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No. 5625

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 12th June 1950 When handed in at Local Office 19 Port of GlasgowNo. in Survey held at Glasgow Date, First Survey 9th March 1950 Last Survey 26th May 1950

Reg. Book. (No. of Visits)

36559 on the M.V. "BRITISH CONSUL" Tons { Gross 8655

Built at Glasgow By whom built Harland & Wolff Ltd. Yard No. 1399C When built 6/50

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

Installation fitted by Harland & Wolff Ltd. When fitted 6/50

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 D.C. Power D.C. 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 both platforms; 1 diesel + 1 steam set stbd., 1 diesel set port side.

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 the 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 sandango, 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 dashpot timing. R/V coils interlocked with

shore supply switch.

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

cartridge type 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.

Two lamps connected in series - mid point earthed.

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

make of fuses. Siemens "TZ" 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 woodwork.

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 (ship stores only)

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Foundation

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Small battery + automatic control panel below + forward of the main switchboard

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 A.H. - 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 DB tank fire and receiver deck.

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.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Harland & Wolff Ltd.	75	110	682	500	3-phi. oil eng.	Harland & Wolff Ltd.
	1	Sunderland Forge	30	110	273	500	Steam eng. (vert. scda)	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	782	120/240	VC	LCAB
" " EQUALISER ...	-	1	61/093	-	492	60/120	"	"
	30	1	37/093	273	363	80	"	"
	-	1	37/072	-	260	40	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.								
Shore 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 Turning gear.	1	19/052	80	110	40	"	"	
Aft lighting + small power. SB1.	1	"	85	"	110	"	"	
Aft boat winches DB.	1	"	90	"	"	"	"	
Oil purifiers DB. M2.	1	"	83	"	40	"	"	
Aft accom + E/R tent. DB. FI.	1	7/064	55	80	64	"	"	
E/R lighting. SB2.	1	"	56	"	60	"	"	
Refing. plant (ship stores)	1	"	51	"	330	"	"	
Workshop motors DB. M1.	1	"	55	"	64	"	"	
F.D. fan (Aux. Boilers)	1	"	67	"	100	"	"	

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TION.	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 MASTER BOARD.							
S/L Projector.	1	19/052	30 ✓	110	280	VC	LSAB
Lighting. DB1. Wheelhouse & navigation	1	7/044	30 ✓	31	210	VIR	LSB
Lighting + all navigation. DB2.	1	"	15 ✓	"	170	"	"
Lighting Upper + Bridge decks. DB3.	1	"	22 ✓	"	140	"	"
Lighting. DB4.	-	Buss bar	47	-	-	-	-
Lighting. DB5.	-	"	40	-	-	-	-
Wireless.	1	7/064	30 ✓	80	106	VC	LSB
Radar.	1	"	45 ✓	"	220	"	"
Echo sounding.	1	7/036	5 ✓	24	180	VIR	"
Hospital Air conditioning plant.	1	"	14 ✓	"	60	"	"
Accommodation vent. fan #1.	1	7/044	23 ✓	31	160	"	"
" " " #2.	1	"	" ✓	"	128	"	"
Boat wind, port.	1	7/064	65 ✓	80	156	VC	"
" " " starboard.	1	"	" ✓	"	120	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Refing. stores compressors.	2	4	1	7/064	35	80	30	VC
Purified F.O. pump.	1	0.75	1	3/036	8	10	160	VIR
S.W. C.O. pump, Aux. engines.	1	3	1	7/044	25	31	100	"
F.D. 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	"



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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,

Electrical Contractors.

Date 16th June 1950

Govan Secretary

COMPASSES.

Have the compasses been adjusted under working conditions.....

Yes

For HARLAND AND WOLFF, LIMITED,

Builder's Signature.

Date 16th June 1950

Govan Secretary

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.....

MV "British Commander"

Plans. Are approved plans forwarded herewith.....

No

If not, state date of approval.....

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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 SWH 14/8/50.

Total Capacity of Generators..... 180 ✓ Kilowatts.

The amount of Fee ...

£ 67 : -

When applied for,

19 JUL 1950

When received,

19

Travelling Expenses (if any) £

:

:

19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 20 JUL 1950

Assigned

SEE ACCOMPANYING MACHINERY REPORT