

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

NOV 1 1939

Received at London Office

Date of writing Report 28-10-1939 When handed in at Local Office 31-10-1939 Port of Leith

No. in Survey held at Burntisland
Reg. Book.

Date, First Survey 24-8-39 Last Survey 27-10-1939

(Number of Visits 6)

38515 on the S.S. "CORMARSH"

Tons { Gross 2848.37
Net 1660.43

Built at Burntisland

By whom built Burntisland J.B. Co. Ltd. Yard No. 231

When built 1939

Owners Borg Bolliers Ltd.

Port belonging to London

Electric Light Installation fitted by Burntisland J.B. Co. Ltd.

Contract No. 231 When fitted 1939

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution TWO WIRE LEAD & RETURN.

Pressure of supply for Lighting 110 volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting DIRECT Power —

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off YES

Generators, do they comply with the requirements regarding temperature rise YES, are they compound wound YES

are they over compounded 5 per cent. YES, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel —, is an adjustable regulating resistance fitted in

series with each shunt field — Have certificates of test results for machines under 100 kw. been submitted and

approved YES. Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing

Have certificates for generators under 100 kw. been supplied and approved YES.

Are all terminals accessible, clearly marked, and furnished with sockets YES, are they so spaced or shielded that they cannot be accidentally earthed

short circuited, or touched YES. Are the lubricating arrangements of the generators as per Rule YES.

Position of Generators 8 K.W. GEN. STARBOARD SIDE, 4 K.W. GEN. PORT SIDE ENGINE ROOM, is the ventilation

in way of the generators satisfactory YES, are they clear of all inflammable material YES, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally, from or vertically above the generators NONE and

are the generators protected from mechanical injury and damage from water, steam or oil YES, are their axes of rotation fore and aft YES

Earthing, are the bedplates and frames of the generating plant efficiently earthed YES, are the prime movers and their respective generators

in metallic contact YES. Main Switch Boards, where placed AFTER BULKHEAD, ENGINE ROOM.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes YES, are they protected from mechanical

injury and damage from water, steam or oil YES, if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards NONE and, are they constructed wholly of durable, non-ignitable non-absorbent

materials YES, is all insulation of high dielectric strength and of permanently high insulation resistance YES.

is it of an approved type YES, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework —, is the non-hygroscopic insulating material of an approved

type YES, and is the frame effectively earthed YES. Are the fittings as per Rule regarding: — spacing or shielding of live parts

YES, accessibility of all parts YES, absence of fuses on back of board YES, temperature rise of

omnibus bars YES, individual fuses to voltmeter, pilot or earth lamp YES, are moving parts of switches alive in the

"off" position NO are all screws and nuts securing connections effectively locked YES, are any fuses fitted on the live side of

switches NO Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

D.P. MAIN SWITCH AND FUSES 100 AMP. CAP FOR 8 K.W. GEN. 1 D.P. MAIN SWITCH & FUSE 60 AMP. CAP. FOR 4 K.W. GEN.

Are turbine driven generators fitted with emergency trip switch as per rule — Are cupboards or compartments containing switchboards composed of

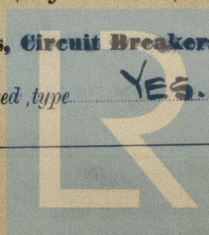
fire-resisting material or lined with approved material YES Instruments on main switchboard ONE ammeters ONE.

voltage meters — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

EARTH LAMPS. Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules YES, are the fusible cutouts of an approved type YES, have the reversed

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Foundation

(1/2) W21-0273

current protection devices been tested under working conditions _____ are all fuses labelled as per rule **YES.**

Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule **YES.**

Cables: Single, twin, concentric, or multicore **SINGLE & TWIN** are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules **YES.**

If the cables are insulated otherwise than as per Rule, are they of an approved type _____ **Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load **2%+3.** **Cable Sockets,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets. **YES.** **Paper Insulated and Varnished Cambric Insulated Cables,** If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound **NONE.** or waterproof insulating tape _____ **Cable Runs,** are the cables sized as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable 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, lavatories, bathrooms and lavatories lead covered or run in conduit **YES.**

Support and Protection of Cables, state how the cables are supported and protected **SUPPORTED WITH SCREWED CLIPS & L.C. & ARMOURD.** If cables are run in wood casings, are the casings and caps secured by screws _____, are the cap screws of brass _____, are the cables run in separate grooves _____ If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII **YES.**

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements _____

Joints in Cables, state if any, and how made, insulated, and protected **NONE.**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **YES.** **Bushes in Beams and Non-watertight Partitions,** where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed **YES.** state the material of which the bushes are made **LEAD.**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas **ALL MAIN CABLES BONDED AT EITHER END TO EARTH & ALL SUBCIRCUIT CABLES BONDED AT ONE END TO EARTH.** are their connections made as per Rule **YES.**

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **YES.** **Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven _____

Navigation Lamps, are these separately wired **YES.** controlled by separate switch and separate fuses **YES.** are the fuses double pole **YES.** are the switches and fuses grouped in a position accessible only to the officers on watch **YES.** has each navigation lamp an automatic indicator as per Rule **YES.** **Secondary Batteries,** are they constructed and fitted as per Rule _____ are they ventilated as per Rule _____

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight **YES.** are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected **NONE.** are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected **NONE.** how are the cables led _____ where are the controlling switches situated _____ are all fittings suitably ventilated **YES.** are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials **YES.**

Heating and Cooking Appliances, are they constructed and fitted as per Rule _____ are air heaters constructed and fitted as per Rule _____

Searchlight Lamps, No. of _____ whether fixed or portable _____, are their fittings as per Rule _____

Motors, are their working parts readily accessible _____, are the coils self-contained and readily removable for replacement _____ are the brushes, brush holders, terminals and lubricating arrangements as per Rule _____, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material _____, are they protected from mechanical injury and damage from water, steam or oil _____ are their axes of rotation fore and aft _____, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type _____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____ have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing _____ have certificates for all motors for essential services been supplied and approved _____

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule _____

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule _____ **Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings _____ are all fuses of the fitted cartridge type _____ are they of an approved type _____ If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed flameproof type approved for use in dangerous spaces _____

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule _____ are they suitably stored in dry situations _____

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	one	8	110	73	1000	Sunderland Forge & Co. Engine No. EG943	✓	✓
AUXILIARY	one	4	110	36.5	1050	Belmore Field Engine No. 5720		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	ONE	.0600	19	.064	58	83	18	RUBBER	L.C. & S.W.A.
EQUALISER CONNECTIONS	ONE	.0145	7	.052	31	37	44	"	"
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	ONE	.0700	7	.036	9.5	22	79	"	"
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION MIDSHIP	ONE	.0100	7	.044	18.5	26	420	"	"
AFT	ONE	.0070	7	.036	10.5	22	82	"	"
NAVIGATION	ONE	.0045	7	.029	4.5	17.5	460	"	"
WIRELESS	ONE	.0070	7	.036	15	22	440	"	"
SEARCHLIGHT	ONE	.002	3	.029	.36	7.8	240	"	"
MASTHEAD LIGHT	ONE	.002	3	.029	.36	7.8	60	"	L.C. ONLY.
SIDE LIGHTS	ONE	.002	3	.029	.36	7.8	30	"	L.C. ONLY.
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

The Electrical Equipment is installed in accordance with the approved plans.

All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

[Signature]
DIRECTOR

Electrical Engineers.

Date 28th Oct., 1939.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 135'-0"

Minimum distance between electric generators or motors and steering compass 130'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 36 Ampères 7 feet from standard compass 7 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 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 BURNTISLAND SHIPBUILDING COMPANY LTD.

[Signature]
DIRECTOR

Builder's Signature.

Date 28th Oct., 1939

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

General Remarks (State quality of workmanship, opinions as to class, etc.)

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

(Please return plan for 71-232 sister vessel.)

[Signature]
2/11/39

Total Capacity of Generators 12 Kilowatts.

The amount of Fee ... £ 12 : 0 : 0 When applied for, 31-10-1939.

Travelling Expenses (if any) £ : - When received, 6/11/39 R.S.D. 8/11

[Signature]
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 7 NOV 1939

Assigned

See Lth. JE 19960