

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

27 OCT 1948

Received at London Office.

Date of writing Report. 18th OCTOBER 1948.

When handed in at Local Office.

Port of

GLASGOW

No. in Survey held at

GLASGOW

Date, First Survey

25th AUGUST

Last Survey

12th OCTOBER 1948

Reg. Book.

(Number of Visits. 5.)

56049 on the

COTTONWOOD CREEK

Tons

Gross.

Net.

Built at

FLABAMA

By whom built

FLABAMA D.D. & S.B.C.

Yard No. 2038

When built 1944

Owners

BRITISH TANKER CO. LTD

Port belonging to

LONDON.

Electrical Installation fitted by

Contract No.

When fitted 1944

Is vessel fitted for carrying Petroleum in bulk. YES

Is vessel equipped with D.F. YES

E.S.D. YES

Gy.C. YES

RADAR. YES

SUBS. YES

Have plans been submitted and approved. APPROVED.

System of Distribution

LIGHTING

(MAIN - 3PH. 3WIRE)

Voltage of supply for Lighting 120 A.C. + D.C.

Heating

220 AC Power

440 AC

Direct or Alternating Current

Lighting

AC + DC

Power

AC + DC

If Alternating Current state periodicity 60 ~ 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

BELOW

are they level compounded under working conditions.

YES

Where more than one generator is fitted are they

arranged to run in parallel. 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. No

Have certificates of

test for machines under 100 kw. been supplied. No

and the results found as per rule.

Are the lubricating arrangements and the construction

of the generators as per rule. YES

Position of Generators

IN MAIN ENGINE ROOM, STARTING 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

FORE END MAIN ENGINE ROOM ADJACENT TO 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. TO BE AMERICAN TYPE BONDED FRONY ASBESTOS

if of synthetic insulating material is it an Approved Type.

if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule.

Is the frame effectually earthed. YES

INSTRUMENT FUSES ONLY FITTED AT BACK OF BOARD.

Is the construction as per Rule. YES

including accessibility of parts. YES

absence of fuses on the back of the board.

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.

ALTERNATORS - TRIPLE

POLE CIRCUIT BREAKERS. D.C. GENERATORS - DOUBLE POLE CIRCUIT BREAKER. ALL FITTED WITH

OVERLOAD TRIPS ON EACH LEG.

and for each outgoing circuit.

TRIPLE POLE OR DOUBLE POLE CIRCUIT BREAKERS OR DOUBLE POLE SWITCHES.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. YES

Instruments on main switchboard

14

ammeters. 5

voltmeters. 1

For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection.

Earth Testing, state means provided. EARTH INDICATING LAMPS ON A.C. AND D.C. SYSTEMS.

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.

are the reversed current

protection devices connected on the pole opposite to the equaliser connection.

have they been tested under working conditions, and at what current

did they operate.

Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule.

AMERICAN STANDARD

Cables, are they insulated and protected as per the appropriate Tables of the Rules. CABLES

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.

are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets. MECHANICAL

Are paper insulated and varnished cambric insulated cables sealed at the ends.

AT ENDS.

VC CABLES TAPED BUT CONDUCTORS NOT SOLDERED

Are paper insulated and varnished cambric insulated cables sealed at the ends.

AT ENDS.

VC CABLES TAPED BUT CONDUCTORS NOT SOLDERED

X GENERATING SETS CONSIST OF 400 KW ALTERNATOR; 75 KW. SHUNT WOUND EXCITER AND 55 KW. D.C. COMPOUND WOUND GENERATOR MOUNTED ON COMMON BEDPLATE AND DRIVEN BY STEAM TURBINE.

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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	400 (500kva)	450	642	1200	STEAM TURBINE		
	2	75	110	682	1200			
	2	55	120	458	1200			
EMERGENCY ...	1	75 (93 kva)	450	120.5	720	OIL ENGINE	OIL	FIROYE 150°F
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead cable not counted).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. C.R. MILS.	In the Circuit.	Rule Applied KVA/MVA.			
MAIN GENERATOR	400	1	1,000,000	642 ✓	725	40	V.C.	L.C.H.
" " EQUALIZER	75	1	1,000,000	682 ✓	725	45	V.C.	L.C.H.
" "	55	1	750,000	458 ✓	592	45	V.C.	L.C.H.
EMERGENCY GENERATOR	75	1	100,000	120 ✓	158	30	V.C.	L.C.H.
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

[illegible]

WIRELESS	1	33.100	15✓	55	300	V.C.	L.C.F.
NAVIGATION LIGHTS	1	10.400	15✓	25	250	V.C.	L.C.F.
LIGHTING AND HEATING							
MIDSHIP LIGHTING					L ₃	1	66.400	30✓	83	400	V.C.	L.C.F.
POOP DECK ACCOM. LIGHTING					L ₄	1	66.400	20✓	83	70	V.C.	L.C.F.
UPPER DECK ACCOM. LIGHTING					L ₅	1	66.400	25✓	83	100	V.C.	L.C.F.
ENGINE ROOM LIGHTING					L ₆	1	66.400	15✓	83	40	V.C.	L.C.F.
BOILER ROOM LIGHTING					L ₇	1	26.300	12✓	47	80	V.C.	L.C.F.
D.C. MAINS TO MIDSHIPS					D.C.	1	33.100		55	400	V.C.	L.C.F.
GYRO					I.D.C.	1	10.400		25	40	V.C.	L.C.F.
ENGINE ROOM EMERGENCY D.C. LIGHTING						1	10.400	15✓	25		V.C.	L.C.F.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.								
MAIN CONDENSER CIRC. PUMP	1	125	1	300,000	160	✓	234	60	V.C.	L.C.F.
CARGO PUMPS	3	200	1	450,000	243	✓	308	60	V.C.	L.C.F.
STRIPPING PUMPS	2	50	1	66,400	63	✓	83	45	V.C.	L.C.F.
FIRE & BUTTERWORTH PUMPS	2	50	1	66,400	60.5	✓	83	60	V.C.	L.C.F.
FORCED DRAUGHT FANS	3	50	1	66,400	63	✓	83	80	V.C.	L.C.F.
STEERING GEAR MOTORS	2	30	1	33,100	42.5	✓	55	165	V.C.	L.C.F.
FLUX. CIRCULATING PUMP	1	30	1	33,100	39	✓	55	90	V.C.	L.C.F.
PROPULSION MOTOR FAN	1	15	1	16,500	21	✓	34	75	V.C.	L.C.F.
MAIN CONDENSATE PUMPS	2	25	1	26,300	32	✓	47	50	V.C.	L.C.F.
COMBUSTION CONTROL AIR COMP.	1	15	1	16,500	19	✓	34	80	V.C.	L.C.F.
DRINKING WATER PUMP	1	15	1	16,500	19.5	✓	34	90	V.C.	L.C.F.
FLUX. CONDENSATE PUMP	1	15	1	16,500	19	✓	34	60	V.C.	L.C.F.
ENGINE ROOM BILGE PUMPS	2	10	1	10,400	13.7	✓	25	110	V.C.	L.C.F.
COOLER CIRCULATING PUMP	1	10	1	10,400	13.7	✓	25	60	V.C.	L.C.F.
FUEL OIL CIRCULATING PUMP	1	7.5	1	6,530	10.5	✓	18	45	V.C.	L.C.F.
SALT WATER PUMP. SANITARY PUMP	2	7.5	1	6,530	10.3	✓	18	150	V.C.	L.C.F.
AIR COMPRESSOR	1	5	1	6,530	6.9	✓	18	30	V.C.	L.C.F.
MAIN SHAFT TURNING GEAR	1	5	1	6,530	7.2	✓	18	100	V.C.	L.C.F.
LUB. OIL SERVICE PUMPS	2	5	1	6,530	7.2	✓	18	60	V.C.	L.C.F.
ENG. ROOM VENT FANS	4	2	1	6,530	3.2	✓	18	60	V.C.	L.C.F.
TURBINE TURNING GEAR	1	2	1	6,530	3	✓	18	20	V.C.	L.C.F.
LUB. OIL SEPARATOR	1	2	1	6,530	3.1	✓	18	120	V.C.	L.C.F.
ACCOM. VENT FANS	2	1.25	1	6,530	2.2	✓	18	50	V.C.	L.C.F.
FRESH WATER PUMPS	2	2	1	6,530	3.1	✓	18	90	V.C.	L.C.F.
EVAPORATOR FEED PUMP	1	1	1	6,530	1.7	✓	18	90	V.C.	L.C.F.
REFRIG. COMPRESSOR	1	7.5	1	6,530	9.8	✓	18	125	V.C.	L.C.F.
REFRIG. CIRCULATING PUMP	1	1	1	6,530	1.55	✓	18	150	V.C.	L.C.F.

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.

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Forty Feet

Minimum distance between electric generators or motors and steering compass

Forty Feet

The nearest cables to the compasses are as follows:—

A cable carrying 1.5 Ampères 10 feet from standard compass 7 feet from steering compass.

A cable carrying .2 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

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

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Builder's Signature.

Date

GENERALLY SIMILAR TO OTHER

Is this installation a duplicate of a previous case T2 TANKERS If so, state name of vessel EL MORRO

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 appears to have been installed in accordance with American practice and with typical plans of T.2 Tankers. The details given in this report were obtained from these plans and from personal observation on board. The lighting sub-circuits are controlled by single pole switches but the original non-flameproof lighting fittings, switches and portable connections have been removed from the centre-castle tweendeck space and have been rewired and flameproof fittings installed. Double-pole switches fitted in accommodation space control these lights. All generators, motors, control gear, transformers, switchboards and cables have been examined as far as practicable, tested, necessary repairs carried out and on completion - insulation resistance measured. All found to be in order. Steering gear tested whilst vessel moored to quay. Operation found to be satisfactory.

The electrical installation of this vessel, as now seen, is in safe working condition and, whilst not strictly in accordance with the Society's Rules, is in my opinion such as could be accepted for classification by this Society.

NOTE. A Radar Installation has been fitted on board at this time.

Total Capacity of Generators 985 Kilowatts.

THE 2.75kw. EXCITERS ARE NOT INCLUDED IN TOTAL.

The amount of Fee ... £ 30 : 0 : 26 OCT 1948

Travelling Expenses (if any) £ : : 21 : 10

Committee's Minute

Assigned

Surveyor to Lloyd's Register of Shipping.



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