

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

JAN 1948

Date of writing Report. 4-12-1947 When handed in at Local Office. 19. Port of LIVERPOOL

No. in Survey held at BIRKENHEAD. Date, First Survey 29/16 Last Survey 17/11 1947  
Reg. Book. (Number of Visits.....)24143 on the S.S. "THELAMUS" ex "FORT RALEIGH" Tons { Gross.....  
Net.....

Built at PORTLAND, OR. By whom built KAISER CO. INC. Yard No. - When built 1945

Owners ANGLO SAXON PETROLEUM CO. LTD Port belonging to LONDON.

Electrical Installation fitted by PRESUMED FITTED BY BUILDERS. Contract No. - When fitted 1945

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 Typical plan of System of Distribution POWER - 3 phase 3 wire  
LIGHTING MAIN - 3 PL 3 wire GROUNDS - 5 x 1/2 inch Voltage of supply for Lighting 120 AC

Heating 220 AC Power 440 AC Direct or Alternating Current, Lighting AC Power AC If Alternating Current state periodicity 60 Prime Movers, 115 AC

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 -

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 No, 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 - 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 In main engine room starting platform

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 Dead front board, insulation material, 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 Triple pole circuit

breakers for A.C. Generator. D.P. Circuit breakers for D.C. Generator.

and for each outgoing circuit Triple pole or Double pole circuit breakers.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 14

ammeters 5 voltmeters 1 synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection - Earth Testing, state means provided Load indicating lamps on AC &amp; DC 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 100% 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 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 - 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

\* Generating sets comprise Alternator, 75kw. Steam wound exciter and 55kw. Comp. wound generator mounted on common bedplate and driven by steam turbine.



PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	400 (500 KW)	450	642	1200	Steam Turbines		
	* 2	75	110	682	"			
	2	55	120	458	"			
	1	75 (93.8 KW)	450	120.5	900		Oil Engine	Dist. Oil
ROTOR TRANSFORMER								

### \*X. EXCITERS FOR PROPULSION UNITS

⊕ AM. BUREAU OF SHIPPING RATING

	WIRELESS	NAVIGATION LIGHTS	LIGHTING AND HEATING	PROP & BOAT DECK ACCOMMODATION	UPPER DECK ACCOMMODATION	ENGINE ROOM LIGHTING	BOILER ROOM	2300 VOLT CUBICLE HEATERS	MAIN MOTOR	MAIN GENERATOR	BATTERY CHARGER GEN. ROOM	GEN. RM. LTG. FROM 120V AC EMERGENCY BUS	ENG. RM. EM. LTG. FROM 115V. D.C. BUS.
DC 10	1	33100	15✓	55	300	VC.	L. CA.						
L1	1	10400	15✓	25	270	"	"						
L3	1	66400	30✓	83	400	"	"						
L4	1	33100	20✓	55	70	"	"						
L5	1	66400	25✓	83	105	"	"						
L6	1	66400	15✓	83	40	"	"						
L7	1	26300	12✓	47	80	"	"						
L9	1	6530	3.4✓	18	75	"	"						
L11	1	6530	13✓	18	24	"	"						
L12	1	6530	13✓	18	30	"	"						
L13	1	400	5✓	15	60	"	"						
L19	1	4100	4✓	15	150	"	"						
DC3	1	10400	16✓	25	100	"	"						

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.							
ENG. ROOM VENT FANS	P34/35	4	2	1	6530	3.19	18	60	V.C.	L.C.A.
AIR COMPRESSOR	P40	1	5	1	6530	7.2	18	30	"	"
TURBINE TURNING GEAR	P45	1	3	1	6530	4.5	18	20	"	"
ENG. ROOM BULGE PUMPS	P33/34	2	10	1	10400	13.7	25	110	"	"
MAIN CONDENSER C.R. PUMPS	P6	1	125	1	300000	160	234	60	"	"
MAIN SHAFT TURNING GEAR		1	5	1	6530	7.2	18	100	"	"
MAIN PROPULSION MOTOR FAN	P47	1	15	1	16500	21	34	75	"	"
LUB OIL SERVICE PUMPS	P20/21	2	5	1	6530	7.2	18	60	"	"
LUB OIL SEPARATOR	P22	1	2	1	6530	3.1	18	120	"	"
FIRE + BUTTERNORTH PUMPS	P7/8	2	50	1	66400	60.5	83	60	"	"
STEERING GEAR MOTORS	P9/10	2	35	1	33100	39	55	165	"	"
MAIN CONDENSATE PUMPS	P2/3	2	25	1	26300	32	47	50	"	"
AUX CIRCULATING PUMPS	P14	1	30	1	33100	37.9	55	90	"	"
AUX CONDENSATE PUMP.	P15	1	15	1	16500	19	34	60	"	"
COOLER CIRCULATING PUMP		1	10	1	10400	13.7	25	60	"	"
FUEL OIL	"	1	7.5	1	6530	10.5	18	45	"	"
FORCED DRAUGHT FANS	P23/24/25	3	50/20	1	66400	67/29	83	40	"	"
EVAPORATOR FEED PUMPS	P26/27	2	1	1	6530	1.7	18	90	"	"
ACCOMMODATION VENT FANS	P28/29	2	2	1	6530	3.1	18	50	"	"
FRESH WATER PUMPS	P30/32	2	2	1	6530	3.1	18	90	"	"
REFRIG. COMPRESSOR	P38	1	7.5	1	6530	10.5	18	125	"	"
" CIRCULATING PUMP	P38	1	1	1	6530	1.7	18	150	"	"
SALT WATER SERVICE PUMP	P41	1	7.5	1	6530	10.5	18	150	"	"
SANITARY PUMP	P42	1	7.5	1	6530	10.5	18	125	"	"
DRINKING WATER PUMP	P51	1	15	1	16500	19.5	34	90	"	"
CHARGO PUMPS	P1/2/3	3	200	1	450000	243	308	60	"	"
STRIPPING PUMPS	P45	2	50	1	66400	63	83	45	"	"
FUEL OIL TRANSFER PUMPS	P46/47	2	20	1	16500	25	24	60	"	"

⊗ AMERICAN RATINGS.



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

40 ft

Minimum distance between electric generators or motors and steering compass

40 ft

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 0.2 Ampères 6 ft 6 in feet from standard compass 6 ft 6 in 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 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

Is this installation a duplicate of a previous case

If so, state name of vessel

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 the typical plans of T2. Tugboats. The details of this report were obtained from plans on board and from personal observation. It was noted that lighting sub-circuits are controlled by single-pole switches and portable connections, switches and non-flameproof fittings installed in bulkheads between deck spaces. The wiring fittings in this space together with portable connections have now been removed and flameproof lighting fittings installed with switches (DP) outside of space. All motor, control gear, transformer, generator, switchboards, cables etc. have been examined, insulation test carried out & a number of minor repairs effected. The installation appears to be in good and efficient condition & whilst not strictly in accordance with the Society's Rules, it is, in my opinion, eligible to be accepted for classification.

Total Capacity of Generators 985 Kilowatts.

(2 x 400 kw, 2 x 50 kw, 1 x 75 kw (Emergency))  
(2 x 75 kw Excess not included)

The amount of Fee

£ 30 : 0 : 0

When applied for,

30 DEC 1947

Travelling Expenses (if any)

£ :

When received,

19

LICENCE CASE.

Committee's Minute

Assigned

See Minute on Machinery Report.

Surveyor to Lloyd's Register of Shipping.



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