

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

12 APR 1945

Received at London Office.....

Date of writing Report..... 10-4-45 When handed in at Local Office..... 10-4-45 Port of LEITH.

No. in Survey held at LEITH. Date, First Survey FEBRUARY 20th Last Survey APRIL 3rd 1945
Reg. Book. (Number of Visits..... 3.....)

on the motor vessel "STORK" Tons { Gross 493
Net 224

Built at LEITH. By whom built MESSRS HENRY ROBB L^{TD} Yard No. 334 When built 1945.

Owners GENERAL STEAM NAVIGATION CO. L^{TD}. Port belonging to LONDON.

Electrical Installation fitted by MESSRS HENRY ROBB L^{TD} Contract No. X When fitted 1945.

Is vessel fitted for carrying Petroleum in bulk No. Is vessel equipped with D.F. No. E.S.D. YES Gy.C. No. Sub.Sig. No.

Have plans been submitted and approved YES System of Distribution TWO WIRE PARALLEL Voltage of supply for Lighting 220

Heating X Power 220 Direct or Alternating Current, Lighting DIRECT Power DIRECT If Alternating Current state periodicity X 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 X Generators, are they compound wound YES, are they level compounded under working conditions YES,

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

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 X. 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 ONE 22 KW SET ON EACH SIDE AT THE FORWARD END OF THE

ENGINE ROOM. 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 No WOODWORK 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 AT THE FORWARD END OF THE ENGINE ROOM AFTWARTSHIP.

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 No WOODWORK and vertically, 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 X. 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 D.P. CIRCUIT BREAKER WITH

OVERLOAD, NO-VOLT & RELEASE CURRENT TRIPS WITH TIME LAGS & A 3rd POLE CLOSING BEFORE AND OPENING AFTER MAIN POLES FOR

EQUALISER CONNECTION. D.P. SWITCHES & FUSES FOR EACH OUTGOING CIRCUIT.

and for each outgoing circuit. D.P. SWITCHES & FUSES FOR EACH OUTGOING CIRCUIT.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES. Instruments on main switchboard 2

ammeters 2 voltmeters X synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection YES. Earth Testing, state means provided TWO LAMPS IN SERIES WITH MID POINT EARTHED.

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 50%, are the reversed current

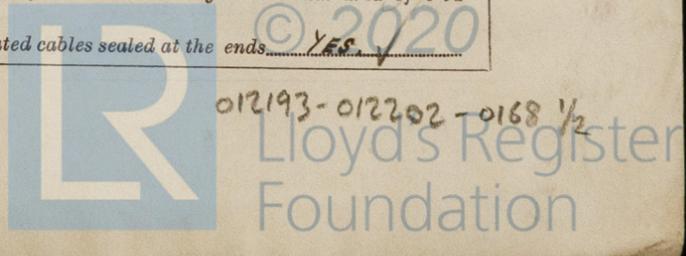
protection devices connected on the pole opposite to the equaliser connection YES, have they been tested under working conditions, and at what current

did they operate 10 AMPS. 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 X,

state maximum fall of pressure between bus bars and any point under maximum load 6 YDTS, 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 . 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 . Are cables laid under machines or floorplates . If so, are they adequately protected . Are cables in machinery spaces, galleys, ~~lavatories~~, etc., lead covered or run in conduit . State how the cables are supported and protected. Laid on Perforated Steel Tray Plates & Clipped

Are all lead sheaths, armouring and conduits effectually bonded and earthed . 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 N/T Glass where unarmoured cables pass through beams, etc., are the holes effectually bushed and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule . Emergency Supply, state position None and method of control .

Navigation Lamps, are they separately wired controlled by separate double pole switches and fuses . Are the switches and fuses in a position accessible only to the officers on watch . Is an automatic indicator fitted . Secondary Batteries, are they constructed and fitted as per Rule None, are they adequately ventilated .

What is the battery capacity in ampere hours .

Fittings, are all fittings on weather decks, in ~~engine~~ engine rooms and wherever exposed to drip or condensed moisture, weatherproof . Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present . If so, how are they protected .

and where are the controlling switches fitted . Are all fittings suitably ventilated .

are all fittings and accessories constructed and installed as per Rule . Searchlight Lamps, No. of None, whether fixed or portable .

are their fittings as per Rule . 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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil . 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 .

Control Gear and Resistances, are they constructed and fitted as per Rule .

Lighting 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 . Are all fuses of the cartridge type .

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

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.
MAIN	2	22	220	100	OIL ENGINES.	Pool Gas Oil	Over 150° F.
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 <u>Port (No. 1)</u>	22	1	19/052	100	104	45	V.C.	LEAD COVERED.
" " EQUALISER		1	7/064	10	75	22	V.C.	LEAD COVERED.
MAIN GENERATOR <u>Star (No. 2)</u>	22	1	19/052	100	104	60	V.C.	LEAD COVERED.
" " EQUALISER		1	7/064	10	75	30	V.C.	LEAD COVERED.
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							
ENGINE ROOM AUXILIARIES	1	7/044	10	31	70	RUBBER	LEAD COVERED.
LIGHTING CIRCUITS	1	7/044	26	31	50	RUBBER	LEAD COVERED.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS	1	7/044	10	31	55	RUBBER	LEAD COVERED.
NAVIGATION LIGHTS	1	7/036	3	24	55	RUBBER	LEAD COVERED.
LIGHTING AND HEATING	Dis. Box No. 1	7/029	18	15	10	RUBBER	LEAD COVERED.
	Dis. Box No. 2	7/029	4.05	15	7	RUBBER	LEAD COVERED.
	Dis. Box No. 3	7/029	3.25	15	60	RUBBER	LEAD COVERED.
	Dis. Box No. 4	7/029	4.2	15	25	RUBBER	LEAD COVERED.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
CAPSTAN	1	15	7/064	60	75	120	V.C.	LEAD COVERED.
GENERAL SERVICE PUMP	1	6.5	7/044	26	31	25	RUBBER	LEAD COVERED.
FUEL OIL PUMPER	1	0.5	3/036	2.2	10	55	RUBBER	LEAD COVERED.
STREAMLINE FILTER PUMP	1	0.25	3/036	1.1	10	20	RUBBER	LEAD COVERED.
ASTER MISC.	1	18	19/052	72	104	75	V.C.	LEAD COVERED.
FOOD MIXER	1	18	19/052	72	104	240	V.C.	LEAD COVERED.
WINDPUMP	1	15	7/064	60	75	260	V.C.	LEAD COVERED.

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.

HENRY ROBB LIMITED

A. Wilson DIRECTOR

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass 36'-0"

Minimum distance between electric generators or motors and steering compass 30'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 0.1 Ampères ONE feet from standard compass X feet from steering compass.

A cable carrying 0.1 Ampères ONE feet from standard compass feet from steering compass.

A cable carrying X Ampères X feet from standard compass X 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 2 degrees on N.W. N & N.E. courses in the case of the standard compass, and ZERO degrees on ANY course in the case of the steering compass.

HENRY ROBB LIMITED

A. Wilson DIRECTOR

Builder's Signature.

Date

Is this installation a duplicate of a previous case YES If so, state name of vessel M/V "KINGFISHER"

Plans. Are approved plans forwarded herewith X If not, state date of approval OCTOBER 10TH 1944.

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 OIL ENGINE DRIVEN GENERATORS (NORTHAMPTON CERTS. C.3162 & C.3163) HAVE BEEN INSTALLED IN THE VESSEL IN A GOOD & EFFICIENT MANNER AND IN ACCORDANCE WITH RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD.

THE ELECTRIC WIRING HAS BEEN CARRIED OUT IN A SATISFACTORY MANNER AND IN ACCORDANCE WITH THE APPROVED PLANS.

THE ELECTRICAL INSTALLATION HAS BEEN TESTED ON FULL LOAD UNDER WORKING CONDITIONS AND ALL WAS FOUND TO BE SATISFACTORY.

Total Capacity of Generators 44 Kilowatts.

The amount of Fee ... £ 26 : 0 : { When applied for, 10.11.19.45
 Travelling Expenses (if any) £ : : { When received, 19.....

J. C. V. Owen

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 APR 1945

Assigned Su F.E. Macky. rpt.

5m. 4.30.—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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