

Report on Steam Turbine Machinery.

No. 1232

FOR 160 K.W. GENERATOR

Received at London Office

4a. Date of writing Report 19... When handed in at Local Office 23 FEB 1953 Port of Kobe
 Date, First Survey 3-10-52 Last Survey 24-10-19 52
 (Number of Visits 6)
 on the Steel, Single Screw S.S. "KIRISHIMA-MARU" Tons (Gross 11,979.61 (Net 8,726.64)
 built at Aioi, Japan By whom built Harima Shipbuilding & Engineering Co., Ltd. Yard No. 476 When built Oct. 1952
 Engines made at Tokyo, Japan By whom made Ishikawajima Heavy Industries Co., Ltd. Engine No. IA1158.9 When made Sept. 1952
 Boilers made at Aioi, Japan By whom made Harima Shipbuilding & Engineering Co., Ltd. Boiler No. B750.751 When made Aug., 1952
 Shaft Horse Power at Full Power 220 S.H.P. Owners Terukuni Kaiun K.K. Port belonging to Tokyo
 Nom. Horse Power as per Rule 44 x Z Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Trade for which Vessel is intended Ocean Going.

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

No. of Turbines Ahead..... Direct coupled, single reduction geared } to..... propelling shafts. No. of primary pinions to each set of reduction gearing.....
 Astern..... double reduction geared }
 Direct coupled to { Alternating Current Generator..... phase..... periods per second } rated..... Kilowatts..... Volts at..... revolutions per minute;
 Propelling Motors, Type.....
 Direct Current Generator }
 Manufacturer supplying power for driving.....
 Rated..... Kilowatts..... Volts at..... revolutions per minute. Direct coupled, single or double reduction geared to..... propelling shafts.

TURBINE LADING.	H. P.	I. P.	L. P.	ASTERN.

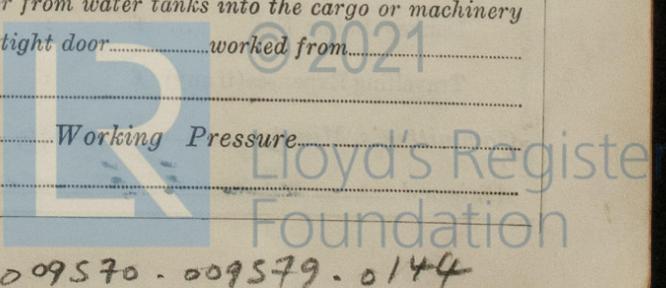
Shaft Horse Power at each turbine { H.P. I.P. L.P. }
 Propeller Shaft diameter at journals { H.P. I.P. L.P. }
 Pitch Circle Diameter { 1st pinion..... 1st reduction wheel..... 2nd pinion..... main wheel..... }
 Width of Face { 1st reduction wheel..... main wheel..... }
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion..... 1st reduction wheel..... 2nd pinion..... main wheel..... }
 Flexible Pinion Shafts, diameter at bearings { External Internal }
 1st { } 2nd { } diameter at bottom of pinion teeth
 Wheel Shafts, diameter at bearings { 1st..... Generator Shaft, diameter at bearings..... 2nd..... }
 Propelling Motor Shaft, diameter at bearings.....
 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 } shaft fitted with a continuous liner { }
 { screw }
 Bronze Liners, thickness in way of bushes as per rule..... Thickness between bushes as per rule.....
 as fitted..... 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.....
 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
 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.

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..... }
 Blast 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.....
 Holds, &c.....

Main Water Circulating Pump Direct Bilge Suctions, No. and size..... Independent Power Pump Direct Suctions to the Engine Room
 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
 level..... 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.....
 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, &c.—(Letter for record.....) Total Heating Surface of Boilers..... Working Pressure.....
 Forced Draft fitted..... No. and Description of Boilers.....
 Report on Main Boilers now forwarded?.....



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Is a Donkey Boiler fitted? an Auxiliary Boiler fitted? If so, is a report now forwarded?

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 Yes

State the principal additional spare gear supplied

The foregoing is a correct description.

M. Yoshikawa Manufacturer
THE YARIMA SHIPBUILDING AND ENGINEERING COMPANY, LTD.

Dates of Survey while building
 During progress of work in shops - - 1952 Oct. 3. 8. 10. 18. 21. 24.
 During erection on board vessel - - -
 Total No. of visits 6

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 3-10-52 Engine holding down bolts 3-10-52 Oct.
 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

; 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 If so, state name of vessel

General Remarks. (State quality of workmanship, opinions as to class, &c.) *The Machinery has now been satisfactory installed on board and tested under full power*

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

E. Tabuchi for W. Currie & self
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 19 JUN 1953**
Assigned *See F.E. ...*

