

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 24-1-1949 When handed in at Local Office 3rd February 1949 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 4-10-48 Last Survey 28-1-1949
Reg. Book. (No. of Visits 16)

on the M.V. "BRITISH FORTUNE" Tons { Gross 6108 Net 3334

Built at Sunderland By whom built Wm. Doxford & Sons Ltd Yard No. 763 When built 1948

Owners British Tanker & Company Port belonging to London

Installation fitted by Campbell & Selwood When fitted 1949

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. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 2-Wire m.s. Voltage of Lighting 110

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

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 - Generators, are they compound wound Yes, and level compounded under working conditions Yes

if not compound wound state distance between generators - and from switchboard - 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 - 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 p. & s. 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 on raised platform

End of main engine 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 Slony "Sindacup" 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 construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear

for each generator and arrangement of equaliser switches a triple pole (one pole for squaring) air-break circuit breaker with O.P. & R.V. contact tripping devices.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit a double pole knife switch and double pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Two ammeters Two voltmeters - 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 E. lamps

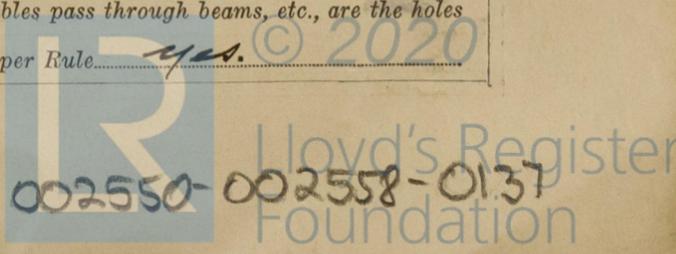
Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes, make of fuses H.P.C. "ZEO", are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 5% and at what current do the reversed current protective devices operate 10%

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 - state maximum fall of pressure between bus bars and any point under maximum load > 6.0. 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 No, if so, are they adequately protected - Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit - or of the "HR" type - State how the cables are supported or protected

main podes along fore & aft gangways in steel trough with cover plate. In accommodation L.C.B. on the surface and protected as required by wood or metal guards.

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



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes Emergency Supply, state position lights in Main Space: Battery-fed, Solenoid-operated on failure of Ships Supply or E.S. fuse.

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 2 of 80 A.H.

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 "Wigan" flameproof lighting fittings as approved in Certificate and where are the controlling switches fitted in Officer's quarters Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of -, whether fixed or 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 "ZED" 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 Waring & Strickland Ltd location of transmitter 2nd Deck and receiver 6th 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.	
MAIN	2	Waring & Strickland	75	110	682	500	Steam Dethlefs & Mortensen Ltd.
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	No. 1. 75	1	91/103	682	782	120	V.C.	L.C.A.B.
"	EQUALISE	1	61/093	464	60	60	"	"
"	No. 2. 75	1	91/103	682	782	120	"	"
"	Eq.	1	61/093	464	60	60	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
"	GENERATOR							

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Midship Sub. Mithboard	1	97/083	70	296 420	V.C.	L.C.A.B.
data	1	97/083	155	296 420	"	"
Upper Deck Section Panel	1	7/064	52	75 60	"	"
Lower " " " "	1	7/064	62	75 240	"	"
Engine Room " " " "	1	7/064	33	46 60	V.I.R.	"
Navigation Bridge " " " "	1	7/036	19	28 65	V.C.	L.C.B.
Bridge 8R " " " "	1	7/036	16	28 15	"	"
Upper Bridge " " " "	1	7/052	30	57 65	"	"
Bridge 8R " " " "	1	7/052	30	57 15	"	"
Navigation Bridge " " " "	1	19/052	22	104 115	"	"

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

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.			
W.T. off Sub. Mithboard 7 S.B.	1	19/052	20	104	160	V.C.	L.C.B.
Bridge 8R DB 'E.1' off 'E'	1	7/036	9	24	30	V.I.R.	"
" " " 'E.2' "	1	"	7	"	180	"	"
Warehouse DB 'G.1' off 'G'	1	"	5	"	180	"	"
Navigation Bridge 'G.2'	1	"	10	"	80	"	"
Upper Bridge 'G.3'	1	"	15	"	30	"	"
Lower Bridge 8R 'H.1' off 'H'	1	"	15	"	60	"	"
" " " 'H.2' "	1	"	5	"	60	"	"
Feed DB 'J'	1	"	4	"	330	"	L.C.A.B.
Prop. 8R DB 'K.1' off 'K'	1	"	10	"	90	"	L.C.B.
" " " 'K.2' "	1	"	10	"	90	"	"
" " " 'K.3' "	1	"	14	"	90	"	"
Upper 8R 'K.4' "	1	"	14	"	30	"	"
" " " 'K.5' "	1	"	10	"	9	"	"
Engine Room DBs 'G.1-2' P.S. off 'G'	1	"	15	"	60	"	"
Boiler " " 'G.3' "	1	"	10	"	120	"	L.C.A.B.
Prop. Galley DB. C-1	1	7/052	10	57	120	V.C.	L.C.B.
Navigation	1	7/036	10	24	180	V.I.R.	"
Alternative Navigation	1	"	4	24	6	"	"
Radio Supply	1	19/052	45	104	40	V.C.	"
Battery Charging	1	7/029	2	15	40	V.I.R.	"
4/10 Compressor	1	7/036	15	24	30	"	"
Large Canal Prop. Supply	1	19/052	40	104	200	V.C.	L.C.A.B.
Water Pumping	1	7/036	10	24	180	V.I.R.	L.C.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.			
Bridge Deck Vent Fan P.	2	3	1	7/052	26	57	2/90	V.C.	L.C.B.
Boiler Blowers P.S.	2	7 1/2	1	19/052	60	104	2/90	"	"
Trimming Pump	1	15	1	7/036	14	28	90	V.C.	"
Crane	1	3	1	7/052	26	57	60	"	"
Hoists	1	3	1	7/052	26	57	120	"	"
Grinder	1	2	1	7/036	18	28	90	V.I.R.	"
Centrifuge	2	3	1	7/052	26	57	60/120	V.C.	"
Vent Fan to Room	1	1 1/2	1	7/036	14	28	60	V.I.R.	"
" " " " " "	2	3	1	7/052	26	57	2/90	V.C.	"
Off Boat Winch. to h.	2	7 1/2	1	19/052	60	104	2/90	"	"
Trig. Compressor. off Main P.	1	4	1	7/044	34	42	90	"	"
" " " " " "	1	4	1	7/052	34	57	30	"	"
" Water Pump	1	1	1	7/052	10	57	30	"	"

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.

CAMPBELL & ISHERWOOD, LTD.

PER *Thomas Mudd* Electrical Contractors.

Date *25th Jan 1949*

COMPASSES.

Have the compasses been adjusted under working conditions.

For and on behalf of
 WILLIAM DOXFORD & SONS, LIMITED.

Hammy Gebbie Managing Director.

Builder's Signature.

Date *1/2/49*

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

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

Plans. Are approved plans forwarded herewith. *No* If not, state date of approval. *20-9-48*

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 equipment of this vessel has been installed under special survey in accordance with the approved plans and the "Rules for Electrical Equipment". The materials and workmanship are good: on completion the equipment was satisfactorily operated on load and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a closed vessel.

Notes sent 23/2/49

Total Capacity of Generators. *(2x75) 150* Kilowatts.

The amount of Fee ... £ *62: 10* : When applied for, **FEB - 8 1949**

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

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

Committee's Minute. **FRI. 25 FEB 1949**

Assigned. *In units see J.S. Rpt*

