

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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Date of writing Report 30 Dec 1938 When handed in at Local Office 19 Port of SHANGHAI
 No. in Survey held at SHANGHAI Date, First Survey 17 Feb. 1937 Last Survey 23 April 1938
 Reg. Book. T.S.S. "KUNG WO" (Number of Visits 2) Tons $\left\{ \begin{array}{l} \text{Gross} \ 4635.6 \\ \text{Net} \ 2824.9 \end{array} \right.$
 Built at Hong Kong By whom built Hong Kong & Whampoa Dock Co. Ltd. Yard No. 579 When built 1922
 Engines made at Hong Kong By whom made Hong Kong & Whampoa Dock Co. Ltd. Engine No. 339.40 When made 1922
 Boilers made at Hong Kong By whom made -do- Boiler No. 606.7.8 When made 1922
 Registered Horse Power 279 Owners Indo-China Stm. Nav. Co., Ltd. Port belonging to Hong Kong
 Nom. Horse Power as per Rule 442 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which Vessel is intended Yangtse River (Shanghai to Hankow)

ENGINES, &c. — Description of Engines Four Crank Triple Expansion Twin Screw Revs. per minute 120
 Dia. of Cylinders 39", 34", 39", 39" Length of Stroke 33" No. of Cylinders Eight No. of Cranks Eight
 Crank shaft, dia. of journals 10 1/2" Crank pin dia. 10 1/2" Crank webs Mid. length breadth 7-3/8" Thickness parallel to axis 4-7/8" shrunk
 Intermediate Shafts, diameter 10 1/2" (At journals 10 1/2") Thrust shaft, diameter at collars 10 1/2"
 Tube Shafts, diameter 11-3/8" Is the $\left\{ \begin{array}{l} \text{tube} \\ \text{screw} \end{array} \right\}$ shaft fitted with a continuous liner No liner
 Bronze Liners, thickness in way of bushes No liner Thickness between bushes 5'-8" 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 shaft Yes
 Length of Bearing in Stern Bush next to and supporting propeller 5'-8"
 Propeller, dia. 10'-6" Pitch 13'-6" No. of Blades 4 Material Cast Iron whether Moveable No Total Developed Surface 45 sq. feet
 Feed Pumps worked from the Main Engines, No. One Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work -
 Bilge Pumps worked from the Main Engines, No. One Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work -
 Feed Pumps $\left\{ \begin{array}{l} \text{No. and size} \ 2 \text{ Two} \\ \text{How driven} \ \text{Independent (Weir's)} \end{array} \right.$ Pumps connected to the $\left\{ \begin{array}{l} \text{No. and size} \ \text{One (Ballast Pump)} \\ \text{How driven} \ \text{Independent (Weir's)} \end{array} \right.$ Main Bilge Line
 Ballast Pumps, No. and size One (Weir's) Cyl. dia. 7" Bucket 8" Stroke 18" Lubricating Oil Pumps, including Spare Pump, No. and size None
 Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Ballast Pump used as General Service Pump
 In Pump Room - In Holds, &c. -

Main Water Circulating Pump Direct Bilge Suctions, No. and size Two- 8 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Ballast Pump 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 Yes
 Are all Sea Connections fitted direct on the skin of the ship Yes 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 No Are the Overboard Discharges above or below the deep water line Above
 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 Yes
 What Pipes pass through the bunkers None How are they protected -
 What pipes pass through the deep tanks No Deep Tanks 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 -

MAIN BOILERS, &c. — (Letter for record -) Total Heating Surface of Boilers 2702 sq.ft. each boiler (3 boilers)
 Is Forced Draft fitted Yes No. and Description of Boilers 3 Multitubular Scotch (Single ended) Working Pressure 190 lbs./sq"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? -
 IS A DONKEY BOILER FITTED? No 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 Piping Arrangements -

SPARE GEAR.

Has the spare gear required by the Rules been supplied -
 State the principal additional spare gear supplied

1 Propeller shaft:	6 Screw shaft bolts & nuts	6 L.P. piston rings
2 Propellers (Solid)	4 Boiler tube plugs	1 H.P. Eccentric Strap (Or I.B.)
2 Stern Bushes	12 Boiler tubes	1 L.P. - do -
50 Condenser Tubes	1 C.I. air pump bucket	1 Set crosshead Brasses H.P. or I.P.
2 Safety valve springs	1 Air pump bucket rod	1 set -do- L.P.
3 Cyl. escape valve springs	1 Weirs pump steam chest (Ballast)	1 set crankpin Brasses H.P. or I.P.
4 Bott end bolts & nuts	1 Vane shaft (Centrifugal Pump)	1 set -do- L.P.
4 Top end bolts & nuts	2 Weirs Pump steam chest (Main feed)	1 L.P. valve spindle
2 Main bearing bolts & nuts	1 Weirs pump steam chest (Gen. Service)	1 Motor & spindle (Turbine Dynamo)
4 Eccentric strap bolts & nuts	3 I.P. piston rings	

The foregoing is a correct description.

Manufacturer.



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—Cylinders Slides Covers
 Pistons Piston Rods Connecting rods
 Crank shaft Thrust shaft Intermediate shafts
 Tube shaft Screw shaft Propeller
 Stern tube Engine and boiler seatings Engines 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
 Crank shaft material Identification Mark Thrust shaft material Identification Mark
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material Identification Mark 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 duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. **The whole of the main and auxiliary machinery has been examined and found in good condition, namely, cylinders, pistons, valves, rods, crank, thrust & intermediate shaftings and all bearings, condenser, pumps, pumping arrangements, piping, engine seatings, and holding down bolts, spare gear. All machinery examined under working conditions.**
This machinery has been examined on several occasions during the past few years by the Surveyors to this Society for the purpose of issuing a Certificate for the Hull, Boilers and Machinery for presentation to the Consul-General in accordance with the Treaties.
The whole is, in my opinion, in sound condition and eligible for Classification with the records of survey already assigned.

Certificate to be sent to
 The Surveyors are requested not to write over below the space for Committee's Minute.

See Rpt 1.
 The amount of Entry Fee ... £ : : } When applied for,
 Special ... £ : : } 19.....
 Donkey Boiler Fee ... £ : : }
 Travelling Expenses (if any) £ : : } When received,
 19.....

L. Pieroni
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned

TUE. 16 MAY 1935
Noted

