

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office NOV 1943

Date of writing Report 26th Oct. 43 When handed in at Local Office 30.10.43 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 18th Aug 43 Last Survey 25 Oct. 1943
Reg. Book. (Number of Visits 12)

37290 on the MV "EMPIRE TRAVELLER" Tons { Gross Net

Built at Glasgow By whom built Messrs Harland & Wolff Yard No. 1189 When built 1943

Owners MONT Eagle Oil & Shipping Co. Ld. Port belonging to

Electrical Installation fitted by Messrs Harland & Wolff Contract No. 1189 When fitted 1943

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

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

Heating - Power 110 Direct or Alternating Current, Lighting DC Power DC 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 in 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. - 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. near 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. sindampo, 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. D.P. switch and fuses

and for each outgoing circuit. D.P. switch and fuses

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

ammeters. 2 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

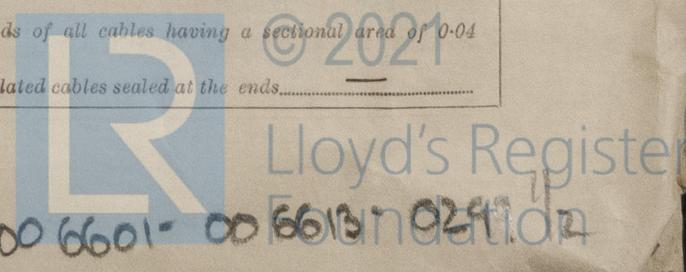
protection devices connected on the pole opposite to the equaliser connection. - have they been tested under working conditions, and at what current

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. No, if otherwise than as per Rule are they of an approved type. PYROTENAX

state maximum fall of pressure between bus bars and any point under maximum load. 4.5 lbs, 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. -



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. Yes, are cables laid under machines or floorplates Yes, if so, are they adequately protected. Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered _____ or run in conduit _____. State how the cables are supported and protected. Clipped.

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 _____ 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. No, if so, how are they protected. _____ and where are the controlling switches fitted. _____, are all fittings suitably ventilated. Yes.

are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of _____, 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. 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. _____ 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 Pyrotanax 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	25	110	288	600	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	25	1	0.2	228	296	20	Pyrotanax	
SHORE CONNECTION		1	0.2	200	296	90	"	
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 ...							
MASTERBOARD	1	0.2	158	296	580	Py	RO TENAX
SECTION BOX No 1	1	0.1	27	191	660	"	"
SECTION BOX No 2	1	0.1	124	191	180	"	"
SECTION BOX No 3	1	0.06	101	135	132	"	"
DG	1	37/072	120	152	10	Rubber	L.S.A.B.

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	0.0225	23	75	75	Py	RO TENAX
NAVIGATION LIGHTS	1	0.0045	4	18	75	"	"
LIGHTING AND HEATING							
No 1 DB.	1	0.0225	32	75	60	"	"
No 2 DB.	1	0.0045	10	18	30	"	"
No 3 DB.	1	0.0145	33	57	180	"	"
No 4 DB.	1	0.0045	16.7	18	10	"	"
No 5 DB.	1	0.0145	4	57	180	"	"
No 6 DB.	1	0.007	5	28	76	"	"
No 7 DB.	1	0.01	22	42	104	"	"
No 8 DB.	1	0.0225	31	75	74	"	"
No 9 DB.	1	0.007	13	28	120	"	"
No 10 DB.	1	0.0045	8	17	16	"	"
No 11 DB.	1	0.0045	8	17	125	"	"
No 12 DB.	1	0.007	7	28	60	"	"
No 13 DB.	1	0.0045	4	17	170	"	"
No 14 DB.	1	0.0045	3.5	17	50	"	"

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.
TURNING GEAR MOTOR.	1	10	0.04	16	104	45	Py	RO TENAX
ACCOM. VENT FAN.	2	4	0.0225	35	75	25	"	"
FUEL OIL PUMP.	1	1.75	0.01	16	42	124	"	"

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 HARLAND AND WOLFF, LIMITED

R. J. Green
Govan Secretary

Electrical Engineers.

Date 29th Oct. 1943.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 15 feet.

Minimum distance between electric generators or motors and steering compass 16 feet.

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying 28 Ampères 12 feet from standard compass 8 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

For HARLAND AND WOLFF, LIMITED

R. J. Green
Govan Secretary

Builder's Signature.

Date 29th Oct. 1943.

Is this installation a duplicate of a previous case 70 If so, state name of vessel

Plans. Are approved plans forwarded herewith 40 If not, state date of approval 20-5-43.

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

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 fitted on board under special survey in accordance with the M.O.W.T specification, tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted
9/11/43

30-10-43

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 : 6
M.O.W.T. SPEC. 6 : 17/6

When applied for, 2 NOV 1943

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

R. I. Hutchinson.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 NOV 1943

Assigned Transmit to Wokingham

5m. 4. 29. — 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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