

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 2ND AUGUST 1948... When handed in at Local Office..... 19... Port of... GLASGOWNo. in Survey held at... PORT GLASGOW... Date, First Survey... 28TH APRIL... Last Survey... 26TH JULY 1948
(Number of Visits... 6...)Reg. Book... 39464... on the... M.V. BRITISH ADVOCATE... Tons { Gross... 8573
Net... 4937

Built at... PORT GLASGOW... By whom built... MESSRS LITHGOWS LTD... Yard No... 1033... When built... 1948

Owners... BRITISH TANKER CO LTD... Port belonging to... LONDON

Electrical Installation fitted by... MESSRS SUNDERLAND FORGE & ENGINEERING CO LTD... Contract No... 1033... When fitted... 1948

Is vessel fitted for carrying Petroleum in bulk... YES... Is vessel equipped with D.F... YES... E.S.D... YES... Gy.C... YES... RADAR Sub. Sig... YES

Have plans been submitted and approved... YES... System of Distribution... TWO WIRE... Voltage of supply for Lighting... 110

Heating... Power... 110... Direct or Alternating Current, Lighting... DC... Power... DC... If Alternating Current state periodicity... Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... YES... Are turbine emergency governors fitted with a

trip switch as per Rule... YES... Generators, are they compound wound... YES... are they level compounded under working conditions... YES

if not compound wound state distance between generators... and from switchboard... Where more than one generator is fitted are they

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... Are the lubricating arrangements and the construction

of the generators as per rule... YES... Position of Generators... STARBOARD SIDE OF ENGINE ROOM

is the ventilation in way of generators satisfactory... YES... are they clear of inflammable material... YES... if situated

near unprotected combustible material state distance from same horizontally... and vertically... are the generators protected from mechanical

injury and damage from water, steam and oil... YES... are the bedplates and frames earthed... YES... and the prime movers and generators in metallic

contact... YES... Switchboards, where are main switchboards placed... NEAR GENERATORS

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

and oil... YES... if situated near unprotected combustible material state distance from same horizontally... and vertically... what insulation

material 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... Is the frame effectually earthed... YES

Is the construction as per Rule... YES... including accessibility of parts... YES... absence of fuses on the back of the board... YES... individual fuses

to pilot and earth lamps, voltmeters, etc... YES... locking of screws and nuts... YES... labelling of apparatus and fuses... YES... fuses on the "dead"

side of switches... YES... Description of Main Switchgear for each generator and arrangement of equaliser switches... 700 AMP TRIPLE POLE

CIRCUIT BREAKER FITTED WITH OVERLOAD AND REVERSE CURRENT TRIPS

and for each outgoing circuit... 300 AMP, 200 AMP, 100 AMP, 60 AMP OR 30 AMP D.P. KNIFE PATTERN SWITCHES

WITH 'ZED' TYPE FUSES

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 is the ammeter 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... are all fuses labelled as

per Rule... YES... If circuit breakers are provided for the generators, at what overload current did they open when tested... FULL LOAD... are the reversed current

protection devices connected on the pole opposite to the equaliser connection... YES... have they been tested under working conditions, and at what current

did they operate... 10% to 15% FL... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... YES

Cables, are they insulated and protected as per the appropriate Tables of the Rules... 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... 6.1 Volts... are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets... YES... Are paper insulated and varnished cambric insulated cables sealed at the ends... YES

with insulating compound or waterproof insulating tape . 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... . Are cables laid under machines or floorplates . Are they adequately protected... . Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit . State how the cables are supported and protected. MAINS. L.C.A.B. CABLES CLIPPED TO STEEL PLATE WITH COVER FITTED.
MACHINERY SPACE. L.C.A.B. CABLES CLIPPED TO STEEL WORK OR TRAY.
ACCOMMODATION. L.C.B. CABLE CLIPPED TO WOODWORK.

Are all lead sheaths, armouring and conduits effectually bonded and earthed . Refrigerated chambers, are the cables and fittings as per Rule . Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands . Are unarmoured cables pass through beams, etc., are the holes effectually bushed and with what material LEAD. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule . Emergency Supply, state position and method of control .

Navigation Lamps, are they separately wired controlled by separate double pole switches and fuses . Are the switches and fuses in a position accessible only to the officers on watch . Is an automatic indicator fitted . Secondary Batteries, are they constructed and fitted as per Rule . Are they adequately ventilated . What is the battery capacity in ampere hours .

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof . Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present . If so, how are they protected FLAME. PROOF FITTINGS INSTALLED IN CENTRE-CASTLE SPACE. PUMP-ROOM FITTINGS COMPLY WITH RULE REQUIREMENTS. and where are the controlling switches fitted IN ACCOMMODATION SPACE, are all fittings suitably ventilated .

are all fittings and accessories constructed and installed as per Rule . Searchlight Lamps, No. of , whether fixed or portable . Heating and Cooking, is the general construction as per Rule . Are the frames effectually earthed . 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 free from damage from water, steam and oil . If situated near unprotected combustible material state minimum distance from same horizontally and vertically . Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule . Control Gear and Resistances, are they constructed and fitted as per Rule . 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 . Are all fuses of the cartridge type . Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships . Are the cables lead covered as per Rule . Spare Gear, if the vessel is for open sea service have spares been provided as per Rule . Are they suitably stored in dry situations . Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory .

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	75	110	682	500	STEAM ENGINE	<input checked="" type="checkbox"/>	
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		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	770	58	V.C.	L.C.A.B.
" " EQUALISER		1	37/103		385	29	V.C.	L.C.A.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
MIDSHIP LIGHTING & POWER SECTION	1	37/103	244	385	640	V.C.	L.C.A.B.
AFT ACCOM. LIGHTING & POWER SECTION	1	37/072	195	246	208	V.C.	L.C.A.B.
ENGINE ROOM LIGHTING SECTION	1	19/052	53	104	162	V.C.	L.C.A.B.
SHORE CONNECTION.	1	37/103	300	385	262	V.C.	L.C.A.B.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS	1	37/103	70	385	752	V.C.	L.C.A.B.
NAVIGATION LIGHTS	1	7/064	30	75	112	V.C.	L.C.B.
LIGHTING AND HEATING							
UPPER BRIDGE DECK LIGHTING D.B.	1	7/044	22	31	72	R.	L.C.B.
BRIDGE DECK MID. LIGHTING D.B.	1	7/044	15	31	30	R.	L.C.B.
RADAR	1	7/044	25	31	184	R.	L.C.B.
ACCOM. LIGHTING D.B. AFT.	1	7/064	24	75	286	V.C.	L.C.B.
ACCOM. LIGHTING D.B. STBD AFT.	1	7/044	14	31	160	R.	L.C.B.
ACCOM. LIGHTING D.B. PORT AFT.	1	7/044	14	31	116	R.	L.C.B.
POOP DECK ACCOM. LIGHTING D.B. PORT	1	7/044	18	31	160	R.	L.C.B.
POOP DECK ACCOM. LIGHTING D.B. STBD	1	7/044	16	31	136	R.	L.C.B.
ENGINE ROOM LIGHTING D.B. TOP PORT	1	7/044	12	31	140	R.	L.C.A.B.
ENGINE ROOM LIGHTING D.B. TOP STBD	1	7/044	12	31	240	R.	L.C.A.B.
ENGINE ROOM LIGHTING D.B. BOTTOM PORT	1	7/044	12	31	180	R.	L.C.A.B.
ENGINE ROOM LIGHTING D.B. BOTTOM STBD	1	7/044	12	31	72	R.	L.C.A.B.
ENGINE ROOM FLUX D.B.	1	19/052	21	104	104	V.C.	L.C.A.B.
REFRIG. D.B.	1	7/064	45	75	386	V.C.	L.C.A.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
TURNING GEAR.	1	7	1	19/052	60	104	152	V.C.	L.C.A.B.
MID. BOAT WINCHES	2	7.5	1	19/052	65	104	140	V.C.	L.C.B.
AFT BOAT WINCHES	2	7.5	1	19/052	65	104	212	V.C.	L.C.B.
REFRIG. COMPRESSORS	2	4	1	7/064	35	75	32	V.C.	L.C.A.B.
PURIFIERS	2	2.5	1	7/064	22	31	270	R.	L.C.A.B.
AFT VENT FANS	2	2.75	1	7/044	24	31	64	R.	L.C.B.
MID. VENT FANS	2	2	1	7/044	17	31	180	R.	L.C.B.
ENGINE ROOM VENT FAN	1	1.5	1	7/044	14	31	162	R.	L.C.A.B.
PRIMING PUMP	1	1.5	1	7/044	14	31	250	R.	L.C.A.B.

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.

P.Pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers. Date 5th August 1948.

J.C. Shanks jun

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... THIRTY-FIVE FEET.

Minimum distance between electric generators or motors and steering compass..... THIRTY FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 30 Ampères 13 feet from standard compass 7 feet from steering compass.

A cable carrying 23 Ampères LED INTO feet from standard compass LED INTO feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power..... YES

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted..... YES.

The maximum deviation due to electric currents was found to be Nil degrees on ANY course in the case of the

standard compass, and Nil degrees on ANY course in the case of the steering compass.

LITHGOWS LIMITED.

A.H. Cunningham Secretary

Builder's Signature. Date 10th Aug 1948.

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..... 25th MARCH 1948.

Certificates. Are certificates of test for motors engaged on essential 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.

Notes. Ent. 9/9/48

Total Capacity of Generators..... 150 Kilowatts.

The amount of Fee ... £ 62: 10: 19. When applied for, P.C. tax.

Travelling Expenses (if any) £ 1: 1: 19. When received.

J.M. Gardiner
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 17 AUG 1948

Assigned..... SEE ACCOMPANYING MACHINERY REPORT

5th, 1939.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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