

Report on Steam Turbine Machinery.

No. 126100
22 OCT 1947

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Date of writing Report 11. 10. 1947. When handed in at Local Office 19 Port of
 o. in Survey held at Bitterhead Date, First Survey Last Survey 19
 g. Book (Number of Visits)
 982 on the T.E.S. "THELIDOMUS" Tons (Gross 10448 Net 6301)
 Built at Portland, Oregon. By whom built Kaiser Co. Inc. Yard No. When built 1944
 Engines made at Lynn, Mass. By whom made General Electric Co. Engine No. When made 1944
 Pilers made at By whom made Combustion Engineering Co. Inc. No. 9444 When made 1944
 Shaft Horse Power at Full Power 6000 normal Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to London
 Com. Horse Power as per Rule 6600 max. NHP = 1386 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Grade for which Vessel is intended MN = 1485

STEAM TURBINE ENGINES, &c.—Description of Engines.

Turbo-electric drive

of Turbines Ahead one Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing
 Astern
 Direct coupled to Alternating Current Generator 3 phase 60/62 periods per second rated 4425 KVA 2300 Volts at 3600 revolutions per minute;
 supplying power for driving one Propelling Motor, Type Synchronous TSM 80.
 rated 4625 KVA 2300 Volts at 90 revolutions per minute. Direct coupled, single or double reduction geared to one propelling shaft.

	H. P.			I. P.			L. P.			ASTERN.		
BLADING.	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.
1st Expansion	1 3/8 - 2 1/8		2									
2nd	1 1/2		1									
3rd	1 3/4		1									
4th	2 1/8		1									
5th	1 3/8		1									
6th	1 7/8		1									
7th	2 5/8		1									
8th	3 1/8		1									
9th	5 3/4		1									
10th	9 3/4		1									
11th												
12th												

Shaft Horse Power at each turbine H.P. I.P. L.P. Revolutions per minute, at full power, of each Turbine Shaft H.P. 3600/3415 1st reduction wheel I.P. L.P. main shaft

Motor Shaft diameter at journals H.P. 5" AFT I.P. 10" FWD L.P. 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

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

Wheel Shafts, diameter at bearings 1st 2nd main diameter at wheel shroud 1st 2nd main Generator Shaft, diameter at bearings 5" Propelling Motor Shaft, diameter at bearings 14 1/2

Intermediate Shafts, diameter as per rule 16.56 as fitted 16 3/8 Thrust Shaft, diameter at collars as per rule 14.39 as fitted 14 1/2

Tube Shaft, diameter as per rule 18.185 as fitted 18 1/2 Is the shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per rule 0.858 as fitted 18 Thickness between bushes as per rule 0.643 as fitted 17 1/2 Is the after end of the liner made watertight in the

propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 two 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 aft no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1'3"

propeller, diameter 19'6" Pitch 14'6" No. of Bades 4 State whether Moveable no Total Developed Surface 138.3 square feet.

Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbines exhaust direct to the condenser No. of Turbines fitted with astern wheels Feed Pumps No. and size 2. 200 GPM How driven Steam Turbine 1. 130 GPM

Pumps connected to the Main Bilge Line No. and size 2. 200 GPM How driven electric 1. 450 GPM 1. 300 GPM (fixed pump room) * Steam Vent. Duplex

Ballast Pumps, No. and size 1. 300 GPM (fixed pump room) Lubricating Oil Pumps, including Spare Pump, No. and size 2. 60 GPM

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room 1 at 3 1/2" 8 at 3" (incl. bilge) 4 at 2 1/2" (incl. bilge) In Pump Room

Holds, &c. Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 at 18" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 at 4" Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes

Are the 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. Not well. Are all Sea Connections fitted direct on the skin of the ship no Are they fitted with Valves or Cocks All 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 Below 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 covering plate. no What pipes pass through the bunkers. How are they protected. Have they been tested as per rule.

Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times. yes The 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 spaces, or from one compartment to another. yes Is the Shaft Tunnel watertight. no Is it fitted with a watertight door. no worked from.

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 5644 sq. feet per boiler.
Is Forced Draft fitted yes No. and Description of Boilers 2. B. W. Type Working Pressure 146 lbs/sq. in.
Is a Report on Main Boilers now forwarded? yes
Is a Donkey Boiler fitted? no If so, is a report now forwarded? yes
an Auxiliary
Is the donkey boiler intended to be used for domestic purposes only? yes
Plans. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
(If not, state date of approval)
Superheaters yes General Pumping Arrangements yes Oil Fuel Burning Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied? no

State the principal additional spare gear supplied. yes

The foregoing is a correct description,

Manufactured

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
Is the flash point of the oil to be used over 150°F Have the requirements of the Rules for the use of oil as fuel been complied with
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with
Is this machinery a duplicate of a previous case If so, state name of vessel

General Remarks. (State quality of workmanship, opinions as to class, &c.) This report is submitted for the information of the Committee.

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

H. J. Sheehy.
Engineer Surveyor to Lloyd's Register of Shipping.



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

Committee's Minute

Assigned