

## REPORT ON ELECTRICAL EQUIPMENT

26 JUN 1945

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 24-5-45 When handed in at Local Office... 2-6-45 Port of Middlesbrough

No. in Survey held at... 1945 Date, First Survey... 6-3-46 Last Survey... 23-5-1945  
Reg. Book. (Number of Visits... 7)92642 on the S.S. "WAVE REGENT" Tons { Gross... 8184  
Net... 4854

Built at... 1945 By whom built... Furness Shipbuilding Co. Ltd. Yard No... 363 When built... 1945

Owners... Admiralty Port belonging to... London

Electrical Installation fitted by... Furness Shipbuilding Co. Ltd. Contract No... 363 When fitted... 1945

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... No

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... Yes Power... Yes 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, are they level compounded under working conditions... Yes,

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

arranged to run in parallel... No, 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... Have certificates of

test for machines under 100 kw. been supplied... Yes and the results found as per rule... Yes Are the lubricating arrangements and the construction

of the generators as per rule... Yes Position of Generators... on generator frame aft of L.P. Boilers

is the ventilation in way of generators satisfactory... Yes are they clear of inflammable material... Yes, if situated

near unprotected combustible material state distance from same horizontally... and vertically... are the generators protected from mechanical

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

contact... Yes Switchboards, where are main switchboards placed... on angle framework adjacent to generators

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... what insulation

material is used for the panels... heavy "lindam" 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 switches... a double-pole, single

throw quick-break knife switch and double pole fuse:

and for each outgoing circuit... a double-pole, double-throw, quick-break knife switch and double-

pole fuse.

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

ammeters... Two 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... E lamps coupled to E through two fuses.

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... 6.7, 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



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.                      Control Gear and Resistances, are they constructed and fitted as per Rule. 400 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. 400 ✓ Are all fuses of the cartridge type. 400 Are they of an approved type. 400 ✓ Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. 400 Are the cables lead covered as per Rule. 400 Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. 400 Are they suitably stored in dry situations. 400 Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. 400

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	285	Single Cylinder Vertical Steam Engines		
EMERGENCY ...								
ROTARY TRANSFORMER								

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 AMPERES.				
				In the Circuit.	Rule.			
MAIN GENERATOR ... ..	74.1	30	1	37/083	273	296 ✓ 60	V.C.	L-C-A-B.
" " EQUALISER ... ..								
" " ... ..	74.2	30	1	37/083	273	296 ✓ 80	V.C.	L-C-A-B.
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

[illegible]

WIRELESS	(Off. mch. Smithbrand)	...	1	7/044	50	78	160	V.C.	L.C.
NAVIGATION LIGHTS	Main	...	1	7/044	22	42	110	"	"
LIGHTING AND HEATING	Emergency	...	1	7/044	-	42	110	"	" (C.O.S. in the room)
Engine Room	Qty. DB. "E"		1	7/044	25	42	200	"	L.C.-R.B.
"	" " " "F"		1	7/044	22	42	40	"	"
Qty. Cargo	Qty. DB. "C"		1	7/029	2	15	120	"	"
Qty. Deck	Qty. DB. "H"		1	7/052	33	54	140	"	"
"	" " " "B"		1	7/052	32	54	120	"	"
Midship	Qty. DB. "H" (Off. mch. Smithbrand)		1	7/044	10	42	100	"	L.C.
Fore	" " " "J"		1	7/044	5	42	320	"	L.C.A.B
Pump Room	Qty. " "								
Midship	" Cargo Qty. " "								
Forelight	" " "								
Off. Midship	Qty. " "								
Qty. Bombing	Qty. " "		1	7/036	10	28	130	V.C.	L.C.
Radar	" " "		1	7/044	27	42	130	"	"
Qty. 10. Compens	" " "		1	7/044	15	42	60	"	"

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Electric Pump (off Main. Ar. Bd.)	1	3	1	7/0444	20	42	310	W.	L.C.A.B.
" " 5 "	1	3	1	7/0444	20	42	310	"	"
oil Purifier Tank " "	1	0.5	1	1/0644	5	10	85	"	"
" " off " "	1	0.5	1	1/0644	5	10	85	"	"
Feeding Unit	1	8	1	7/0644	61	75	550	"	"
Oil. Pump (off Tank: Pans & C. S.)	1	3 1/2	1	7/0444	27	42	210	"	L.C.
" " 2 1/2 " "	1	4.9	1	7/0444	36	42	130	"	"
Frig. Com. Pump. (off Main. Ar. Bd.)	1	1	1	7/0239	7	15	1145	"	L.C.A.B.
Middle Oil. P. Tank (off Sub. Ar. Bd.)	1	4.9	1	7/0444	35	42	200	"	L.C.
1st Oil. Tank	1	3	1	7/0444	21	42	20	"	L.C.A.B.
Brake Water P. Tank	1	2	1	7/036	16	28	160	"	L.C.
" " 5. "	1	2	1	7/036	16	28	160	"	"
" " 2. 2 1/2	1	2	1	7/036	16	28	200	"	"
" " 3. "	1	2	1	7/036	16	28	200	"	"
Frig. House Vent. Fan.	1	.5	1	7/029	4	15	150	"	"



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.

FURNESS SHIPBUILDING CO. LIMITED

Electrical Engineer

Date 8-6-45

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

15'

Minimum distance between electric generators or motors and steering compass

13'

The nearest cables to the compasses are as follows:—

A cable carrying .15 Ampères 7 feet from standard compass on the steering compass.

A cable carrying .15 Ampères on the standard compass 7 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 Yes

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

The maximum deviation due to electric currents was found to be nil degrees on West course in the case of the standard compass, and nil degrees on West course in the case of the steering compass.

Builder's Signature.

Date 8-6-45

Jas. M. Robertson  
Secretary.

Is this installation a duplicate of a previous case Yes If so, state name of vessel S.S. "Wave Emperor"

Plans. Are approved plans forwarded herewith No If not, state date of approval 28-7-44

Certificates. Are certificates of test for motors engaged on essential 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 installed under special survey in accordance with the approved plans and the Ministry of Shipping specification and arrangements thereto: The materials used are of good quality and design and the workmanship is good: Upon completion the equipment was operated on load with satisfactory results and the insulation resistance of each circuit was measured and found good: This equipment is in my opinion suitable for a vessel bearing the Society's class "for Government service".

Total Capacity of Generators (2x30) 60 Kilowatts.

The amount of Fee ... £28. 10. 0  
Specification 7. 2. 2  
Travelling Expenses (if any) £ : :  
When applied for, 25-6-1945  
When received, 19.45

S. D. Brand  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 13 JUL 1945

Assigned Lee M. de la machine 7/11/1986



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