

Rpt. 13.

No. 75168

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

23 MAR 1950

Date of writing Report 7th April 1950 When handed in at Local Office 15/3/1950 Port of GlasgowNo. in Survey held at Glasgow Date, First Survey 13th Dec. '49 Last Survey 16th Feb. 1950
Reg. Book.

(No. of Visits) 8600

on the m.v. "BRITISH COMMANDER"

Tons Gross 8600

Built at Govan By whom built Harland & Wolff Ltd Yard No. 1398C. When built 2/50

Owners The British Tanker Co. Ltd. Port belonging to London

Installation fitted by Harland & Wolff Ltd. When fitted 2/50

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

Plans, have they been submitted and approved Yes System of Distribution Two cond-insul. Voltage of Lighting 110

Heating 110 Power 110 D.C. or A.C., Lighting DC Power DC If A.C. state frequency Yes

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted

with a trip switch Yes Generators, are they compound wound Yes, and level compounded under working conditions Yes

if not compound wound state distance between generators Yes and from switchboard Yes Are the generators 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 Yes Have certificates of

test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

Position of Generators Engine room bot. platform, 1 diesel & 1 steam set Starboard, 1 diesel set Port.

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and

damage from water, steam and oil Yes Switchboards, where are main switchboards placed Engine room Starboard

side, above steam generating set.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

steam and oil Yes, what insulation is used for the panels Ebony sandanap, 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 Yes Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear

for each generator and arrangement of equaliser switches Triple pole Air break C/breakers with over-current

& reverse current protection. Oil dead pot timing.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. Knife switches & cartridge type

indicating fuses in each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4

ammeters 2 voltmeters Yes synchronising devices. For compound machines in parallel are the ammeters and reversed current

protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided

Lamps permanently connected

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses Siemens T Z, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 850/1050A for 75kW 340/420A for 30kW, and at what current do the reversed current protective devices operate 80A & 40A

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes

Cables, are they insulated and protected as per Rule 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 4 volts, are the ends of all cables having a sectional

area of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambric insulated

cables sealed at the ends Yes 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 any cables laid under machines or floorplates Yes, if so, are they

adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes

or of the "HR" type Yes State how the cables are supported or protected Clipped to solid or perforated

steel tray, direct to structural steelwork or to brackwork.

Protected by steel plate covers as required.

Are all lead sheaths, armouring and conduits effectually bonded and earthed 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

effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes (ships' stores only)

002978-002988

Lloyd's Register
Foundation

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Battery - automatic control panel below main switch board

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes state battery capacity in ampere hours 45 AH - Engine room emergency lighting only.

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

and where are the controlling switches fitted In adjacent accommodation Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 1, whether fixed or portable Portable, are they of the carbon arc or of the filament type ✓

Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, 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 protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and 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 sea services been supplied and the results found as per Rule Yes

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 an Approved Cartridge Type Yes, make of fuse Siemens "T2" Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes

E.S.D., if fitted state maker Siemens Bros. location of transmitter E/R 20 tank fwd hold and receiver E/R 20 tank fwd hold

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and 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	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Harland & Wolff Ltd	75	110	682	500	3 cyl. oil engine	Harland & Wolff Ltd.
	1	Sunderland Forge	30	110	273	500	Steam engine (vert. S.C.A.)	Sunderland Forge
EMERGENCY ...	✓							
ROTARY TRANSFORMER	✓							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	75	1	91/103	682	✓	120/240	VC	LCAB
" " EQUALISER ...	-	1	61/093	-	492	60/120	"	"
	30	1	37/093	273	✓	80	"	"
	-	1	37/072	-	260	40	"	"
EMERGENCY GENERATOR ...	✓							
ROTARY TRANSFORMER: MOTOR ...	✓							
" " GENERATOR...	✓							

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.								
Main supply	1	37/072	-	260	140	VC	LCAB	
Midship Masterboard (Power & lighting)	1	37/093	228	✓	363	560	"	"
" " (Radar & W/T)	1	"	60	✓	"	"	"	"
M/E Draining gear	1	19/052	80	✓	110	40	"	"
Off lighting & small power. S.B.1.	1	"	85	✓	"	110	"	"
Off Boat Ladders DB	1	"	90	✓	"	110	"	"
Oil purifiers DB (M2)	1	"	83	✓	"	40	"	"
Off accom. & E/R vent. DB (F1)	1	7/064	55	✓	80	64	"	"
E/R lighting. S.B.2	1	"	56	✓	"	60	"	"
Refrig. Plant (ships' stores)	1	"	51	✓	"	330	"	"
Workshop motors DB (M1)	1	"	55	✓	"	64	"	"
F.O. fan (Aux. Boilers)	1	"	67	✓	"	100	"	"

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.					
			In the Circuit.	Rule.			
CIRCUITS ON MIDSHIP MASTERBOARD							
5/4 Projector	1	19/052	30	✓	110	VC	LCB
Lighting D.B.1	1	7/064	30	✓	31	VIR	"
Accomm. vent. fan #1	1	"	23	✓	"	"	"
" " " #2	1	"	"	✓	"	"	"
Boat hatch, Port	1	7/064	65	✓	80	VC	"
" " Starboard	1	"	"	✓	"	"	"
Wireless	1	"	30	✓	"	"	"
Echo sounding	1	7/036	5	✓	24	VIR	"
Radar	1	7/064	45	✓	80	VC	"
Lighting D.B.5	1	Buster	40	✓	-	-	-
Lighting & All. Navigation D.B.2	1	7/064	15	✓	31	VIR	LCB
Lighting Upper Bridge deck D.B.3	1	"	22	✓	"	"	"
Hospital Air conditioning plant	1	7/036	14	✓	24	"	"
Lighting D.B.4	-	Buster	47	-	-	-	-

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Refrig. stores compressors	2	4	1	7/064	35	✓	80	30 VC LCAB
Purifier F.O. pump	1	3/4	1	3/036	8	✓	10	160 VIR "
S.W. Circ. pump. Aux. engines	1	3	1	7/044	25	✓	31	100 " "
F.O. fan. Aux. Boilers	1	7	1	7/064	67	✓	80	20 VC "
L.O. Purifiers	2	3	1	7/044	25	✓	31	60 VIR "
F.O. Purifiers	1	3	1	"	"	✓	"	140 " "

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. Green
Govan Secretary.

Electrical Contractors.

Date 13. 3. 50

COMPASSES.

Have the compasses been adjusted under working conditions.

Yes

For HARLAND AND WOLFF, LIMITED,

R. Green
Govan Secretary.

Builder's Signature.

Date 13. 3. 50

Have the foregoing descriptions and schedules been verified and found correct.

Yes

Is this installation a duplicate of a previous case.

Yes

If so, state name of vessel.

Mr. "British Captain"

Plans. Are approved plans forwarded herewith.

No

If not, state date of approval.

30. 4. 49

Certificates. Are certificates of test for motors engaged on essential sea 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 electrical installation fitted in this ship has been installed under the supervision of the Surveyors, tested under full working conditions & found satisfactory. The materials & workmanship are good.

Noted *Sub* 31/3/50

Total Capacity of Generators 180 Kilowatts.

The amount of Fee ...

£ 67 : -

When applied for,

19

When received,

19

Travelling Expenses (if any) £

Committee's Minute

GLASGOW 22 MAR 1950

Assigned

See F. E. Macky Rpt.

S. B. Johnson
Surveyor to Lloyd's Register of Shipping.