

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

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Date of writing Report 29-5-49 When handed in at Local Office 30-5-49 Port of Calcutta
 No. in Survey held at Nijagalatam Date, First Survey 20-10-48 Last Survey 8-5-49
 Reg. Book 15862 on the KUTUBTARI Tons (Gross 390 Net 209)
 Built at Nijagalatam By whom built Seindia Ste. Nav. Co. Ltd. Yard No. VC. 109 When built 1949
 Engines made at Paisley By whom made McAlister & Baxter Engine No. 1380 When made 1948
 Boilers made at Grenock By whom made J.G. Kincaid & Co. Boiler No. 2189 183 When made 1948
 Registered Horse Power 68 (66.96 MN.) Owners Seindia Ste. Nav. Co. Ltd. Port belonging to Calcutta
 Nom. Horse Power as per Rule _____ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended Cargo and passenger carrying - restricted service.

ENGINES, &c.—Description of Engines 2 1/2" compound inverted direct acting Revs. per minute 230
 Dia. of Cylinders 10 1/2" - 14" - 28" Length of Stroke 18" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 5 7/16" Crank pin dia. 5 7/16" Crank webs 18 1/4" Thickness parallel to axis 2 1/32"
 as per Rule _____ as fitted _____ Mid. length breadth _____ shrunk _____ Thickness around eye-hole 2 1/32"
 Intermediate Shafts, diameter 5 1/8" Thrust shaft, diameter at collars 5 1/2"
 as per Rule _____ as fitted _____ as per Rule _____ as fitted _____
 Tube Shafts, diameter _____ Screw Shaft, diameter _____ Is the no screw shaft fitted with a continuous liner no
 as per Rule _____ as fitted _____ as per Rule _____ as fitted _____

Bronze Liners, thickness in way of bushes _____ Thickness between bushes _____ Is the after end of the liner made watertight in the
 as per Rule _____ as fitted _____ as per Rule _____ as fitted _____ 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
Yes If so, state type newark 193 gland Length of Bearing in Stern Bush next to and supporting propeller 2'-0 1/2" (40. M)

Propeller, dia. 5'-3" Pitch 5'-5 1/2" No. of Blades 4 Material Brong whether Movable no Total Developed Surface 110 sq. feet
 Feed Pumps worked from the Main Engines, No. one Diameter 2 1/4" Stroke 8 3/4" Can one be overhauled while the other is at work _____
 Bilge Pumps worked from the Main Engines, No. one Diameter 2 1/4" Stroke 8 3/4" Can one be overhauled while the other is at work _____
 Feed Pumps No. and size 1 - 6" x 4" x 11" Pumps connected to the Main Bilge Line (No. and size 1 - 5 1/2" x 3 1/2" x 6 1/4" + 1 M.E. room)
 How driven steam How driven steam 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:—In Engine and Boiler Room one - 2" in ER, one 2" in B. Rm.
 In Pump Room one - 2" in ER, one 2" in B. Rm.
 In Holds, &c. No. 1 Hold, 2" one off, No. 2 Hold, 2" one off, No. 3 Hold, 2" one off.

Main Water Circulating Pump Direct Bilge Suctions, No. and size one - 4" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges,
 No. and size one - 2 1/2" 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-borers, 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 Yes, blow down at sea cocks.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold 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 5" soil pipe pas, 2" x 3" surface pas pas How are they protected steel casing
 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 no tunnel Is it fitted with a watertight door _____ worked from _____

MAIN BOILERS, &c.—(Letter for record _____) Total Heating Surface of Boilers 1470 sq. ft.
 Which Boilers are fitted with Forced Draft not fitted Which Boilers are fitted with Superheaters _____
 No. and Description of Boilers one, multitubular Scotch Bo. Working Pressure 180 lbs per sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? _____
 IS A DONKEY BOILER FITTED? _____ If so, is a report now forwarded? _____
 Can the donkey boiler be used for other than domestic purposes _____

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 Yes
 State the principal additional spare gear supplied _____

The foregoing is a correct description of the machinery of the Seindia Steam Navigation Co. Ltd.

James L. ... Chief Shipyard Manager.

Manufacturer.



During progress of work in shops - - - *20th Oct 1948, 19th, 20th, 21st Nov 1948, 17th & 18th Dec 1948, 6th & 8th Jan 1949*
 Dates of Survey while building During erection on board vessel - - - *25th, 29th Mar 1949 & 6th, 7th, 8th May 1949*
 Total No. of visits *14*

Dates of Examination of principal parts - Cylinders Slides Covers
 Pistons Piston Rods Connecting rods
 Crank shaft Thrust shaft Intermediate shafts
 Tube shaft Screw shaft *17-12-48* Propeller *17-12-48*
 Stern tube *17-12-48* Engine and boiler seatings *6-1-49* Engines holding down bolts *29-3-49*
 Completion of fitting sea connections *17-12-48*
 Completion of pumping arrangements *6-5-49* Boilers fixed *28-3-49* Engines tried under steam *6-5-49*
 Main boiler safety valves adjusted *6-5-49* Thickness of adjusting washers *PV. 5/16" SV. 5/16"*
 Crank shaft material *Steel* Identification Mark Thrust shaft material *steel* Identification Mark *Lloyds 16203*
 Intermediate shafts, material *steel* Identification Marks *Lloyds 16203* Tube shaft, material Identification Mark
 Screw shaft, material *steel* Identification Mark *Lloyds 16203* Steam Pipes, material *Copper* Test pressure *400 lbs* Date of Test *3-3-49*
 Is an installation fitted for burning oil fuel *No* 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 machinery of this vessel has been installed under Special Survey in accordance with Rule Requirements and approved plans.
The materials and workmanship are sound and good.
Upon completion of the installation the main boiler was subjected to an accumulation test in accordance with the Rules and the safety valves adjusted under steam for a working pressure of 180 lbs per sq in.
Finally, the main and auxiliary machinery was tried under full working conditions with satisfactory results.
This machinery is eligible in my opinion to be classed in the Register Book with the notation of LMC 5-49 and record of 12-48.
Interim Certificate issued, copy attached.
Classification certificates in 'duplicate' are requested.

Certificate to be sent to *Vizagapatam Office in duplicate.*
 (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 <i>1/5 total fee</i> £ <i>214/- 2s.</i>	19.
Donkey Boiler Fee ... £	When received,
Travelling Expenses (if any) £ <i>57/- 1s.</i>	19.

R. E. Rintchard
 Engineer Surveyor to Lloyd's Register of Shipping.

Date *FRI. 12 AUG 1949*

Committee's Minute *+ LMC 5.49.*
OG
15B 18016

