

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 3845

Date of writing Report Jan 20th 1927 When handed in at Local Office 19 Port of Yokohama
 Received at London Office 11 MAR 1927
 No. in Survey held at Urapa Date, First Survey 14 May Last Survey 14 Dec 1926
 Reg. Book. on the Steel Screw Steamer Tsukushi Maru No 2 (Number of Visits 22)
 Built at Urapa By whom built Urapa Dock Coy Yard No. 316 Tons Gross 2123.32
 Engines made at Urapa By whom made Urapa Dock Coy Engine No. 316 When built 1926 Net 1426.88
 Boilers made at " By whom made do Boiler No. " when made 1926
 Registered Horse Power 264 Owners Kajima Shogyo Kabushiki Kaisha Port belonging to Shimonoseki
 Nom. Horse Power as per Rule 264 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

ENGINES, &c.—Description of Engines Triple Expansion
 Dia. of Cylinders 19.31 1/2 Length of Stroke 39 Revs. per minute 90 No. of Cylinders 3 No. of Cranks 3
 Dia. of Crank shaft journals as per rule 10.3/4 Dia. of Crank pin 10.3/4 Crank webs Mid. length breadth 15.2 Thickness parallel to axis 6.5
 Diameter of Thrust shaft under collars as per rule 10.63 Diameter of Tunnel shaft as per rule 10.7/8 Diameter of Screw shaft as per rule 10.63 Thickness around eye-hole 4.5
 Is the Screw shaft fitted with a continuous liner the whole length of the stern tube Yes 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 joints burned ✓ 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated ✓

Pitch of Propeller 16'-0" No. of Blades 4 Length of Stern Bush 46" Diameter of Propeller 14'-0"
 State whether Moveable Yes Total Surface 154 square feet.
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 3 1/2 Stroke 20 Can one be overhauled while the other is at work Yes
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 3 3/4 Stroke 20 Can one be overhauled while the other is at work Yes
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 1 Heirs 9x6 1/2 + G.S. Worthington 6x4
 No. and size of Pumps connected to the Main Bilge Line 1 G.S. pump 6x4 + one ballast pump 8x10
 No. and size of Ballast Pumps 1 Vert Worthington 8x10 No. and size of Lubricating Oil Pumps, including Spare Pump ✓

Are two independent means arranged for circulating water through the Oil Cooler ✓ No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 4 @ 3" and in Holds, &c. No 1 hold. 2 @ 3" No 2 hold 2 @ 3" No 3 hold 2 @ 3" No 4 hold 2 @ 3" Tunnel well 1 @ 2 1/4"

No. and size of Main Water Circulating Pump Bilge Suctions 1 @ 6 1/2" No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges 1 @ 3 1/2" 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 connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes 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 are carried through the bunkers ✓ How are they protected ✓
 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 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from E.R. top platform

MAIN BOILERS, &c.—(Letter for record (S) Total Heating Surface of Boilers 4000 ft
 Is Forced Draft fitted Yes No. and Description of Boilers 2 Horizontal 2SB Working Pressure 200 lbs.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓
 General Pumping Arrangements ✓ Oil Fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—
 One set of piston packing rings. 1 set piston springs (RP) 1/4 of total joint ring bolts & nuts. 1/2 of total for cylinder covers. 1 set metallic packing for piston & valve rods. 1 valve rod & brasses. 1 set securing rods. 1 set connecting rod brasses & bolts. 1 set coupling bolts. 1 set main bearing brasses. 30 number of condenser tubes. 20 ferrules. 1 air pump rod. 1 set air pump valves. 1 impeller for circulating pump. 1 set of valves & seals for main feed pump. 1 set pump. 1 feed check valve - valve & seals. 1 set of safety valve springs for each boiler. 5 of total fire bars. Same plates. 1 set of steam & water piston packing rings for ballast pump and donkey pump.

The foregoing is a correct description,
[Signature] Manufacturer.



May 14. 17. 24 June 8. Sept 14. 17. 23. Oct 4. 6. 13. 18. 25. Nov 5

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel ---
 Total No. of visits 22.

Dates of Examination of principal parts - Cylinders Sept 17. Sept 23. Slides Sept 23
 Covers Sept 23. Pistons Sept 17. Rods May 17. 24. Sept 17
 Connecting rods May 17. 24. Sept 17. Crank shaft Sept 17. Oct 6. Thrust shaft Sept 17
 Tunnel shafts Sept 17. Screw shaft Sept 17. Propeller Oct 6
 Stern tube Oct 14. Engine and boiler seatings + Nov 10. Engines holding down bolts Nov 17.
 Completion of pumping arrangements Dec 4. Boilers fixed Nov 30. Engines tried under steam Dec 4.
 Completion of fitting sea connections Nov 30. Stern tube Screw shaft and propeller
 Main boiler safety valves adjusted Dec 3. Thickness of adjusting washers ✓
 Material of Crank shaft Steel Identification Mark on Do. Lloyds. 7. 12. 26 RoB. R
 Material of Thrust shaft Steel Identification Mark on Do. do
 Material of Tunnel shafts Steel Identification Marks on Do. do
 Material of Screw shafts Steel Identification Marks on Do. do
 Material of Steam Pipes Steel ✓ Test pressure 100 lbs ✓ Date of Test Nov 30
 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 carrying and burning oil fuel been complied with ✓
 Is this machinery duplicate of a previous case No ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery has been built in accordance with the requirements of the Rules & the material & workmanship found good and is eligible, in my opinion to the Record of M.S. 12. 26.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12. 26. FD. CL.

[Signature]
 14/3/27
 J. B. Baileton
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 7 40: ✓
 Special L.M.C. ... £ 7 40: ✓
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ 7 80: ✓

Committee's Minute TUES. 15 MAR 1927
 Assigned + L.M.C. 12. 26
 F.D. Ch.

Certificate to be sent to The Surveyors are requested not to write on or before the space for Committee's Minute.



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