

Reversing Switches.—If any are provided are they interlocked as per Rule Yes Resistances.—Are resistances for synchronous motor fields insulated as per Rule Yes Temperature Alarm.—Are machines with enclosed ventilating system, etc., fitted with temperature alarm Indicator only.

CONDUCTORS & CABLES.—Are all essential Conductors stranded as per Rule Yes Are the ends of Paper and Varnished Cambric Insulated Cables sealed Yes Are all Cables carrying A.C. constructed and installed as per Rule Yes Have all Cables been tested at the makers works —

SECONDARY BATTERIES.—Are Batteries used for starting Main Propulsion Engines No If so, have full particulars of rating been submitted and approved — Have they been tested under working conditions and do they give the required number of starts — Are they installed as per Rule — Are the charging arrangements satisfactory —

SPARE GEAR.—If engaged on open sea service has a list of spare gear been submitted and approved No Is a list of the articles supplied attached to this report No Are they stored as per Rule Yes

ELECTRIC PROPULSION EQUIPMENT CONDUCTORS.

DESCRIPTION	CONDUCTORS.		TOTAL MAXIMUM CURRENT—AMPERES.		MAXIMUM VOLTAGE TO EARTH.	INSULATED WITH.	DI-ELECTRIC THICKNESS.	HOW PROTECTED.
	No. per Pole.	Nominal Area per Pole.	When Running.	When Manoeuvring.				
MAIN GENERATORS	3	3.000.000	1315	1708	2300	V.C.	—	L.C.A.
GENERATOR FIELDS	1	500.000	165	444	110	"	—	"
MAIN MOTORS	3	3.000.000	1160	1708	2300	"	—	"
MOTOR FIELDS	1	500.000	420	444	110	"	—	"
CONTROL CIRCUITS								
OTHER CIRCUITS:—								

*For field circuits the "Hot" and "Cold" value should be given.

The foregoing is a correct description,

Electrical Engineers.

Date.

COMPASSES.—Are Single-Conductor circuits carrying direct current arranged with lead and return Conductors fitted as close to one another as possible

Have tests been made during adjustment of the Compasses to determine the effect of switching the main circuits on and off —

Builders' Signature.

Date.

Is this machinery duplicate of a previous case Generally similar to other 12. Tankers. If so, state name of vessel El. Harris, T. Schiller, T. Helton, etc.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Electrical Propulsion Equipment of the vessels appear to be installed in accordance with American practice and the typical plans of T. Tankers. The details of this report were obtained from these plans and instruction booklet & personal observation.

The machinery was examined and tested under working conditions & found satisfactory. The equipment appears in good and efficient condition & which is strictly in accordance with the Society's Rules, it is in my opinion, eligible for classification.

The amount of Entry Fee £ : : When applied for, 19

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

Date.

Committee's Minute.

See Minutes or Report 9.

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. 127547

Received at London Office

Date of writing Report 30-8-1948 When handed in at Local Office 19 Port of LIVERPOOL

No. in Survey held at BIRKENHEAD Date, First Survey — Last Survey 19
Reg. Bk. 77732 on the TOMOCYCLUS (Number of Visits) 10668 Tons { Gross 10668 Net 6321
Built at PORTLAND, OR. By whom built KAISER CO. INC. When built 1944
Engines made at LYNN, MASS. By whom made GENERAL ELECTRIC CO. When made 1944
Boilers made at — By whom made COMBUSTION ENGINEERING CO. INC. When made 1944
Nominal Horse Power. — Owners ANGLO-SAXON PETROLEUM CO. LTD. Port belonging to LONDON

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Bethlehem Steel, Wash. St. L.

Date of Approval of plan Nº P. 9749 S-9747 Number and Description or Type —

of Boilers 2-Babcock Type W.T. Boilers Working Pressure 500 Tested by Hydraulic Pressure to 750 Date of Test 25-5-44

No. of Certificate — Can each boiler be worked separately Yes Total Heating Surface of Boilers 49344 3016 ER + 49344

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler — SUPERHEATER 7439

No. and type of burners (oil) in each boiler 4 Jod No. and description of safety valves on —

each boiler 1-2 1/2" High Lift (Double) Area of each set of valves per boiler { per rule 7.000 as fitted 9.8 Pressure to which they

are adjusted 500 lbs/p Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler —

Smallest distance between boilers or uptakes and bunkers or woodwork Well Clear Height of boiler 21'-0"

Width and Length 11'-10" x 17'-6" Steam Drums:—Number in each boiler One Inside diameter 41 9/32" x 42"

Thickness of plates Shell 3/4" Tube plate 1 1/32" Range of Tensile Strength A.B. requirements Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Not known Have all the requirements of the rules

for Class I vessels been complied with — Description of riveting:—Cir. seams — long. seams —

Diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum 4" Pitch of tube holes 7"

Percentage strength of shell in way of tubes — Steam Drum Heads or Ends:—Range of tensile strength A.B. requirements

Thickness of plates 1 1/4" Radius or how stayed — Size of manhole or handhole 16" x 12" Water Drums:—Number in each boiler — Inside Diameter — Thickness of plates — Range of tensile strength — Are drum shell plates welded or flanged — If fusion welded, state name of welding firm — Have all the requirements of the rules

for Class I vessels been complied with — Description of riveting:—Cir. seams — long. seam —

Diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum — Pitch of tube holes —

Percentage strength of drum shell in way of tubes — Water Drum Heads or Ends:—Range of Tensile strength —

Thickness of plates — Radius or how stayed — Size of manhole or handhole —

Headers or Sections:—Number 12 Material Steel Thickness 7/8" Tested by Hydraulic Pressure to —

Tubes:—Diameter 1 1/4", 2" x 4" Thickness 13 G.W.G., 10 G.W.G. + 5 G.W.G. Number 1148 Steam Dome or Collector:—Description of Joint to Shell — Inside diameter — Thickness of shell plates — Range of tensile strength — Description of longitudinal joint — If fusion welded, state name of welding firm — Have all the requirements of the rules for Class I vessels been complied with — Diameter of rivet holes — Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum — Pitch of tube holes —

Crown or End Plates:—Range of tensile strength — Thickness — Radius or how stayed —

SUPERHEATER. Drums or Headers:—Number in each boiler 2 Inside Diameter 7 1/4" square

Thickness 3/4" Material Steel Range of tensile strength A.B. requirements Are drum shell plates welded or flanged — If fusion welded, state name of welding firm — Have all the requirements of the rules

for Class I vessels been complied with — Description of riveting:—Cir. seams — long. seams —

Diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum — Pitch of tube holes —

long. joint:—Plate — Rivet — Diameter of tube holes in drum — Pitch of tube holes — Percentage strength of drum shell in way of tubes — Headers or Ends:—Range of tensile strength — Thickness — Radius or how stayed — Size of manhole or handhole — Number, diameter, and thickness of tubes 145-1 1/4"-11 B.W.G.

Tested by Hydraulic Pressure to 750 lbs/p Date of Test Not known Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Yes No. and description of Safety Valves 1-1 1/4" High Lift (Single) Area of each set of valves 1.2265" Pressure to which they are adjusted 464 lbs/p Is easing gear fitted Yes

Spare Gear. Has the spare gear required by the rules been supplied Yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops -- } Is the approved plan of boiler forwarded herewith —
while { During erection on board vessel -- } Total No. of visits —

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. T. R. TANKERS.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This report is submitted for the information of the committee.

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute Assigned

James H. Smyth
Engineer Surveyor to Lloyd's Register of Shipping.

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Lloyd's Register Foundation

002858-002864-0362

Rpt. 13.

No. 127527

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

15 SEP 1948

Date of writing Report... 4th Aug. 48 When handed in at Local Office... 19 Port of Liverpool
 No. in Survey held at Birkenhead Date, First Survey 2/6/48 Last Survey 30/7/48
 Reg. Book 77732 on the SS. TOMOCYCLUS Gross 10668 Tons
 Net 6321
 Built at Portland Or. By whom built Kaiser Co. Inc. Yard No. - When built 1944
 Owners Anglo Siam Petroleum Co. Ltd. Port belonging to Liverpool
 Electrical Installation fitted by Prosser & Butler Contract No. - When fitted 1944
 Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.T. Yes E.S.D. Yes G.C. Yes Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Lighting 3 phase 3 wire 440 V. 50 Hz. Voltage of supply for Lighting 120 AC.
 Heating Electric 220 V. 50 Hz. Direct or Alternating Current, Lighting AC Power 15 AC. 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 Yes and from switchboard Yes Where more than one generator is fitted are they if not compound wound state distance between generators Yes and from switchboard Yes Is the compound winding connected to the negative or positive pole arranged to run in parallel No, are shunt field regulators provided Yes 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 Yes 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 Yes and vertically Yes, 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 at 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 Yes and vertically Yes, what insulation material is used for the panels Dead front board, insulation material 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 Yes 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 Single pole circuit breakers for A.C. Generators, D.P. Circuit breakers for D.C. Generator.
 and for each outgoing circuit Single 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 Yes Earth Testing, state means provided Earth testing lamps on D.C. and A.C. supplies
 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 150%, 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 Yes 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 Yes, 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 consist of 400 K.V.A. alternators; 75 Kilo. Steam turbine engines on common bedplate and driven by steam turbines.