

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. - 7 JAN 1949

Date of writing Report... 7 October 1948... When handed in at Local Office... 19... Port of... Southampton

No. in Survey held at... Portsmouth... Date, First Survey... 6th Sept... Last Survey... 23rd Sept... 1948
Reg. Book. (Number of Visits... 2)

on the Tanker "WAVE KING" Tons {Gross... 815.9
Net... 454.5

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

Owners... The Admiralty Port belonging to London

Electrical Installation fitted by 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. -

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, 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... - and the results found as per rule... - Are the lubricating arrangements and the construction of the generators as per rule... Yes. Position of Generators... Port side - boiler room flat. 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... After bulkhead port side of 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... - what insulation material is used for the panels... Syndonyo, 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... 350 ampere double pole knife switches with 300 ampere "Artie" indicating cartridge fuses on each pole and for each outgoing circuit 250, 100, 60 and 30 ampere double pole knife switches and "Artie" indicating cartridge fuses. 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... Two lamps in series with mid point earthed and fed through switches and 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... - 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.

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. Lead covered armoured and braided clipped to perforated metal tray fixed to the deckhead and bulkhead as required.

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 deck tubes, where unarmoured cables pass through beams, etc., are the holes effectively 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 — and method of control —.

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. Dormen Smith flame proof fittings in Sun Deck spaces. Access to Pump room lighting fittings from outside of Deck house. and where are the controlling switches fitted. Upper Deck - centre castle. are all fittings suitably ventilated. Yes, are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of 1-10, whether fixed or portable portable, are their fittings as per Rule Yes. 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. 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 GENERATORS Nos. 1 & 2	30	1	37/083	273	296	20	V.C.	Lead covered armoured and braided.
" " EQUALIZER								
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 ...							
Duplicate feeds to Start switchboard	1	37/072	143	246	1080	V.C.	Lead covered armoured and braided.
Engine room Vent fans & motor D/B.M.	1	37/072	240	246	636	"	"
	1	19/044	60	87	264	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/064	40	46	132	V.I.R.	Lead covered.
NAVIGATION LIGHTS Nos 1 & 2 Supplies	1	7/036	10	28	120	V.C.	"
LIGHTING AND HEATING							
Distribution Board No 2.	1	7/036	20	24	120	V.C.	"
" " No 3	1	7/064	50	75	128	"	"
" " No 4	1	7/044	13	42	330	"	"
" " No 5	1	7/036	11	28	130	"	"
" " No 6	1	7/036	11	28	130	"	"
No 8 - R.D.F. & M.A.B.	1	7/044	27	31	138	V.I.R.	"
10 inch signal projector	1	7/044	18.75	31	120	"	"
Lighting etc off D/B No 7 & 8	1	7/052	38	57	138	V.C.	" A & B.
" " Engine Room D/B. 11.	1	7/044	23	42	264	"	"
" " Deck Bleed R & Forward D/B. 10	1	7/036	20	24	42	V.I.R.	"
Shore supply connection	1	19/083	-	191	120	V.C.	"
Ventilating Fans D/B. 11.	1	7/064	57	75	138	"	"
Cargo Connections D/B. 9.	1	7/036	10	24	114	V.I.R.	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
No. 1 Thermotank Motor	1	3	1	7/044	25	42	210	V.C. Lead covered.
Gyro Compass	1	1.4	1	7/036	14	24	60	V.I.R. " "
Turning Gear Motor	1	8	1	7/064	65	75	150	V.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. Date

Is this installation a duplicate of a previous case..... *No* If so, state name of vessel.....

Plans. Are approved plans forwarded herewith..... *Yes* If not, state date of approval..... *23/4/48*.....

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

The installation has been checked against the "as fitted" plans as far as practicable and found to be so detailed thereon.

Minor repairs have been made and insulation tests on the equipment were found satisfactory. The equipment has been tested under working conditions and found in order.

The installation is in my opinion such as could be accepted for classification subject to that portion of the main cables clipped to the underside of the fore and aft gangway adjacent to the poop bulkhead being renewed, junction boxes fitted and suitable means provided to protect the cables against the expansion and contraction of the fore and aft gangway, before the end of September 1949 (Twelve months.)

Total Capacity of Generators..... *60* Kilowatts.

The amount of Fee £ *4* : *0* : When applied for,19.....

Travelling Expenses (if any) £ *2* : *5* : *7* When received,19.....

J.H. Dickell

Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... *FRI. 11 FEB 1949*.....

Assigned..... *See minute on file*.....

