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No. 34502

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report.....19..... When handed in at Local Office.....25 JUL 1946..... Received at London Office.....26 JUL 1946.....

Port of SUNDERLAND

No. in Survey held at SUNDERLAND Date, First Survey 25 JUL 1946 Last Survey July 17 1946
Reg. Book. (Number of Visits.....14.....)

36965 on the M/V 'BRITISH COMMERCE' Tons { Gross 609.2
Net 333.5

Built at SUNDERLAND By whom built H.M. DOXFORD & SONS LTD. Yard No. 736 When built 1946

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

Electrical Installation fitted by CAMPBELL & ISHERWOOD LTD. Contract No. 736 When fitted 1946

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

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

Heating — Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. 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 — 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 ENGINE ROOM. FORD OF MAIN ENGINE. NO. 1. PORT. NO. 2. STBD

NO. 3. STBD ON PLATFORM, 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 ENGINE ROOM. ON FORD BULKHEAD. STBD.

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 EBONY SANDWICH, 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 300 AMPERE, DOUBLE POLE

CIRCUIT BREAKER, WITH REVERSE CURRENT, TIME LAGS, 2 OVERLOAD TRIPS, MAGNETIC BLOWOUTS, AND

THIRD POLE ACTING AS EQUALISER.

and for each outgoing circuit DOUBLE POLE, DOUBLE THROW, Q.B. SWITCH AND DOUBLE POLE FUSE.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3

ammeters 3 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 CONNECTED TO "E" THROUGH SWITCHES AND FUSES.

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 25%, 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 15% 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 —,

state maximum fall of pressure between bus bars and any point under maximum load 56V., are the ends of all cables having a sectional area of 0.04

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

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Lloyd's Register
Foundation

PARTICULARS OF GENERATING PLANT.

PARTICULARS OF GENERATING PLANT.						WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	Fuel Used.	Flash Point of Fuel.
		Kilowatts.	Volts.	Ampères.	Revs. per Min.			
MAIN ...	3	30✓	110✓	273	685	600 one cyl.		
EMERGENCY ...						STEAM ENGINE		
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TED 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	3X30kw	1	34/.083	273	296		V.C.	L.C.+B.
" " EQUALISER		1	19/.083		191		V.C.	L.C.+B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

LIGHTING AND HEATING, ETC., SUPPLIES.														
WIRELESS	...	...	...	...	...	...	1	19/044	25	87	✓	560	V.C.	L.C.A.#B.
NAVIGATION LIGHTS	...	...	...	...	...	...	1	4/044	5	42	✓	560	V.C.	"
LIGHTING AND HEATING	...	...	...	...	...	...	ALTERNATE SUPPLY FROM WHEELHOUSE DIS FUSE BOARD.							
CREWS ACCOMMODATION PORT							1	7/044	11.6	42	✓	78	V.C.	L.C.
"						STBD.	1	7/044	10.5	42	✓	70	V.C.	"
GALLEY AND HOSPITAL							1	7/044	4.	42	✓	230	V.C.	"
CREWS ACCOM. UPPER DECK. PORT							1	7/044	14.2	42	✓	70	V.C.	"
"						STBD	1	7/044	14	42	✓	60	V.C.	"
FORECASTLE							1	7/044	7.	42	✓	92	V.C.	L.C.A.#B.
NAVIGATING BRIDGE							1	7/044	10	42	✓	120	V.C.	L.C.
UPPER BRIDGE DECK.							1	7/044	20	42	✓	150	V.C.	"
BRIDGE DECK PORT							1	7/044	15	42	✓	150	V.C.	"
"						STBD.	1	7/044	15	42	✓	130	V.C.	"
CENTRECASTLE							1	7/044	9.	42	✓	50	V.C.	"
ENGINEERS ACCOM.						PORT & STBD	1	7/044	12/19.	42	✓	40/30	V.C.	"
MACHINERY SPACE							1	19/044	39	87	✓	48	V.C.	L.C.A.#B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.								
ENGINE ROOM VENT FAN PORT	1	3	1	4/044	26	42	32	V.C.	L.C. & B.	
" STBD	1	3	1	4/044	26	42	42	V.C.	"	
" MIDR.	1	3	1	4/044	26	42	120	V.C.	"	
BORT WINCH PORT	1	2	1	4/044	18	42	60	V.C.	"	
" STBD	1	2	1	4/044	18	42	132	V.C.	"	
VENT FAN PORT	1	3	1	4/044	26	42	40	V.C.	"	
" STBD.	1	3	1	4/044	26	42	48	V.C.	"	
" PANTRY	1	.5	1	3/029	5	5	40	V.R.	"	
BORT WINCH PORT	1	2	1	4/044	18	42	140	V.C.	"	
" STBD	1	2	1	4/044	18	42	64	V.C.	"	
CRANE MOTOR	1	2	1	4/044	18	42	240	V.C.	"	
PRIMING PUMP MOTOR	1	1.45	1	4/044	18/20	42	380	V.C.	"	
OIL PURIFIER NO1	1	2	1	4/044	18	42	36	V.C.	"	
" NO2	1	2	1	4/044	18	42	36	V.C.	"	
GRINDER	1	1.5	1	4/044	16	42	65	V.C.	"	
WORKSHOP MOTOR	1	4	1	4/064	35	75	50	V.C.	"	
AIR CONDITIONING FAN	1	.5	1	3/029	5	5	56	V.R.	"	
COMPRESSOR	1	1 1/2	1	4/044	15	42	40	V.C.	"	
GALLEY BLOWER	1	.5	1	3/002	4	5	60	T.R.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.

GUTHRIE & LUTHERWOOD LTD.

Thos. Macdonald Electrical Engineers.

Date 22 July 1946

COMPASSES.

Minimum distance between electric generators or motors and standard compass 25 FEET

Minimum distance between electric generators or motors and steering compass 15 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères ^{INSIDE} feet from standard compass feet from steering compass.

A cable carrying 14 Ampères feet from standard compass ^{INSIDE} 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 EVERY course in the case of the

standard compass, and NIL degrees on WILLIAM ROY FORD & SONS, Limited the case of the steering compass.

Builder's Signature. Date. Managing Director.

Is this installation a duplicate of a previous case YES. If so, state name of vessel BRITISH MARQUIS.

Plans. Are approved plans forwarded herewith. If not, state date of approval.

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith.

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 in conformity with the Society's Rules and regulations, and the arrangements are in accordance with, or equivalent to those shown on the approved plans.

Materials used are of good quality and the workmanship is satisfactory. On completion, the insulation resistance of all circuits was above the requirements and the Generators operated on Load and Governor tests with satisfactory results.

The Equipment as installed, is, in my opinion, suitable for a Classed vessel.

Total Capacity of Generators 90 Kilowatts.

The amount of Fee £ 31 : 10. : 19 July 1946

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

A. Diment for S. D. Brand. Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 16 AUG 1946

Assigned See F.E. machy. rpt

5m.430—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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