

Rpt. 13.

No. 77102.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 28th May 1951 When handed in at Local Office 27-7-51 Port of GLASGOW AUG 1951No. in Survey held at Dumbarton Date, First Survey 6/2/51 Last Survey 24/4 1951
Reg. Book. (No. of Visits 10)95754 on the "ROYAL IRIS" Tons Gross 1000 Net 550Built at Dumbarton By whom built Wm Denny & Bros. Ltd Yard No. 1448 When built 1951Owners Corporation of Wallasey Port belonging to LiverpoolInstallation fitted by Wm Denny & Bros. Ltd. When fitted 1951Is vessel equipped for carrying Petroleum in bulk. No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. - Sub.Sig. - Radar In conjunction with Shore Radar.Plans, have they been submitted and approved Yes System of Distribution Two Wire Voltage of Lighting 220Heating 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 No, and level compounded under working conditions -if not compound wound state distance between generators 20 ft and from switchboard 35 ft Are the generators arranged to run in parallel Yes, are shunt field regulators provided Yes Manual & AutomaticIs the compound winding connected to the negative or positive pole -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 YesPosition 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 On special platform at forward end of Engine Room.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" ("Dead front" type S/B.) 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 circuit breaker with overload, reversed current and preference releases. Double pole knife switch isolator fitted to each generator circuit breakerand the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole switch & fuses. Non-essential circuits supplied through double pole circuit breaker with overload & shunt releases.Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Six ammeters Six 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 Yesmake of fuses "Artic", 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 12/15% full load.Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YesCables, 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 No, if so, are they adequately protected - Are cables in machinery spaces, galleys, landries, etc., lead covered Yes or run in conduit -or of the "HR" type - State how the cables are supported or protected -MACHINERY SPACES :- Clipped to steel tray on structurePUBLIC ROOMS, ETC. :- Clipped to steel tray, wood ground, or structureAre 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. **Yes** are they adequately ventilated. **Yes** 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. **Yes** Are all fittings suitably ventilated.

Searchlight Lamps, No. of **2**, whether fixed or portable. **Portable** are they of the carbon arc or of the filament type. **Filament**

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.

Have certificates of test for motors under 100 BHP intended for essential 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. **Yes** 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. **Yes** 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. **Marine Instruments** location of transmitter **Fr. 55/56 "A" stroke** and receiver **Fr. 55/56 "A" stroke** and receiver **Fr. 55/56 "A" stroke**

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	4	Metropolitan-Vickers	50	220	227	800	1-C. Diesel	Ruston & Hornsby.
	2		50	220	227	800	1-C. Diesel	"
EMERGENCY ROTARY TRANSFORMER							Aux. Engines	"

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	50	1	37.072	227	260	12	V.C.	L.C.B.
"	2	"	"	"	"	28	"	"
"	3	"	"	"	"	126	"	"
"	4	"	"	"	"	44	"	"
"	5	"	"	"	"	54	"	"
"	6	"	"	"	"	76	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
"								

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

DESCRIPTION.							
Auxiliary Supply Switchboard.	1	61.103	-	572	74	V.C.	L.C.B.
Ventilation	1	7.064	51	80	90	"	"
Generator & Motor Room Vent Fans	1	7.064	34	80	162	"	"
"	1	7.064	36	80	152	"	"
Tea & Water Boilers: Buffet & Saloon	1	10.052	90	110	124	"	"
"	1	7.052	34	60	232	"	"
Catering Equipment	1	7.052	34	60	128	"	"
Engine Water & Oil Heaters	1	7.064	56	80	172	"	"
S.L. Filter Heaters	1	10.052	68	110	174	"	"
Auxiliaries: Small Pumps, etc.	1	10.052	85	110	176	"	"
Large Pumps.	1	10.083	198	202	156	"	"
Heating, Crew & Machinery Comp.	1	10.083	157	202	30	"	"

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.			
Nav. Units & "A" Deck Lighting.	1	7.064	34	80	192	V.C.	L.C.B.
Lighting: "B" Deck	1	10.052	74	110	150	"	"
"C" & "D" Decks	1	7.064	32	80	114	"	"
Generator & Motor Rooms	1	7.044	20	48	80	"	"
Alarms, Telegraph & Despatchers.	1	7.036	15	24	30	V.C.	"
Fish Fryer	1	10.052	99	190	200	V.C.	"
Fuel Oil & Lub Oil Heaters.	1	10.052	91	110	178	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Steering Gear	2	5	1	7.052	22	37	V.C.	L.C.B.
Capstan/Windlass	1	23	1	10.064	90	143	V.C.	"
Metadyne Units	2	30	1	10.064	115	143	"	"
F.O. Purifier	1	3	1	7.029	13	15	V.C.	"
" Transfer	1	2	1	7.029	9	15	"	"
Lub. Oil Purifier	1	1 1/2	1	7.029	7	15	"	"
F.W. Pumps	2	2 1/2	1	7.029	11	15	"	"
Air Compressor	1	12 1/2	1	7.064	55	80	V.C.	"
G.S. Pumps	2	8 1/2	1	7.044	35	45	"	"
Bilge Pump	1	8 1/2	1	7.044	35	45	"	"

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 WILLIAM DENNY & BROTHERS LIMITED

Electrical Contractors.

Date

Director and Secretary

COMPASSES.

Have the compasses been adjusted under working conditions.

Yes

FOR WILLIAM DENNY & BROTHERS LIMITED.

Builder's Signature.

Date

Director and Secretary

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.

12/6/50

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

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 installed under Special Survey, tried under working conditions and found satisfactory. Materials and workmanship are good.

1.0.0.1	2.1.1	3.1.1	4.1.1	5.1.1	6.1.1	7.1.1	8.1.1	9.1.1	10.1.1	11.1.1	12.1.1	13.1.1	14.1.1	15.1.1	16.1.1	17.1.1	18.1.1	19.1.1	20.1.1	21.1.1	22.1.1	23.1.1	24.1.1	25.1.1	26.1.1	27.1.1	28.1.1	29.1.1	30.1.1	31.1.1	32.1.1	33.1.1	34.1.1	35.1.1	36.1.1	37.1.1	38.1.1	39.1.1	40.1.1	41.1.1	42.1.1	43.1.1	44.1.1	45.1.1	46.1.1	47.1.1	48.1.1	49.1.1	50.1.1	51.1.1	52.1.1	53.1.1	54.1.1	55.1.1	56.1.1	57.1.1	58.1.1	59.1.1	60.1.1	61.1.1	62.1.1	63.1.1	64.1.1	65.1.1	66.1.1	67.1.1	68.1.1	69.1.1	70.1.1	71.1.1	72.1.1	73.1.1	74.1.1	75.1.1	76.1.1	77.1.1	78.1.1	79.1.1	80.1.1	81.1.1	82.1.1	83.1.1	84.1.1	85.1.1	86.1.1	87.1.1	88.1.1	89.1.1	90.1.1	91.1.1	92.1.1	93.1.1	94.1.1	95.1.1	96.1.1	97.1.1	98.1.1	99.1.1	100.1.1
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Note end 8/8/51

Total Capacity of Generators 300 Kilowatts.

Propulsion Excitation 24
Fee based on 276 kW

The amount of Fee ...

£ 66 : 14
£ 16 : 14

When applied for, 4.6.51

Travelling Expenses (if any) £

When received, 3.7.51

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

31 JUL 1951

Assigned

See Gls. F.E. Machy Rpt 44102.



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