Rpt. 13. No. 1005

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

3 AUG 1948

Received at London Office

Date of writing Report JUNE 1948 When handed in at Local Office JUNE 1948 Port of GALVESTON. TEXAS

No. in Reg. Book. Survey held at GALVESTON. TEXAS. Date, First Survey 26TH MAY 48 Last Survey JUNE 1948 (No. of Visits)

on the SS "THEOBALDIUS" EX "SILVER CREEK" Tons Gross 10662 Net 6323

Built at PORTLAND. OREGON. By whom built KAISER CO INC Yard No. 145 When built 1945-

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

Installation fitted by KAISER CO INC When fitted 1945-

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 ✓

Plans, have they been submitted and approved NOTED MARCH 1948 FOR THIS TYPE VESSEL System of Distribution AC 3PH. 3WIRE Voltage of Lighting 115

~~Heating~~ COOKING. 230 Power 450 D.C. or A.C., Lighting AC Power AC If A.C. state frequency 60/62

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 55 KW EXCITERS ONLY, and level compounded under working conditions ✓, if not compound wound state distance between generators 8 FEET and from switchboard 30 FEET. Are the generators arranged to run in parallel YES 400 KWS SETS, are shunt field regulators provided Yes (quite) Is the compound winding connected to the negative or positive pole —. Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing By ABS. Have certificates of test for machines under 100 kw. been supplied ✓ and the results found as per Rule —

Position of Generators IN ENGINE ROOM STARBOARD SIDE GENERATOR FLAT, 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 IN ENGINE ROOM ON GENERATOR FLAT FORWARD THWARTSHIPS

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 —, 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 construction as per Rule, including locking of screws and nuts YES. Description of Main Switchgear for each generator and arrangement of equaliser switches 400 KWS GENERATORS. THREE POLE LINKED CIRCUIT BREAKERS WITH OVERLOADS AND REVERSE POWER TRIPS AND THREE POLE ISOLATING SWITCHES: 55 KWS EXCITERS D.P. LINKED BRAKER WITH OVERLOADS AND SELECTOR SWITCH: 75 KWS EXCITERS D.P. D.T. SWITCH.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit TWO AND THREE POLE LINKED CIRCUIT BREAKERS

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 7 ammeters 5 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection ✓. Earth Testing, state means provided EARTH LAMPS

Switches, Circuit Breakers and Fuses, are they as per Rule A.I.E.E. STANDARDS, are the fuses an Approved Type AIEE STANDARD, make of fuses (RENEWABLE TYPE), are all fuses labelled ✓. If circuit breakers are provided for the generators, at what overload do they operate 120%, and at what current do the reversed current protective devices operate 25 KWS

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule A.I.E.E. STANDARDS

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 ✓, 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 ✓. Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit ✓ or of the "HR" type ✓. State how the cables are supported or protected MAIN FEEDER CABLES LEAD COVERED AND BASKET WEAVE ARMOURED RUN IN CONDUIT ON DECK SUPPORTED BY STRAPS UNDER FORE AND AFT WALKWAY. CABLES IN ACCOMMODATION AND ENGINE ROOM CLIPPED TO BRACKETS AND BULKHEADS. MAIN PROPULSION CABLES SUPPORTED ON CLEATS

Are all lead sheaths, armouring and conduits effectually 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 PORTSIDE BOAT DECK LEVEL - DIESEL DRIVEN GENERATOR. SUPPLYING 440V BUS BAR

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 (NO) See Rft 9.

Secondary Batteries, are they constructed and fitted as per Rule –, are they adequately ventilated –

state battery capacity in ampère hours –

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 –

if so, how are they protected BULKHEAD FITTINGS IN PUMPROOMS

and where are the controlling switches fitted OUTSIDE COMPARTMENTS Are all fittings suitably ventilated YES

Searchlight Lamps, No. of ONE, whether fixed or portable FIXED, are they of the carbon arc or of the filament type FILAMENT

Heating and Cooking, is the general construction as per Rule AIEE STANDARDS, are the frames effectually earthed YES, 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 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 ABS

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule AIEE STANDARDS

Control Gear and Resistances, are they constructed and fitted as per Rule AIEE **Lightning Conductors**, where required are they fitted as per Rule YES EXCEPT WOOD SIGNAL MAST (SEE RPT 9) **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 PARTLY, make of fuse AIEE STANDARD 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 –

E.S.D., if fitted state maker – location of transmitter ER. FORE END and receiver BRIDGE

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 Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	PRIME MOVER. TYPE.	MAKER.
MAIN	2	GENERAL ELECTRIC Co	400	450	642	1200	TURBINE	GENERAL ELECTRIC
EXCITERS	2	" "	75	110	682	1200	"	" "
EXCITERS	2	" "	55	120	458	1200	"	" "
EMERGENCY ...	1	IDEAL ELECTRIC MFG Co	75	450	120.5	900	DIESEL	YENN SEVERN MACHY Co
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS. No. in Parallel per Pole.	CONDUCTORS. Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	MAXIMUM CURRENT IN AMPERES. AIEE Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
MAIN GENERATOR	400	1	·7854	642 ✓	864		VC	LC & BASKET WEAVE ARMOURED
" " EQUALISER								
EXCITERS	75	1	·7854	682 ✓	864		VC	" " "
EXCITERS	55	1	·5890	458 ✓	705		VC	" " "
PROPULSION GENERATOR	5400	2	2·3562	1315 ✓	2272		VC	BRONZE TAPE
" MOTOR	6600	2	2·3562	1160 ✓	2272		VC	" "
EMERGENCY GENERATOR	75	1	·1318	151 ✓	185 ✗		VC	LC & BW ARMOURED
~~ROTARY~~ TRANSFORMER : ~~MOTOR~~	200/450 V	1	·1318	151 ✓	185 ✗		VC	BRONZE TAPE
" " GENERATOR...								

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

DESCRIPTION.								
Emergency switchboard	P55	1	·0829	121 ✓	134 ✗		VC	LC & BW ARMOURED
Lighting transformers 450/120V		1	·1318	151 ✓	185 ✗		"	" "
Cargo pump	P53	1	·3922	243 ✓	390 ✗		"	" "
Shore connection box	P52	1	·5100	400 ✓	466 ✗		"	" "
Machine shop panel	P61	1	·0082	10 ✓	30 ✓		"	" "
Galley transformers	P33	1	·0521	58 ✓	99 ✓		"	" "

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS. No. in Parallel per Pole.	CONDUCTORS. Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	MAXIMUM CURRENT IN AMPERES. Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Navigation L1	1	·0829	25	30 ✗		VC	LC & BASKET WEAVE ARMOURED
Midship quarter light L3	1	0829	70 ✓	99 ✗		"	" "
Poop + Boat deck quarter L4	1	·0261	50 ✓	65		"	" "
Upper deck L5	1	·0521	70 ✓	99		"	" "
General room lights L14	1	·0032		11·5		"	" "
Engineroom lights L6	1	·0521	70 ✓	99		"	" "
Boilerroom lights L7	1	·0206	35 ✓	55·5		"	" "
Main generator heaters L12	1	·0051	·	22		"	" "
Main motor heaters L11	1	·0051		22		"	" "
Switchboard heaters L9	1	·0051		22		RI	" "
Rudder angle indicator L10	1	·0032		11·5		"	" "
ER telegraph L8	1	·0032		11·5		"	" "
Fuel oil interlock L15	1	·0032		11·5		"	" "
Radio DC1	1	·0261	50 ✓	65		VC	" "
Searchlights 24L3	1	·0051	10 ✓	16·5		RI	" "
Masthead lights	1	·0032	·45 ✓	11·5		"	" "
Side lights	1	·0032	·45 ✓	11·5		"	" "
Compass lights	1	·0032	·25 ✓	11·5		"	" "
Gyro compass	1	·0082	15 ✓	30		VC	" "
Galley ranges, each (2)	1	·0414	55 ✓	88		"	" "
Bake oven	1	·013	24 ✓	41		"	" "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.								
Cargo pumps P123.	3	200	1	·3535	243 ✓	367	–	VC	LC + BW ARMOURED
Stripping pumps P4+5	2	50	1	·0521	61 ✓	99	–	"	" "
Main circulating pump P6	1	125	1	·2356	175 ✓	279	–	"	" "
Auxiliary " " P14	1	30	1	·0261	40 ✓	65	–	"	" "
Main Condensate pumps P12+13	2	25	1	·0206	31 ✓	55·5	–	"	" "
Auxiliary " " P15	1	15	1	·013	20 ✓	41	–	"	" "
Steering gear motors P9+10	2	30	1	·0261	46 ✓	65	–	"	" "
Fire pumps P7+8	2	50	1	·0521	60·5 ✓	99	–	"	" "
Forced draft fans P23, 24+25	3	50	1	·0829	93 ✓	134	–	"	" "
Fuel oil service P18+19	2	7½	1	·0051	10 ✓	22	–	"	" "
Fuel oil transfer P17	1	20	1	·013	11 ✓	41	–	"	" "
Fuboil service P21	1	5	1	·0051	7·5 ✓	22	–	"	" "
Fuboil separator P22	1	2	1	·0051	3 ✓	22	–	"	" "
Main motor cooling fan P47	1	15	1	·013	21 ✓	41	–	"	" "
Cooler pumps P16	1	10	1	·008	13·7 ✓	30	–	"	" "
ER+BR Vent fans P34 to 37	4	2	1	·0051	3 ✓	22	–	"	" "
Accommodation vent fans P27+28	2	1½	1	·0051	2·5 ✓	22	–	"	" "
Evaporator feed pump P26	1	1	1	·0051	1·6 ✓	22	–	"	" "
Bilge pumps P43 + 44	2	10	1	·008	13·7 ✓	30	–	"	" "
Seawater pumps P31+32	2	2	1	·0051	3 ✓	22	–	"	" "
Drilling water pumps P45+46	2	1	1	·0051	1·6 ✓	22	–	"	" "
Saltwater service pump P41	1	7½	1	·0051	10·3 ✓	22	–	"	" "
Sanitary pump P42	1	7½	1	·0051	10·3 ✓	22	–	"	" "
Ships service air Comp P40	1	5	1	·0051	6·9 ✓	22	–	"	" "
Combustion Control Air Comp P51	1	15	1	·013	19 ✓	41	–	"	" "
Turbine turning motor P48	1	3	1	·0051	3 ✓	22	–	"	" "
Main shaft turning P49	1	5	1	·0051	8 ✓	22	–	"	" "
Pumproom exhaust P54	1	1½	1	·0051	2 ✓	22	–	"	" "
Refrigerator circulation P38	1	1	1	·0051	1·55 ✓	22	–	"	" "
Refrigerator Compressor P38	1	7½	1	·0051	9·8 ✓	22	–	"	" "
Drain + receiver pump P39	1	2	1	·0051	3 ✓	22	–	"	" "
Foundry machine P45	1	1	1	·0032	1·6 ✓	11·5	–	RI	" "
Lathe LP11	1	2	1	·0051	3 ✓	22	–	VC	" "
Drill 2P11	1	1	1	·0051	1·6 ✓	22	–	"	" "
Grinder 4P11	1	3	1	·0051	4·5 ✓	22	–	"	" "
Refrig power P38	3	·	1	·0051	20 ✓	22	–		

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 Contractors.* *Date* ✓

COMPASSES.

Have the compasses been adjusted under working conditions YES

✓ *Builder's Signature.* *Date* ✓

Have the foregoing descriptions and schedules been verified and found correct YES

Is this installation a duplicate of a previous case YES *If so, state name of vessel* SS ESSO NORMANDIE

Plans. *Are ~~approved~~ plans forwarded herewith* YES *If not, state date of approval* –

Certificates. *Are certificates of test for motors engaged on essential sea services and generators forwarded herewith* NO

General Remarks. (*State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.*) The electrical installation to the requirements of the American Bureau of Shipping has been in operation since August 1945 the condition and standard of materials and workmanship are considered good and satisfactory.

The dimensions of this Report have been taken from the ABS approved plans. The dimensions have been checked, as far as possible, on the ship and found correct and the installation has been examined under working conditions and found to be satisfactory

In my Opinion the electrical installation is such as could be accepted by the Committee for Classification

8/8/48

Gen.

Fed.

Noted.

Total Capacity of Generators 1185 ✓ *Kilowatts.*

The amount of Fee ... ... £ $150 : When applied for, ... 19.....

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

Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUL 14 1948

Assigned Elec. light

2m.9.46.—**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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