

Rpt. 13.

No. 74046

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report. 5th May 1949 When handed in at Local Office. 30 MAY 1949 Port of GLASGOW

No. in Survey held at Glasgow Date, First Survey 17-1-49 Last Survey 27-4-1949
Reg. Book. (Number of Visits.....)

79558 on the WAVE MONARCH Tons { Gross 8,159
Net 4,545

Built at Glasgow By whom built Messrs Harland & Wolff Ltd Yard No. - When built 1944

Owners The Admiralty Port belonging to London

Electrical Installation fitted by Messrs Harland & Wolff Ltd Contract No. - When fitted 1944

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub-Sig Radar -

Have plans been submitted and approved Yes System of Distribution Two wire insulated Voltage of supply for Lighting 110

Heating - Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity - Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule - Generators, are they compound wound Yes 13, are they level compounded under working conditions Yes,

if not compound wound state distance between generators - and from switchboard - 13 Where more than one generator is fitted are they

arranged to run in parallel No, are shunt field regulators provided Yes 27 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 - C.A.B. Have certificates of

test for machines under 100 kw. been supplied No and the results found as per rule - 21 Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Boiler Room flat

" NO 11 Engine Room, is the ventilation in way of generators satisfactory Yes 92 are they clear of inflammable material Yes, if situated

Suez Canal Projector near unprotected combustible material state distance from same horizontally - and vertically - 120, are the generators protected from mechanical

Share Supply injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic

Vapour Light Fans contact Yes Switchboards, where are main switchboards placed After bulkhead, Boiler Room flat

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil Yes, if situated near unprotected combustible material state distance from same horizontally - and vertically - 210, what insulation

material 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 frame effectually earthed Yes

Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc., Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches 350 Ampere D.P.

knife switch and 300 Ampere cartridge fuses on each pole

and for each outgoing circuit D.P. knife switch & D.P. cartridge fuses.

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

ammeters - voltmeters - synchronising devices. For compound machines in parallel is the ammeter 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, are all fuses labelled as

per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested -, are the reversed current

protection devices connected on the pole opposite to the equaliser connection -, have they been tested under working conditions, and at what current

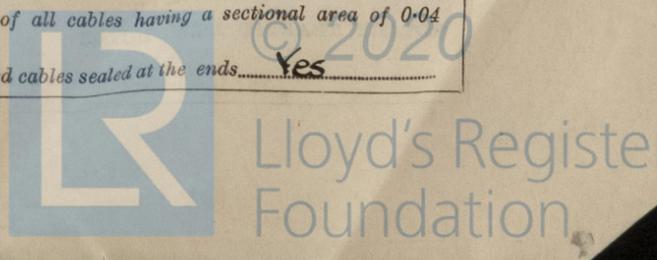
did they operate - Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules 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 0.04

square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes

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with insulating compound. — or waterproof insulating tape. 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 cables laid under machines or floorplates. No, if so, are they adequately protected. — Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. — State how the cables are supported and protected. L.C.A.B. cables clipped to steel tray or structure

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. — 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 effectually bushed. Yes and with what material. Lead 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. Yes 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. Secondary Batteries, are they constructed and fitted as per Rule. —, are they adequately ventilated. — what is the 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 fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. Yes, if so, how are they protected. —

Flame proof fittings in Tween Deck spaces. Access to Pump Room fittings from outside deck house and where are the controlling switches fitted. Centre castle upper deck, are all fittings suitably ventilated. Yes, are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of. 1, whether fixed or portable. portable, are their fittings as per Rule. Yes. Heating and Cooking, is the general construction as per Rule. —

are the frames effectually earthed. —, are heaters in the accommodation of the convection type. —. Motors, are all motors constructed and installed as per Rule. Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally. — and vertically. — Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule. Not available. 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. Yes, are all fuses of the cartridge type. Yes

are they of an approved type. 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. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. Yes, are they 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	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	30	110	273	685	Steam Engine	—	
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		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	37/083	273	296	20	V.C.	L.C.A.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Sub-switchboard N°1 Supply	1	37/072	240	260	636	V.C.	L.C.A.B.
" " N°2 "	1	37/072	240	260	720	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/064	40	46	132	V.I.R.	L.C.
NAVIGATION LIGHTS	1	7/036	10	30	120	V.C.	"
LIGHTING AND HEATING							
D.B. N°2 Nav. Bridge & Captain's Qrs.	1	7/036	20	30	120	V.C.	L.C.
" N°3 Midship Lighting, etc.	1	7/064	50	80	128	"	"
" N°4 Forecastle Lighting, etc.	1	7/044	13	45	330	"	"
" N°5 Cargo connections Mid.	1	7/036	11	30	130	"	"
" N°6 Pump Rooms & Mast Lights	1	7/036	11	30	130	"	"
Radar & M.A.B.	1	7/044	27	31	138	V.I.R.	"
10 inch Signalling Projector	1	7/044	19	31	120	"	"
D.B. N°5 7 & 8 Lighting, etc., Aft.	1	7/052	38	60	138	V.C.	L.C.A.B.
" N°9 Cargo Connections	1	7/036	10	24	114	V.I.R.	"
" N°10 Swbd., Boiler Room & Tunnel	1	7/036	20	30	42	V.C.	"
" N°11 Engine Room.	1	7/044	23	45	264	"	"
Suez Canal Projector	1	19/044	40	92	432	"	"
Shore Supply	1	19/083	-	202	120	"	"
Ventilating Fans	1	7/064	57	80	138	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
E.R. Vent Fans	2	3	1	7/044	25	45	220	V.C. L.C.A.B.
Gyro Compass	1	1.4	1	7/036	14	24	60	V.I.R. L.C.
Turning Gear Motor	1	8	1	7/064	65	80	210	V.C. L.C.A.B.

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.

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass

A cable carrying Ampères feet from standard compass feet from steering compass

A cable carrying Ampères feet from standard compass feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be degrees on course in the case of the

standard compass, and degrees on course in the case of the steering compass.

Builder's Signature.

Is this installation a duplicate of a previous case Yes If so, state name of vessel "WAVE KING"

Plans. Are approved plans forwarded herewith No If not, state date of approval 23.4.48

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

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 built and installed in accordance with the requirements of the British Corporation Register.

The installation has been examined and found to conform generally to the "as fitted" plans.

At this time, the equipment has been overhauled and minor repairs effected. On completion of repairs, the installation was examined and seen under working conditions, insulation resistance tests made and all found in satisfactory condition.

The Echo sounding projectors are fitted under the Transit Pump Room on this vessel in accordance with Messrs Harland & Wolff Ltd. Yard No 1306G Plan 33 and Secretary, London's letter of 4th April 1946, granting exception for this arrangement.

The electrical installation of this vessel is, in my opinion, such as could be accepted for classification with this Society.

Noted *int* 4/8/49

Total Capacity of Generators 60 Kilowatts.

The amount of Fee £ 16 : 0 : When applied for, 30 51 MAY 1949 37-083 273 295 V.C. L.C.A.B.

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

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 MAY 1949

SEE ACCOMPANYING MACHINERY REPORT.

Assigned

5m. 4.38—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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