

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

59 OCT 1946

Date of writing Report..... 25-9-1946 When handed in at Local Office..... 25-9-1946 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL Date, First Survey 4/6/46 Last Survey 20-9-1946
Reg. Book.88001 on the S/S "MALMO" Tons { Gross 1778.96
Net 734.47

Built at WEST HARTLEPOOL By whom built W. GRAY & CO. LTD. Yard No. 1191 When built 1946

Owners ELLERMAN WILSON LINE LTD. Port belonging to HULL

Electrical Installation fitted by W. GRAY & CO. LTD. Contract No. 1191 When fitted 1946

Is vessel fitted for carrying Petroleum in bulk..... 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 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....., 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 ENGINE ROOM, STBD. OUT AND IN BOARD.

....., 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 ENGINE ROOM ON AFT BULKHEAD.

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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 EBONY 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 DOUBLE POLE Q.B.

SWITCH AND DOUBLE POLE FUSE

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and for each outgoing circuit DOUBLE POLE, DOUBLE THROW Q.B. SWITCH AND DOUBLE POLE FUSE.

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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 CONNECTED TO E 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 6 V., are the ends of all cables having a sectional area of 0.4

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

Are all lead sheaths, armouring and conduits effectively 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 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. -.....

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.....-....., if so, how are they protected.....-.....

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

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

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

and found satisfactory. *Yes* *Yes* *Yes*

INSULATION TESTS, has the insulation resistance of all circuits and apparatus been tested

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 ...	1	10	110	91	600	STEAM ENGINE		
	1	15	110	136	550			
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION	KILOWATTS	CONDUCTORS.		MAXIMUM CURRENT		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	15	1	2-19/64	136	166	38	V.I.R.	CONDUIT
" EQUALIZER	10	1	19/64	91	118	20	V.I.R.	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

WIRELESS		1	7/064	25	46	225	V.I.R.	CONDUIT
NAVIGATION LIGHTS		1	7/044	14	31	240	V.I.R.	"
LIGHTING AND HEATING		ALTERNATE SUPPLY FROM BALCON LIGHTING DIS. FUSE BOARD.						
SALCOON LIGHTING DIS. FUSE BOARD	Y33V3	1	7/036	11.5	24	72	V.I.R.	L.C.
BOAT DECK	PORT	1	7/029	10.5	19	45	V.I.R.	"
BOAT DECK	STBD.	1	7/029	10	19	21	V.I.R.	"
ENGINEERS ACCOM.	PORT	1	7/036	13	24	60	V.I.R.	"
ENGINEERS ACCOM.	STBD	1	7/036	11.5	24	3	V.I.R.	"
AFT ACCOM.	SHALTER OK.	1	7/029	9	19	33	V.I.R.	"
AFT ACCOM.	UPPER OK.	1	7/029	10	19	3	V.I.R.	"
ENGINE AND BOILER ROOM DIS. FUSE BOARD		1	19/044	45	53	24	V.I.R.	L.C.A+B.
FOREMAST. CARGO.	"	1	7/044	12	31	84	V.I.R.	CONDUIT
MAINMAST. CARGO	"	1	7/044	23	31	108	V.I.R.	"

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
SALOON THERMOTANK	1	3/4	1	4.036	9	24	195	V.I.R.	CONDUIT
BOAT DECK " PORT	1	3/4	1	4.036	8	24	70	V.I.R.	CONDUIT
BOAT DECK " STARBOARD	1	3/4	1	4.036	8	24	51	V.I.R.	"
ENGINEERS ACCOM. THERMOTANK	1	3/4	1	4.036	9	24	144	V.I.R.	"
REFRIGERATOR	1	1 1/2	1	7.064	14.25	46	120	V.I.R.	"
REF. ACCOM. THERMOTANK	1	3/4	1	4.036	8	24	90	V.I.R.	"
GRINDING MACHINE MOTOR	1	3/4	1	7.029	7.4	18	42	V.I.R.	S.W.A.
DRILLING MACHINE MOTOR	1	3/4	1	7.029	7.4	18	42	V.I.R.	"
OIL SEPARATOR	1	1/2	1	3.036	4	10	120	V.I.R.	"

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 of the electrical equipment installed on the vessel.

Electrical Engineers.

Date 24/9/46

COMPASSES.

Minimum distance between electric generators or motors and standard compass 20 Feet

Minimum distance between electric generators or motors and steering compass 15 Feet

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Ampères ^{INSIDE} feet from standard compass feet from steering compass.

A cable carrying 1/4 Ampères ^{INSIDE} 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 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 EVERY course in the case of the

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

Builder's Signature.

Date 24/9/46

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

Plans. Are approved plans forwarded herewith. If not, state date of approval. 1-4-46

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

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 in conformity with the Society Rules and Regulations, and the arrangements are in accordance with, or equivalent to those shown on the approved plans.

Materials used are of good quality and the workmanship is satisfactory. On completion, the insulation resistance of all circuits was above the requirements, and the Generators operated on Load and Governor tests with satisfactory results.

The equipment as installed is, in my opinion, suitable for a Classed vessel.

Notes Run 19.10.46

Total Capacity of Generators 25 Kilowatts.

The amount of Fee ... £ 20 : 0 : . When applied for, 7-10-1946

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

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 8 NOV 1946

Assigned See F.E. mch. rpt.



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