	Rubber	HR.
Diesel O.F. Transfer.	1	3 1/2	1	7/064	14	✓ 46	105	"	"
F.W. Pump.	1	10	1	7/064	40	✓ 46	300	"	"
Gen. Service Pump.	1	36	1	19/083	137	✓ 191	270	VC	LC.
Standby pump	1	10	1	7/064	40	✓ 46	300	Rubber	HR.
Sanitary pump.	1	10	1	7/064	40	✓ 46	300	"	"
Gens. F.W. cooling pump	1	4 3/4	1	7/044	20	✓ 31	75	"	"
Bilge	1	20	1	19/044	78	✓ 87	150	VC	LC.
Forced lub. oil pumps	3	17	1	19/044	67	✓ 87	120	"	"
F.D. Fans.	2	60	1	37/072	225	✓ 246	300	"	"
I.D. Fans.	2	98	1	37/103	368	✓ 385	270	"	"
I.D.F. Circ. water	1	14	1	19/044	56	✓ 87	240	"	"
Boiler Room Vent Fans.	2	6 3/4	1	7/064	27	✓ 46	360	Rubber	HR.
Engine Room Vent Fans.	4	6 3/4	1	7/064	27	✓ 46	30	"	"
Boat winches	4	7 1/2	1	7/064	32	✓ 46	315	"	"
Oil Fuel Pressure pumps.	2	8	1	7/064	32	✓ 46	90	"	"
Refrig. compressors.	3	160	2	37/083	590	✓ 592	240	VCEE	LC.
" Brine pumps	4	14	1	19/044	55	✓ 87	150	"	"
" " "	2	2	1	7/029	9.2	✓ 15	165	Rubber	HR.
" S.W. Circ. pumps	2	17	1	19/044	67	✓ 87	255	VC	LC.
Water Service pumps	1	36	1	19/083	137	✓ 191	90	"	"
Refrig. Circ. Fans.	3	11 1/4	1	19/044	45	✓ 87	150.	"	"
	3	8 1/4	1	7/064	33	✓ 46	105	HR.	HR.
	5	6 3/4	1	7/064	27	✓ 46	120	"	"
	4	3 3/4	1	7/044	15 1/2	✓ 31	90	"	"
	6	3 1/4	1	7/044	13.7	✓ 31	105	"	"
	3	3	1	7/044	12.4	✓ 31	90	"	"
6	2 1/2	1	7/044	10.5	✓ 31	135	"	"	

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.

HARLAND & WOLFF  
 LIMITED  
 30 MAR 1950  
 Shipbuilders and Engineers  
 BELFAST

Electrical Contractors.

Date March 31st '50.

COMPASSES.

Have the compasses been adjusted under working conditions.

HARLAND & WOLFF  
 LIMITED  
 30 MAR 1950  
 Shipbuilders and Engineers  
 BELFAST

*Yes.*

Builder's Signature.

Date 31. 3. 50.

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.

*No.*

If not, state date of approval.

*20-6-49.*

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.)

*The electrical equipment of this vessel has been fitted on board under special survey, tested under full working conditions and found satisfactory. Materials and workmanship are good.*

*Notes end 27/4/50*

Total Capacity of Generators 1800 Kilowatts.

The amount of Fee

*£ BEL £ 108 / - / -  
 £ LON £ 27 : - / -*

When applied for,

*114 / 1950*

When received,

*19*

Travelling Expenses (if any) £ 5 : 4 / 5 :

LONDON.

*R. J. Lucehian*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 5 MAY 1950

Assigned

*Su F.E. mchly rpt.*