

Report on Steam Turbine Machinery.

No. 10746

pt. 4a.

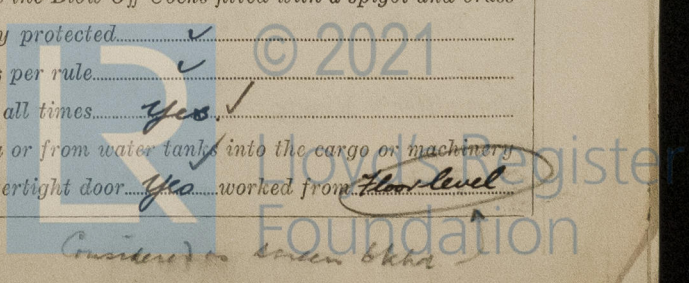
Date of writing Report 7.2.1948, When handed in at Local Office 7.2.1948, Port of Falmouth
 No. in Survey held at Falmouth, Date, First Survey 29-12-47, Last Survey 15-1-1948
 Reg. Book 22107 on the S.S. "COTTONWOOD CREEK" Tons { Gross 10647 Net 6310
 Built at Mobile, Alabama, By whom built Alabama D.D. & S.B. Co., Yard No. , When built 1944
 Engines made at Lynn, Mass., By whom made General Electric Co., Engine No. , When made 1944
 Boilers made at , By whom made Combustion Eng. Co. Inc., Boiler Nos. S. 9651, When made 1944
 Shaft Horse Power at Full Power 6000, Owners British Tanker Co. Ltd., Port belonging to London
 Nom. Horse Power as per Rule 1374, MN-1415, Is Refrigerating Machinery fitted for cargo purposes No, Is Electric Light fitted Yes
 Trade for which Vessel is intended Carrying Petroleum in bulk

TEAM TURBINE ENGINES, &c.—Description of Engines One Curtis Impulse 10 Stage Turbine
 No. of Turbines One Ahead One Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing
 Direct coupled to Alternating Current Generator 3 phase 62 periods per second, Direct Current Generator rated 5400 Kilowatts 2370 Volts at 3715 revolutions per minute;
 for supplying power for driving One Propelling Motor, Type 3 PHASE, 62 CYCLE, 80 POLE, REVOLVING FIELD, SALIENT POLE, SYNCHRONOUS.
 rated 2300 Kilowatts 90 Volts at 90 revolutions per minute. Direct coupled, single or double reduction geared to one propelling shafts.

TURBINE LADING.	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.
1st Expansion			2									
2nd			1									
3rd			1									
4th			1									
5th			1									
6th			1									
7th			1									
8th			1									
9th			1									
10th			1									
11th			1									
12th			1									

Shaft Horse Power at each turbine HP 5410 IP 3715 LP 90 1st reduction wheel main shaft
 Rotor Shaft diameter at journals HP 5 1/2 IP 5 1/2 LP 5 1/2 Pitch Circle Diameter { 1st pinion 1st reduction wheel Width of Face { 1st reduction wheel
 2nd pinion main 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 main wheel
 Flexible Pinion { 1st Pinion Shafts, diameter at bearings External 1st 2nd diameter at bottom of pinion teeth
 2nd Internal 1st 2nd Generator Shaft, diameter at bearings 5.507
 Wheel Shafts, diameter at bearings { 1st diameter at wheel shroud, { 1st Propelling Motor Shaft, diameter at bearings 17.268
 main main Thrust Shaft, diameter at collars 17.39
 Intermediate Shafts, diameter as per rule 16.56 as fitted 16 3/8 as per rule 18.185 as fitted 18 5/8 Is the tube shaft fitted with a continuous liner Yes
 Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the screw shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per rule 3.68 as fitted 1 1/2 Thickness between bushes as per rule 6.43 as fitted 1 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 Yes
 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 Yes
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes
 Shaft No If so, state type 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 condenser Yes
 No. of Turbines fitted with astern wheels None Feed Pumps { No. and size 2 Centrif. 200 G.P.M. 1- simplex 10" x 4" x 24" How driven Turbine Steam Cylinder
 Pumps connected to the Main Bilge Line { No. and size 2- 1 1/2" x 5" G.P.M. 1 Butternut & Ballad 450 G.P.M. 1 Butternut & Ballad 450 G.P.M. How driven Motor Motor Motor
 Bilge Pumps, No. and size 1 1/2" x 7 1/2" in 1st Pump Room Lubricating Oil Pumps, including Spare Pump, No. and size 2- Vert Rotary 60 G.P.M.
 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 2 @ 3", 2 @ 3 1/2", 2 @ 4" In Pump Room 2 1/2" x 7 1/2" in Pump Room 2 1/2" x 7 1/2" in Pump Room
 Holds, &c. Butternut & Ballad 3-1" Ejectors, Chain Locker, 2" Ejector
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 1 1/2" Independent Power Pump Direct Suctions to the Engine Room
 Bilges, No. and size 2 @ 4" Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes
 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
 Are all Sea Connections fitted direct on the skin of the ship Spool pieces 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
 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 None How are they protected
 What pipes pass through the deep tanks None Have they been tested as per rule Yes
 Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Is 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 Yes Is it fitted with a watertight door Yes worked from

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BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 11354
Is Forced Draft fitted Yes No. and Description of Boilers 2 W.T.B. Working Pressure 500 LBS/0
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? Yes (Spare propeller has been ordered.)
State the principal additional spare gear supplied.

The foregoing is a correct description,

Manufacturer

Dates of Survey while building
During progress of work in shops - A. B. 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 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
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 Yes If so, state name of vessel T.2 Type Tanker

General Remarks: (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel was constructed under the Special Survey & to the requirements of the American Bureau of Shipping and the materials & workmanship are considered satisfactory.
The scantlings & general arrangements have been checked as far as possible & found to conform to the plans aboard the vessel.
For recommendations as to class please see Report 9

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

Geo. Stevenson
Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 24 FEB 1948

Committee's Minute

Assigned

See Rpt. 9



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