

Rpt. 13.

No. 77697

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

30 OCT 1951

Date of writing Report 29<sup>th</sup> Sep. 51 When handed in at Local Office 19. Port of GLASGOW.No. in Survey held at GREENOCK. Date, First Survey 2<sup>nd</sup> May. Last Survey 5<sup>th</sup> September 1951.  
Reg. Book. (No. of Visits 13.)

91752 on the M.V. BRITISH PIONEER Tons Gross..... Net.....

Built at GLASGOW By whom built BLYTHSWOOD S.B. CO. LTD Yard No. 97 When built 1951

Owners BRITISH TANKER CO. LTD Port belonging to LONDON.

Installation fitted by W. MUIR GOODFELLOW &amp; CO. LTD When fitted 1951

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 WIRE Voltage of Lighting 110

Heating YES 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 DIESEL - PORT AND STARBOARD SIDES OF ENGINE ROOM. STEAM. ON FLAT STARBOARD SIDE OF ENGINE ROOM

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 ADJACENT TO STEAM DRIVEN

GENERATOR.

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 SINDANYO 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 CIRCUIT BREAKER FITTED WITH OVERLOAD AND

REVERSE CURRENT TRIPS

and the switch and fuse gear (or circuit breakers) for each outgoing circuit DOUBLE POLE KNIFE PATTERN SWITCHES WITH

FUSES.

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

ammeters TWO 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

EARTH LAMPS

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

make of fuses SIEMENS 'ZED' TYPE are all fuses labelled YES If circuit breakers are provided for the generators, at what

overload do they operate 150% FULL LOAD, and at what current do the reversed current protective devices operate 10%-15% F.L.

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 6 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 NO, 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 "HB" type YES State how the cables are supported or protected MAINS L.C.B. CABLES CLIPPED

TO STEEL PLATE WITH COVERPLATE FITTED MACHINERY SPACE L.C.B. CABLES CLIPPED TO STEEL

TRAY. ACCOMMODATION L.C.B. CABLES CLIPPED TO WOODWORK.

Are all lead sheaths, armouring and conduits effectively 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

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. 1200

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 IN CENTRECASTLE. PUMPROOM AS IN APPROVED PLAN 27/2/51 and where are the controlling switches fitted. IN ACCOMMODATION SPACE Are all fittings suitably ventilated. YES

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

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. YES 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. YES Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. YES

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. YES 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 'ZAR' TYPE 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. HUGHES M.S.B. location of transmitter. FRAME SPACE 37-38 and receiver. FRAME SPACE 37-38

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.	MAKER.
MAIN	2	CAMPBELL & ISEHWOOD.	75	110	682	500	DIESEL
	1	SUNDERLAND FORGE & ENG. CO. LTD.	30	110	273	500	STEAM
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	2	37/103	682	816	160	V.C.	LCAB.
" " EQUALISER		1	37/103		408	80	V.C.	LCAB.
" " "	30	1	37/103	273	408	40	V.C.	LCAB.
" " "		1	37/103		408	20	V.C.	LCAB.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

DESCRIPTION.		No.	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. BOARD.	SUPPLY N°1	1		37/103	206	408	V.C.	LCAB.
MIDSHIP SUB. BOARD.	SUPPLY N°2	1		37/103	206	408	V.C.	LCAB.
AFT ACCOM. L <sup>th</sup> SECTION.		1		19/052	87	110	V.C.	LCAB.
ENGINE ROOM L <sup>th</sup> SECTION.		1		7/064	58	80	V.C.	LCAB.
AFT VENT FANS.		1		19/044	67	92	V.C.	LCAB.
AFT BOAT WINCHES.		1		19/054	131	143	V.C.	LCAB.
SUEZ CANAL PROJECTOR.		1		19/052	30	64	RUBBER	LCB.
HEAVY OIL AUXILIARIES.		1		19/064	140	143	V.C.	LCAB.
PURIFIERS.		1		7/064	36	80	V.C.	LCAB.
ENGINE ROOM AUXILIARIES.		1		7/064	57	80	V.C.	LCAB.
WORKSHOP.		1		7/064	26	80	V.C.	LCAB.
DOMESTIC REFRIGERATOR.		1		19/052	44.5	110	V.C.	LCAB.

#### 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.			
NAVIGATION.	1	7/036	14	24	132	RUBBER	L.C.B.
WIRELESS.	1	7/064	12	45	130	RUBBER	L.C.B.
INSTRUMENT L <sup>th</sup>	1	7/044	22	31	150	RUBBER	L.C.B.
UPPER BRIDGE L <sup>th</sup>	1	7/044	29	31	96	RUBBER	L.C.B.
BRIDGE DECK L <sup>th</sup>	1	7/064	38	46	18	RUBBER	L.C.B.
UPPER DECK STBD. L <sup>th</sup> D.B.	1	7/044	21	31	12	RUBBER	L.C.B.
UPPER DECK PORT L <sup>th</sup> D.B.	1	7/044	20	31	162	RUBBER	L.C.B.
POOP DECK STBD. L <sup>th</sup> D.B.	1	7/044	23	31	24	RUBBER	L.C.B.
POOP DECK PORT L <sup>th</sup> D.B.	1	7/044	23	31	186	RUBBER	L.C.B.
CARGO L <sup>th</sup> D.B.	1	7/044	25	31	18	RUBBER	L.C.B.
ENGINE ROOM STBD. L <sup>th</sup> D.B.	1	7/044	25	31	105	RUBBER	L.C.A.B.
ENGINE ROOM PORT L <sup>th</sup> D.B.	1	7/044	25	31	144	RUBBER	L.C.A.B.
RADAR.	1	7/064	20	30	130	V.C.	L.C.B.
DOMESTIC GEAR.	1	7/064	40	80	240	V.C.	L.C.A.B.
FUEL VALVE COOLING PUMP D.B.	1	7/036	10	24	165	RUBBER	L.C.A.B.

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.	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.
BOAT WINCHES		4	7.5	1	7/064	65.2	80	V.C.	L.C.A.B.
FRIG. COMPRESSOR		2	4	1	7/052	35	37	RUBBER	L.C.A.B.
AFT ACCOM. VENT FANS.		2	2.5	1	7/044	21	31	240	RUBBER
MID. ACCOM. VENT FANS.		2	2.5	1	7/044	21	31	144	RUBBER
ENGINE ROOM VENT FANS.		2	1.5	1	7/036	12.4	24	204	RUBBER
TURNING GEAR.		1	10	1	19/044	80	92	180	V.C.
F.O. PURIFIER AND CLARIFIER		2	7.5	1	7/064	65	80	84	V.C.
FORCED DRAUGHT FAN		1	7	1	7/064	67	80	192	V.C.
GENERATOR COOLING PUMP.		1	3.5	1	7/044	30	31	126	RUBBER
WORKSHOP		1	3	1	7/044	24	31	63	RUBBER
PURIFIERS.		3	2.5	1	7/036	22	24	78	RUBBER
VALVE COOLING PUMPS.		2	1	1	7/029	9.7	15	20	RUBBER
FRESH WATER PUMPS.		2	7.5	1	3/036	7.24	10	168	RUBBER



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The foregoing is a correct description.

FOR AND ON BEHALF OF

W. MUIR GOODFELLOW & Co, LTD

*Electrical Contractors.*

Date 3/10/51

DIRECTOR

## COMPASSES.

Have the compasses been adjusted under working conditions.

**YES**

GLYTHSWOOD SHIPBUILDING CO., LTD.

Builder's Signature.

Date 5/10/51

~~SECRETARY~~

Have the foregoing descriptions and schedules been verified and found correct

✓ F.S.

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*

*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 of this vessel has been fitted on board under Special Survey, tested under working conditions and found satisfactory. The quality of materials and workmanship is good.

[illegible]

Noted 29-10-51

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

The amount of Fee ... £ 69 : 0 : / When applied for,

When applied for,

19

When received,

19

Travelling Expenses (if any) £

✓

Surveyor to Lloyd's Register of Shipping.

### Committee's Minute

*Assigned*