

Report on Steam Turbine Machinery. No. 24195.

Writing Report **16-9-1948** When handed in at Local Office **18-9-1948** Port of **SWANSEA** Received at London Office **21/10/48**
 Survey held at **SWANSEA** Date, First Survey **7-7-48** Last Survey **31-8-1948**
 (Number of Visits **7**)
 On the **SS THALAMUS** Tons (Gross **10673** Net **6318**)
 Made at **PORTLAND OR.** By whom built **KAISER C^o INC** Yard No. **135** When built **1945**
 Made at **LYNN, MASS.** By whom made **GENERAL ELECTRIC C^o** Engine No. **72164** When made **1945**
 Made at **CHATTANOUGA TENN.** By whom made **COMBUSTION ENGINEERING C^o** Boiler No. **P12059 S.12057** When made **1945**
 Horse Power at Full Power **6600 MAX 6000 NORMAL** Owners **ANGLO SAXON PETROLEUM C^o** Port belonging to **LONDON**
 Horse Power as per Rule **1486** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**
 for which Vessel is intended **CARRYING PETROLEUM IN BULK**

STEAM TURBINE ENGINES, &c.—Description of Engines **ONE CURTIS IMPULSE 10 STAGE TURBINE**
 Ahead **ONE** Direct coupled, single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearing
 Astern **✓** double reduction geared }
 coupled to { Alternating Current Generator **3** phase **62** periods per second } rated **4925/5400** Kilowatts. **2300/2370** Volts at **3600/3715** revolutions per minute;
 Direct Current Generator }
 supplying power for driving **ONE** Propelling Motors, Type **3 PHASE 62 CYCLE 80 POLE REVOLVING FIELD SALIENT POLE SYNCHRONOUS**
6000/6600 S.H.P. Kilowatts. **2300/2370** Volts at **90/93** revolutions per minute. Direct coupled, single or double reduction geared to **ONE** propelling shafts.

EXPANSION	H. P.			I. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
	7/8"	34"	2									
	1"	34"	1									
	1 1/4"	34 3/8"	1									
	1 5/8"	35 1/4"	1									
	7/8"	42 1/2"	1									
	1 3/8"	43 1/2"	1									
	2 1/8"	45 1/2"	1									
	2 1/2"	47"	1									
	5 1/2"	49 1/2"	1									
	9"	55"	1									

Horse Power at each turbine **H.P. 5400** I.P. **5400** L.P. **5400** Revolutions per minute, at full power, of each Turbine Shaft **H.P. 3715** I.P. **3715** L.P. **3715** 1st reduction wheel **93** main shaft **90**

Shaft diameter at journals **H.P. 5.8 x 10"** I.P. **5.8 x 10"** L.P. **5.8 x 10"** Pitch Circle Diameter { 1st pinion **✓** 1st reduction wheel **✓** 2nd pinion **✓** main wheel **✓** Width of Face { 1st reduction wheel **✓** main wheel **✓**

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion **✓** 1st reduction wheel **✓** 2nd pinion **✓** main wheel **✓**

Pinion diameter { 1st **✓** 2nd **✓** Pinion Shafts, diameter at bearings { External 1st **✓** 2nd **✓** Internal 1st **✓** 2nd **✓** diameter at bottom of pinion teeth { 1st **✓** 2nd **✓**

Shafts, diameter at bearings { 1st **✓** 2nd **✓** diameter at wheel shroud, { 1st **✓** 2nd **✓** Generator Shaft, diameter at bearings **10"** Propelling Motor Shaft, diameter at bearings **17 1/4"**

Intermediate Shafts, diameter as per rule **16 1/2"** as fitted **16 3/8"** Thrust Shaft, diameter at collars as per rule **17.39** as fitted **17 1/2"**

Shaft diameter as per rule **18.185** as fitted **18 3/8"** Is the { tube screw } shaft fitted with a continuous liner { **YES**

Liners, thickness in way of bushes as per rule **.858** as fitted **18"** Thickness between bushes as per rule **.643** as fitted **1"** Is the after end of the liner made watertight in the **YES**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **✓** If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **✓**

If liners are fitted, is the shaft lapped or protected between the liners **✓** Is an approved Oil Gland or other appliance fitted at the after end of the tube **✓** Length of Bearing in Stern Bush next to and supporting propeller **87"**

Propeller, diameter **19.6"** Pitch **17.6"** No. of Blades **4** State whether Moveable **No** Total Developed Surface **138.5** square feet.

Are arrangements made so that steam can be led direct to the L.P. Turbine **ONE TURBINE ONLY** Can the H.P. or I.P. Turbines exhaust direct to the sea **NO**

No. of Turbines fitted with astern wheels **NONE** Feed Pumps { No. and size **2-Rotary 200 GPM 1-Simplex 10" x 7" x 24"** How driven **TURBINE** **STEAM CYL.**

Pumps connected to the Main Bilge Line { No. and size **2-BILGE AT 175 GPM** **1-GREEN BILGE AT 450 GPM** How driven **ELECTRIC MOTOR** **ELECTRIC MOTOR**

Oil Pumps, No. and size **ONE AT 10" x 7" x 10" DUPLEX** Lubricating Oil Pumps, including Spare Pump, No. and size **2-Rotary 60 GPM**

Are independent means arranged for circulating water through the Oil Cooler **YES** Suctions, connected both to Main Bilge Pumps and Auxiliary Pumps, No. and size:—In Engine and Boiler Room **10 AT 3"** **2 AT 4"** In Pump Room **1-10" x 7" x 10" BILGE PUMP STEAM DUPLEX** **1-10" x 7" x 10" BILGE PUMP STEAM DUPLEX**

Water Circulating Pump Direct Bilge Suctions, No. and size **1-18" DIA.** Independent Power Pump Direct Suctions to the Engine Room **2-4"** Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **✓**

Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **YES**

Sea Connections fitted direct on the skin of the ship **CHESTS OF SPOOL PIPES** Are they fitted with Valves or Cocks **VALVES**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **YES** Are the Overboard Discharges above or below the deep water **YES**

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **YES** Are the Blow Off Cocks fitted with a spigot and brass **YES**

What pipes pass through the bunkers **NONE** How are they protected **✓**

pipes pass through the deep tanks **NONE** Have they been tested as per rule **✓**

All Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times **YES**

Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery **YES**

spaces, or from one compartment to another **YES** Is the Shaft Tunnel watertight **YES** Is it fitted with a watertight door **YES** worked from Floor Level **YES**

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 11354 ^{0'}
 Is Forced Draft fitted YES No. and Description of Boilers W.T. BARBOCK & WILCOX TYPE SINGLE PASS STRAIGHT TUBE
 Working Pressure 500

Is a Report on Main Boilers now forwarded? YES
 Is ^{a Donkey} _{an Auxiliary} Boiler fitted? NO If so, is a report now forwarded? YES

Is the donkey boiler intended to be used for domestic purposes only? NO
 Plans. Are approved plans forwarded herewith for Shafting NO Main Boilers NO Auxiliary Boilers NO Donkey Boilers NO
 (If not, state date of approval)

Superheaters NO General Pumping Arrangements NO Oil Fuel Burning Arrangements NO
 TYPICAL FOR T.2 TANKERS

SPARE GEAR.

Has the spare gear required by the Rules been supplied? AS PER RULE REQUIREMENTS.
 State the principal additional spare gear supplied.

The foregoing is a correct description,

Dates of Survey while building ^{During progress of work in shops - - -} _{During erection on board vessel - - -}
 Total No. of visits

Dates of Examination of principal parts—Casings Rotors Blading Gearing
 Wheel shaft Thrust shaft Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts
 Completion of fitting sea connections Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers
 Rotor shaft, Material and tensile strength Identification Mark

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength Identification Mark

1st Reduction Wheel Shaft, Material and tensile strength Identification Mark

Wheel shaft, Material Identification Mark Thrust shaft, Material Identification Mark

Intermediate shafts, Material Identification Marks Tube shaft, Material Identification Marks

Screw shaft, Material Identification Marks Steam Pipes, Material Test pressure

Date of test Is an installation fitted for burning oil fuel YES
 Is the flash point of the oil to be used over 150°F YES Have the requirements of the Rules for the use of oil as fuel been complied with YES

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo YES If so, have the requirements of the Rules been complied with YES

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with YES

Is this machinery a duplicate of a previous case YES If so, state name of vessel T.2. TANKERS.

General Remarks. (State quality of workmanship, opinions as to class, &c.) THE MACHINERY OF THIS VESSEL WAS BUILT

THE SPECIAL SURVEY AND TO THE REQUIREMENTS OF THE AMERICAN BUREAU OF SHIPPING AND THE

MATERIAL AND WORKMANSHIP ARE CONSIDERED SATISFACTORY

THE SCANTINGS AND ARRANGEMENTS HAVE BEEN VERIFIED WITH TYPICAL PLANS OF T.2 TANKERS AS FAR AS

PRACTICABLE AND FOUND TO AGREE

FOR RECOMMENDATIONS AS TO CLASS SEE RPT 9 ATTACHED.

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£	:	:	When applied for
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received
Travelling Expenses (if any)	£	:	:	19

Jas. Grandman
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FBI 5 NOV 1904
 Assigned See minute on page 9.