

Rpt. 13.

No. 35597

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.

Date of writing Report 8.6.51 19... When handed in at Local Office... 19... Port of SunderlandNo. in Survey held at Sunderland Date, First Survey 13.2.51 Last Survey 11.6.51
Reg. Book. (No. of Visits 17.)90689 on the m.v. "BRITISH CRAFTSMAN" Tons { Gross 8647
Net 5008Built at Sunderland By whom built Wm. Duxford & Sons Ltd Yard No. 783 When built 1951Owners British Tanker Company Port belonging to LondonInstallation fitted by Campbell & Isherwood Ltd When fitted 1951Is 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 Rotor yesPlans, have they been submitted and approved yes System of Distribution 2-wire ins. Voltage of Lighting 110Heating - 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 fittedwith 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 runin parallel yes, are shunt field regulators provided yes Is the compound winding connected to the negative or positive polenegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates oftest for machines under 100 kw. been supplied yes and the results found as per Rule yesPosition of Generators engine room starboard, on raised deckis the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil yes Switchboards, where are main switchboards placed on angle framework neargenerators

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 "Sindanyo", if of synthetic insulatingmaterial is it an Approved Type yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom asper Rule - Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgearfor each generator and arrangement of equaliser switches a triple-pole (one pole for equaliser) air-break circuitbreaker fitted with O/L and R/V current tripping devices.and the switch and fuse gear (or circuit breakers) for each outgoing circuit a double-pole knife switch and fuses.Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 3ammeters 3 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed currentprotection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided 3 lampsSwitches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes,make of fuses "ZED", are all fuses labelled yes If circuit breakers are provided for the generators, at whatoverload do they operate 12%, and at what current do the reversed current protective devices operate 15%Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yesCables, 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 less than 6 v. Are the ends of all cables having a sectionalarea of 0.01 square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulatedcables 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 theyadequately 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 cables from engine room tomidship house V.C.L.C.A.B. cables on steel channel fixed to underside of fore and aftgangway with cover plate fitted; Accommodation, L.C.B. on the surface and protected wherenecessary by wood or metal guards.Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holeseffectively bushed yes Refrigerated chambers, are the cables and fittings as per Rule -

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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... **Yes**... Emergency Supply, state position **Skeleton lgt. system in machinery spaces from storage batteries near 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.**

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 lgt fittings as approved in centre-castle**

and where are the controlling switches fitted... **in officers quarters**... Are all fittings suitably ventilated... **Yes**

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

Heating and Cooking, is the general construction as per Rule... **1**... are the frames effectually earthed... **1**... are heaters in the accommodation of the convection type... **1**... 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... **1**... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... **1**

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... **1**... 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... **1**... Are the cables lead covered as per Rule... **Yes**

E.S.D., if fitted state maker... **Marconi**... location of transmitter... **Forward end Eng. Rm. P.** and receiver... **ditto starboard**

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	S.F. & E. Co. Ltd	75	110	681	500	Diesel	Mirrlees R.A. Day Ltd.
	1	ditto	30	110	273	500	Steam	S.F. & Eng. Co. Ltd
Serials:								
Diesel:-323III - Gen.41501								
Diesel:-323III2 - Gen.41502								
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	2	37/.103	681	816	60	V.C.	L.C.B.
"	"	1	37/.103		408	30	"	"
"	No. 2. 75	2	37/.103	681	816	84	"	"
"	"	1	37/.103		408	42	"	"
"	eq. No. 3. 30	1	37/.083	273	314	120	"	"
"	"	1	37/.083		314	60	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
"	"							
"	"							

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

DESCRIPTION.								
Poop Deck Section Panel 'D'	I	19/.052	104	110	60	V.C.	L.C.A.B.	
Upper Deck " 'E'	I	7/.064	52	80	170	"	"	
Engine Room " 'G'	I	7/.064	40	80	60	"	"	
Poop Deck " 'C'	I	7/.064	68	80	64	"	"	
Fridge Machy. " 'F'	I	7/.064	24	80	312	"	"	
Aux. Switchboard Feeder (Radar & W/T)	I	37/.083	70	314	364	"	"	
" " " (Ltg. & Power)	I	37/.064	155	314	364	"	"	
Eng. Rm. Switchboard Feeder.	I	19/.083	128	202	60	"	"	
Navigating Bridge Section Panel 'A'	I	7/.036	19	28	22	"	"	
Bridge Deck " 'E'	I	7/.036	7	28	20	"	"	
Upper Deck " 'L'	I	7/.052	40	60	66	"	"	
Bridge Deck " 'F'	I	7/.052	30	60	30	"	"	

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.			
Poop Deck DB, 'K-1', off SB, 'K'	I	7/.036	4	28	160	V.C.	L.C.B.
" " " 'K-2' "	I	7/.036	10	28	100	"	"
" " " 'K-3' "	I	7/.036	10	28	12	"	"
Upper Deck " 'K-4' "	I	7/.036	14	28	130	"	"
" " " 'K-5' "	I	7/.036	14	28	78	"	"
Eng. Rm. Port DB, 'G-1' off SB, 'G'	I	7/.036	10	28	140	"	L.C.A.B.
" " Star. " 'G-2' "	I	7/.036	10	28	260	"	"
Boiler Rm. DB, 'G-3' "	I	7/.036	10	28	10	"	"
Galley DB, 'C-1' off SB, 'C'	I	7/.036	10	28	120	"	L.C.B.
Navigation, Main Supply, off SB, 'A'	I	3/.036	4	10	120	V.I.R.	"
" Alt. " DB, 'L-1' "	I	3/.036	-	10	20	"	"
Bridge DB, 'E-1' off SB, 'E'	I	7/.036	9	28	18	V.C.	"
Wheelhouse DB, 'E-2' "	I	7/.036	7	28	120	"	"
" " 'L-1' off SB, 'L'	I	7/.036	5	28	100	"	"
Nav. Bridge DB, 'L-2' "	I	7/.036	10	28	80	"	"
Upper Bridge DB, 'L-1' "	I	7/.036	15	28	14	"	"
Bridge Dk. Port DB, 'H-1' off 'H'	I	7/.036	15	28	60	"	"
" " Star. " 'H-2' "	I	7/.036	15	28	30	"	"
Forecastle DB,	I	7/.036	5	28	200	"	L.C.A.B.
Gyro Compass Supply	I	7/.036	15	28	120	"	L.C.B.
W/T Supply	I	7/.064	20	80	120	V.C.	"
Echo Sounding Supply	I	7/.036	10	28	120	V.C.	"
Suez Canal Projector (wiring only)	I	7/.064	-	80	250	"	L.C.A.B.
Radar Supply	I	7/.064	45	80	60	"	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.			
Boat Winch Motors	4	7.5	I	7/.064	52	80	av. 140	V.C.	L.C.B.
Poop Vent Fans	2	2.5	I	7/.052	26	60	2/80	"	"
Engineers Washing M/C	I	.75	I	7/.036	7	28	60	"	"
Water Pump	I	1	I	3/.036	7.5	10	280	V.I.R.	"
Fridge Compressors	2	4	I	7/.064	34	80	2/30	V.C.	"
Forced Draught Fan	I	7	I	7/.064	55	80	145	"	L.C.A.B.
Galley Supply Fan	I	.5	I	2/0.002	6	5	60	Pyratenax	
" Exhaust "	I	.5	I	2/0.002	6	5	90	"	
Pantry Exhaust Fan	I	.5	I	3/.036	6	10	80	V.I.R.	L.C.B.
Midship Vent Fans	I	2.5	I	7/.052	26	60	60	V.C.	"
Priming Pump Motor	I	1.5	I	7/.044	13	45	120	"	L.C.A.B.
Crane Motor	I	3	I	7/.064	26	80	140	"	"
Lathe Motor	I	3.5	I	7/.064	30	80	80	"	"
Grinder Motor	I	2	I	7/.036	18	28	90	"	"
Oil Purifiers	3	3	I	7/.044	26	45	av. 180	"	"
Engine Room Vent Fans	2	1.5	I	7/.044	16	45	av. 170	"	"
S.W. Cooling Pump Motor	I	3	I	7/.044	26	45	80	"	"
F.W. Mono Pumps	I	1.5	I	7/.036	13	28	40	"	"
Oil Purifier	I	3	I	7/.052	28	60	90	"	"
ditto	I	5	I	7/.052	42	60	90	"	"

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

W. M. M. M.

Electrical Contractors.

Date

17 June 1951

COMPASSES.

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

For and on behalf of

WILLIAM DOXFORD & SONS, LIMITED.

Builder's Signature.

Date

14.6.51

Managing Director.

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. **m.v. "British Defender"**

Plans. Are approved plans forwarded herewith... **yes**

If not, state date of approval. -

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 pump room lighting arrangements are in accordance with the Secretary's letter of 5.12.51. The electrical equipment of this vessel has been installed under special survey and with the above qualification, complies with the special requirements of Section 15 of the Electrical rules. The arrangements in general principle accord with those shown on the approved plans. The materials and workmanship are good. On completion, satisfactory trials of the equipment were witnessed and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a classed vessel.**

Notes sent 29/6/51

(2 x 75, 1 x 30)

Total Capacity of Generators... **180** Kilowatts.

The amount of Fee ... £ **69 : 0 : 0**

When applied for,

JUN 14 1951

When received,

Travelling Expenses (if any) £

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 3 JUL 1951

Assigned

See F.E. Mchly. rpt.



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