

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

2 JUN 1943

Received at London Office

Date of writing Report 15-6-1943 When handed in at Local Office 21-6-1943 Port of Leith

No. in Survey held at Burntisland Date, First Survey 30-4-43 Last Survey 15-6-1943
Reg. Book.

86422 on the S.S. "EMPIRE GLORY" Tons { Gross 7290
Net 4996

Built at Burntisland By whom built Burntisland J.B. Co Ltd Yard No. 266 When built 1943

Owners Ministry of War Transport Port belonging to Burntisland

Electrical Installation fitted by Burntisland J.B. Co Ltd Contract No. 266 When fitted 1943

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

Have plans been submitted and approved Yes System of Distribution 2 Wire Voltage of supply for Lighting 110

Heating 110 Power 110 Direct or Alternating Current, Lighting Direct Power Direct 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 Yes 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

positions 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 Platform Starboard side of engine room between

frames 66 & 69, 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 Forward Bulkhead in generator compartment

at frame 71.

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 "Sindonyx" 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

each generator controlled by 1 100x D.P.D.T. Switch.

and for each outgoing circuit 1 - 30x S.P.S.T. Switch.

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 2 lamps for each generator

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

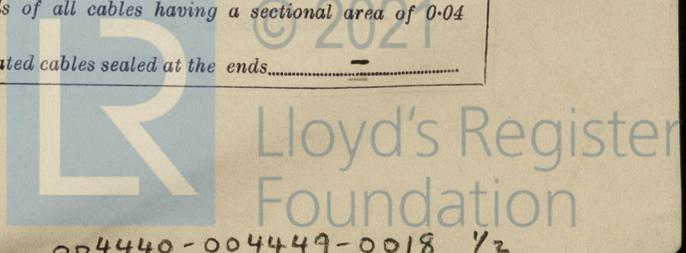
protection devices connected on the pole opposite to the equaliser connection - have they been tested under working conditions, and at what current

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 Yes

state maximum fall of pressure between bus bars and any point under maximum load 2 Volts, 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. No, 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. Supported by galvanized clips fixed by 3/8" machine screws where lead covered & single wire armoured & braided. Where lead covered & left plain it is supported by brass saddles fixed by 1/2" x No 3 Red lead brass screws & protected by sheet iron plating where liable to mechanical damage

Are all lead sheaths, armoured and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. Yes

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. Yes, are they adequately ventilated. Yes what is the battery capacity in ampere hours. 184 ampere hours batteries for Action Alarm Bells etc.

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. Yes. 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. 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN D.G.	1	15	110	136	550	Steam Engine	Hydrocarbon 104/19	
	1	15	110	136	550	Steam Engine	" " " 104/16	
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	15	1	37.072	125	152	30	V.I.R.	LC & S.W.A.
" " EQUALISER								
D.G. "	15	1	37.072	95	152	30	V.I.R.	LC & S.W.A.
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							

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7.036	10.5	24	300	V.I.R.	LC & S.W.A.
NAVIGATION LIGHTS	1	7.029	10.82	15	320	V.I.R.	LC & S.W.A.
LIGHTING AND HEATING							
SALOON	1	7.036	19.97	24	260	V.I.R.	LC & S.W.A.
ENGINE ROOM	1	7.036	13.55	24	30	V.I.R.	LC & S.W.A.
SIDE-HOUSE ACCOM.	1	7.044	26.55	31	48	V.I.R.	LC & S.W.A.
CREWS ACCOM.	1	7.036	12.72	24	360	V.I.R.	LC & S.W.A.
EMERGENCY WIRELESS	1	7.029	10.5	15	120	V.I.R.	LC & S.W.A.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
REFRIGERATOR.	1	2.5	1	7.044	22	31	250	V.I.R. LC & S.W.A.

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 installation.

W. D. Southwell DIRECTOR Electrical Engineers. Date 15th JUNE 1943.

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 109 FEET.

Minimum distance between electric generators or motors and steering compass..... 106 FEET

The nearest cables to the compasses are as follows:—

A cable carrying .37 Ampères 7" feet from standard compass feet from steering compass.

A cable carrying .37 Ampères feet from 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 any course in the case of the

standard compass, and nil degrees on any course in the case of the steering compass.

FOR THE BUROTTISLAND SHIPBUILDING COMPANY LTD.
W. D. Southwell DIRECTOR Builder's Signature. Date 15th JUNE 1943.

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

Plans. Are approved plans forwarded herewith Yes If not, state date of approval ✓

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.)

This installation has been efficiently fitted on board in accordance with the rules. The material and workmanship are sound and good and the installation was found satisfactory under full load and working conditions. Specification requirements carried out.

Noted
24/6/43

Total Capacity of Generators 15 Kilowatts.

4 5/8 H.P. £12-0-0

1/2 G.I.S. £3-0-0

The amount of Fee £15 : 0 : 0 When applied for, 21-6-1943.

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

25% Specification £3-15-0

J. H. Campbell
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 29 JUN 1943

Assigned see minute on J.E. Mahy Rpt.

5m. 4.33.—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)