

Rpt. 4a.

## Report on Steam Turbine Machinery.

No. 52976.

Date of writing Report Jan. 6th 1954. When handed in at Local Office 19 Port of NEW YORK. Received at London Office 29 JUN 1954

No. in Survey held at Quincy, Massachusetts. Date, First Survey October 2nd. Last Survey December 29th 1953.

Reg. Book Hull 4522. JOHN P.G. (Number of Visits cont:)

on the Quincy, Mass. By whom built Bethlehem Steel Co. Yard No. 4522 Tons {Gross Net}

Built at Quincy, Mass. By whom made Bethlehem Steel Co. Engine No. CS7048 When built 1953

Boilers made at By whom made Boiler No. When made

Shaft Horse Power at Full Power 15,000 Owners. Port belonging to

Nom. Horse Power as per Rule 3,000 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which Vessel is intended Tanker

## STEAM TURBINE ENGINES, &amp;c.—Description of Engines Cross compound geared turbines.

No. of Turbines Ahead two Direct coupled, single reduction geared to one propelling shafts. No. of primary pinions to each set of reduction gearing two

direct coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;

for supplying power for driving Propelling Motors, Type

rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE  
BLADING.

	H. P.	I. P.	L. P.	ASTERN.
Impulse Blading { No. of rows 2.		nil	0	Two stages.
				1st stage - 3 rows
				2nd stage - 2 rows
Reaction Blading { No. of stages 22.		nil	21.	0
				0
No. of rows in each stage 1.		nil	1.	0

Shaft Horse Power at each turbine { H.P. 6150 I.P. --- L.P. 7450 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 4773 I.P. --- L.P. 2673 } 1st reduction wheel 800 main shaft 169

Rotor Shaft diameter at journals { H.P. 5" I.P. --- L.P. 9" } 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 Shafts, diameter { 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 } diameter at wheel shroud, { 1st 2nd } Generator Shaft, diameter at bearings { 1st 2nd } Propelling Motor Shaft, diameter at bearings { 1st 2nd }

Intermediate Shafts, diameter as per rule as fitted Thrust Shaft, diameter at collars as per rule as fitted

Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the { tube screw } shaft fitted with a continuous liner { }

Bronze Liners, thickness in way of bushes as per rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the propeller boss

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 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 shaft

If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet

If 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 How driven }

Pumps connected to the Main Bilge Line { No. and size How driven }

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary

Bilge Pumps, No. and size:—In Engine and Boiler Room In Pump Room

In Holds, &c. Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size 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 Are they fitted with Valves or Cocks

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

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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record) Total Heating Surface of Boilers

Is Forced Draft fitted No. and Description of Boilers Working Pressure

Is a Report on Main Boilers now forwarded?

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

NOTE.—The words which do not apply should be deleted.

Large with report.

© 2020  
Lloyd's Register  
008201-008210-0159



Is { a Donkey Boiler fitted? 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 Main Boilers Auxiliary Boilers Donkey Boilers  
(If not, state date of approval)  
Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements  
Geared turbines situated aft. Have torsional vibration characteristics of system been approved Date of approval

### SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

Dates of Survey while building { During progress of work in shops - - continuous during October 2nd 1953 to December 29th 1953. }  
{ During erection on board vessel - - }  
Total No. of visits

Dates of Examination of principal parts—Casings Oct. 2nd. 1953 Rotors Oct. 2nd. Blading Nov. 30th 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  
H.P. O.H. steel 90,000 lbs. elong; 21% reduction 45% Heat No. 260255  
Rotor shaft, Material and tensile strength L.P. O.H. steel 75,000 lbs elong; 22% red; 40% Identification Mark No. 2906

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength Identification Mark

; Chemical analysis

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment

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 Yes If so, state name of vessel S/S "Andros Island"

General Remarks. (State quality of workmanship, opinions as to class, &c.) These main propulsion H.P. & L.P. turb

have been built under special survey in accordance with approved plans, the workmanship

materials are good, the hydraulic tests satisfactory. On completion, the turbines were

in shop at 15% over their designed speed.

In my opinion, this machinery is suitable to be fitted in vessel classed with this Soci

and on completion be assigned the notation L.M.C. with date.

Certificate (if required) to be sent to

The amount of Entry Fee : When applied for.

Special ... : 19

Donkey Boiler Fee ... : When received.

Travelling Expenses (if any) : 19

Committee's Minute

Assigned See minute on first entry lft. attached

NEW YORK JUN 9 1954

*[Signature]*

Engineer Surveyor to Lloyd's Register of Shipping



© 2020

Lloyd's Register Foundation