

Report on Steam Turbine Machinery. No. 4334

Writing Report 4th March 1949 When handed in at Local Office 4th Mar. 1949 Port of NAPLES
 Survey held at Palermo Date, First Survey 10th Jan. Last Survey 20th Feby. 1949
 (Number of Visits 10)
 on the s.s. "CLEVELAND" ex "Forbes Roads" Tons (Gross 10667 Net 6313.89)
 at Portland Or. By whom built Kaiser Co. Inc. Yard No. 57 When built 1944
 es made at Lynn Mass By whom made Gen. Electr. Co. Engine No. 61812 When made 1944
 rs made at St Louis Mo By whom made Combustion Eng. Co. Boiler No 7729 & 7730 When made 1944
 Horse Power at Full Power 7240 Owners Cleveland Petroleum Co. Ltd. Port belonging to London
 Horse Power as per Rule 1324 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 e for which Vessel is intended Carrying Petroleum in bulk

M TURBINE ENGINES, &c.—Description of Engines. One Curtis Impulse 10 Stage Turbine
 Turbines one Direct coupled, single reduction geared } to = propelling shafts. No. of primary pinions to each set of reduction gearing =
 coupled to { Alternating Current Generator 3 phase 60/62 periods per second } rated 4925/5400 Kilowatts 2300/2370 Volts at 3600/3715 revolutions per minute;
 Direct Current Generator }
 applying power for driving one Propelling Motors, Type 3 Phase 60/62 cycle, 80 Pole, Revolving-Field, Salientpole, Synchronous
6000/6600 BHP 2300/2370 Volts at 90/93 revolutions per minute. Direct coupled, single reduction geared to one propelling shaft.

	H. P.			I. P.			L. P.			ASTERN.		
ING.	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.
Expansion	<u>7/8</u>	<u>34"</u>	<u>2</u>									
"	<u>1"</u>	<u>34"</u>	<u>1</u>									
"	<u>1.1/4"</u>	<u>34.3/8"</u>	<u>1</u>									
"	<u>1.5/8"</u>	<u>35.1/4"</u>	<u>1</u>									
"	<u>7/8"</u>	<u>42.1/2"</u>	<u>1</u>									
"	<u>1.3/8"</u>	<u>43.1/2"</u>	<u>1</u>									
"	<u>2.1/8"</u>	<u>45.1/2"</u>	<u>1</u>									
"	<u>2.1/2"</u>	<u>47"</u>	<u>1</u>									
"	<u>5.1/2"</u>	<u>49.1/2"</u>	<u>1</u>									
"	<u>9"</u>	<u>56"</u>	<u>1</u>									

Horse Power at each turbine H.P. 7240 Revolutions per minute, at full power, of each Turbine Shaft H.P. 3600/3715 1st reduction wheel
H.P. 7240 main shaft 90/93

Shaft diameter at journals H.P. 5" and 10" Pitch Circle Diameter H.P. 5" and 10" Width of Face H.P. 5" and 10"

Pinion Shafts, diameter at bearings H.P. 5" and 10" Generator Shaft, diameter at bearings H.P. 5.1/2"
 Propelling Motor Shaft, diameter at bearings H.P. 17.1/4"

Intermediate Shafts, diameter as per rule 16.1/2 as fitted 16.7/8 Thrust Shaft, diameter at collars as per rule 17.325 as fitted 17.1/2

Shaft, diameter as per rule 18.1/8" as fitted 18.5/8" Is the screw shaft fitted with a continuous liner yes

Liners, thickness in way of bushes as per rule .85" as fitted 1.1/8 Thickness between bushes as per rule .65 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 =

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 =

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 no

If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 7' 3"

Propeller, diameter 19' 6" Pitch 17' 6" No. of Blades 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 One turbine only Can the H.P. or I.P. Turbines exhaust direct to the no

No. of Turbines fitted with astern wheels none Feed Pumps { No. and size 2 Cent. 200 GPM. } Simplex 10"x7"x24"
 How driven Turbine Steam Cyl.

s connected to the Main Bilge Line { No. and size 2 Bilge at 175 GPM } 2 Gen Service at 450 GPM
 How driven Electric Motor Electric Motor

at Pumps, No. and size One at 10"x7"x10" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size 2 Horizontal Rotary 60 GPM.

no 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 1. 3.1/2" = 9 at 3" = 2 at 4" In Pump Room 1. 3.1/2" = 9 at 3" = 2 at 4"

lds, &c Botswains Store 2 — 1" Ejectors Chain Locker 2" Ejector For'd Pump Room (One 10"x7"x10" Bilge Pump Suction P&S Dry Stores 2.1/2" P&S pump room)

Water Circulating Pump Direct Bilge Suctions, No. and size 1 — 18" Dia. Independent Power Pump Direct Suctions to the Engine Room

, No. and size 2 at 4 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes =

e 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

l Sea Connections fitted direct on the skin of the ship Spool Pieces Are they fitted with Valves or Cocks valves

ey 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

ing plate no What pipes pass through the bunkers none How are they protected none

pipes pass through the deep tanks none Have they been tested as per rule yes

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

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

W W + 1486 Spt.
BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 9868
Is Forced Draft fitted yes No. and Description of Boilers 2 Combustion Eng. Straight Tube Working Pressure 500 L
Is a Report on Main Boilers now forwarded? yes
Is { a Donkey } Boiler fitted? no If so, is a report now forwarded? =
{ an Auxiliary }
Is the donkey boiler intended to be used for domestic purposes only.
Plans. Are approved plans forwarded herewith for Shafting no Main Boilers no Auxiliary Boilers = Donkey Boilers.
(If not, state date of approval)
Superheaters no General Pumping Arrangements no Oil Fuel Burning Arrangements no

SPARE GEAR.

Has the spare gear required by the Rules been supplied.
State the principal additional spare gear supplied. As per Rule Requirements

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - American Bureau Survey
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 steel 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. 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.) The machinery of this vessel was constructed under the Special Survey, and to the requirements of the American Bureau of Shipping, and U.S. Coast Guard, and the materials and workmanship are considered satisfactory.
The scantlings, and the general arrangements have been checked as far as practicable and found to conform to available plans.
For recommendations as to class etc., please see Report 9 attached.

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

F. N. Sutcliffe.
Engineer-Surveyor to Lloyd's Register of Shipping.

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 WED 13 APR 1910

Assigned