

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

31 AUG 1946

Date of writing Report 19-6-46 to When handed in at Local Office 19 Port of Brisbane

No. in Survey held at Brisbane Date, First Survey 19-10-1943 Last Survey 15-6-1946
 Reg. Book. on the SINGLE SCREW STEAMER "RIVER NORMAN" (Number of Visits 76) Tons } Gross 6659.17
 Net 3908.81

Built at Brisbane By whom built Evans Deakin & Co. Ltd. Yard No. 19 When built 1946

Engines made at Rocklea Brisbane By whom made Commonwealth Govt. Marine Engine No. - when made 1946
 Engine Works.

Boilers made at Sydney N.S.W. By whom made Babcock & Wilcox Ltd. Boiler No. - when made 1946

NOMINAL RECIPROCATOR. 493
 Registered Horse Power TURBINE 73 Owners Commonwealth of Australia. Port belonging to Brisbane.

Machinery Numeral 580 566 Is Refrigerating Machinery fitted for cargo purposes yes. Is Electric Light fitted yes.

Nom. Horse Power as per Rule 639 Trade for which Vessel is intended International.

ENGINES, &c.—Description of Engines Triple Expansion with Bauer Nact Exhaust Turbine Revs. per minute 85

Dia. of Cylinders 24 1/2", 40 1/2" & 67" Length of Stroke 48" No. of Cylinders 3. No. of Cranks 3

Crank shaft, dia. of journals as per Rule 14.078" Crank pin dia. 14 1/8" Crank webs Mid. length breadth 2 1/4" Thickness parallel to axis 9" ✓
 as fitted 14 1/8" Mid. length thickness 9" shrunk Thickness around eye-hole 6 7/16" ✓

Intermediate Shafts, diameter as per Rule 13.4" Thrust shaft, diameter at collars as per Rule 14.078" ✓
 as fitted 13 1/2" as fitted 14 1/4" ✓

Tube Shafts, diameter as per Rule 14.825" Is the tube screw shaft fitted with a continuous liner? yes ✓
 as fitted 15 1/8" as fitted 15 1/8" ✓

Bronze Liners, thickness in way of bushes as per Rule 7.47" Thickness between bushes as per Rule 56" Is the after end of the liner made watertight in the propeller boss yes ✓
 as fitted 25.32" as fitted 19.32" ✓

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 ✓

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 no ✓

Length of Bearing in Stern Bush next to and supporting propeller 5' 0 1/2" ✓

Propeller, dia. 17' 0" Pitch 16.9 average No. of Blades 4 Material Bronze whether Movable yes Total Developed Surface 102 sq. feet

Feed Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

Bilge Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

Feed Pumps { No. and size 2 - 12" x 8" x 22" Gen. Service Pumps connected to the Main Bilge Line { No. and size 2 - Bilge 9" x 10" x 24", Ballast 10 1/2" x 12" x 24"
 How driven Direct acting Steam driven. How driven Direct acting Steam driven.

Ballast Pumps, No. and size one 9.5. 10 1/2" x 7" x 21" Lubricating Oil Pumps, including Spare Pump, No. and size Two - 8" x 9" x 18" ✓

Are two independent means arranged for circulating water through the Oil Cooler yes ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Engine Room, Two 3" Thrust Room - One 2 1/2", Boiler Room - Two 3" ✓

In Holds, &c. one 3" port and one 3" starboard in all holds (Nos 1, 2, 3, 4 & 5). One 2 1/2" port and starboard sides of cofferdams except cofferdam between forepeak & No. 1. D.B. Tank which has one 2 1/2". One 2 1/2" in Tunnel Hull.

Main Water Circulating Pump Direct Bilge Suctions, No. and size one 11" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one 5" 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 All valves except Boiler & Evaporator blow downs which are cocks. ✓

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

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 Fore Deck Steam and Exhaust. How are they protected 5/16" steel plate 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 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 E.R. at 2nd Deck level.

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 7212 Square Feet. +1240 sq. = 8452

Is Forced Draft fitted yes ✓ No. and Description of Boilers Two Babcock & Wilcox. N.T. Working Pressure 240 lbs. (Sp. 220 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 no Main Boilers 26.8.41 Auxiliary Boilers Donkey Boilers
 (If not state date of approval) See Secretary's Letter E28. 10.2.42 Forwarding copies of approved plans for S.S. Burnside

Superheaters 30.8.41. General Pumping Arrangements 1-6-42 Oil fuel Burning Piping Arrangements 3-7-42.

SPARE GEAR. State the articles supplied:— As per Rules. (See list forwarded with Sydney Rpt. 19252 on S.S. River Clarence)

The foregoing is a correct description, R.H. Mearns, Manager, Commonwealth Government Marine Engine Works, Rocklea, Brisbane. Manufacturer.



1943 Oct 19, Nov 22, Dec 3, 28 1944 Jan 10, 25, Feb 10, 18, Mar 8, 20, 30, April 5, 19, May 15, 18, 23, June 5, 8, 21, 22
 During progress of work in shops -- JULY 12, 17, AUG 3, 17, 24, SEPT 5, 6, 25, OCT 18, NOV 20, DEC 15, 20 1945 JAN 25, 26, FEB 21, MAR 22, APRIL 27
 1945 MAY 21, JUNE 1, 20, JULY 3, 11, AUG 17, SEPT 5, 17, SEPT 17, 29, 31, OCT 17, 29, 31, NOV 15, 16, 31, DEC 14, 18
 During erection on board vessel --- 1946 JAN 9, 16, 18, FEB 14, 21, MAR 6, 19, APRIL 8, 17, 29, MAY 4, 7, 14, 21, 28, JUNE 8, 11, 13, 14, 15
 Total No. of visits 76

Dates of Examination of principal parts—Cylinders 20-3-44, 30-3-44, 18-5-44 Slides 23-5-44 Covers 20-3-44
 Pistons 30-3-44 & 21-4-44 Piston Rods 17-8-44 Connecting rods 17-8-44
 Crank shaft 17-8-44 Thrust shaft 11-4-45 Intermediate shafts 26-1-45
 Tube shaft ✓ Screw shafts 26-1-45 Propeller 22-3-45
 Stern tube 22-3-45 Engine and boiler seatings 18-10-44 & 13-12-44 Engines holding down bolts 6-3-46
 Completion of fitting sea connections 4-5-1945
 Completion of pumping arrangements 18-5-46 Boilers fixed 11-1-1945 Engines tried under steam 18-5-46
 Main boiler safety valves adjusted 18-5-46 Thickness of adjusting washers STARBOARD BOILER " 4.10" " 4.51" " 5.16
 Crank shaft material Mild Steel Identification Mark L.P. No 126 Thrust shaft material Mild Steel Identification Mark M316
 Intermediate shafts, material Mild Steel Identification Marks 134 & 135. Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Mild Steel Identification Mark SPARE No 136 Steam Pipes, material Mild Steel O.H. Test pressure 720 lbs. Date of Test 19-12-44
 Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes
 Have the requirements of the Rules for the use of oil as fuel been complied with yes
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no If so, have the requirements of the Rules been complied with ✓
 Is this machinery duplicate of a previous case yes If so, state name of vessel "RIVER BURDEKIN" ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been built under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. The installation has been fitted on board in an efficient manner, tested under working conditions and found satisfactory. The machinery is now eligible in our opinion to be classed in the Society's Register Book with record of LMC 6,46, T.S. (C.L) and the notations of 2 W.T. Boilers, 240 LBS. (SPT 220 LBS) F.D. One L.P. Turbine with O.R. Gearing and Hydraulic coupling, fitted for Oil fuel 6,46 F.P. above 150°F.

Certificate to be sent to Sydney, N.S.W.
 The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 7 : 10 :
 Special ... £ 208 : 0 :
 Donkey Boiler Fee ... £ - : :
 Travelling Expenses (if any) £ 50 : 0 :

When applied for, 2/7/1946
 When received, 19

J. G. North & J. H. Kavanagh
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute **FRI 20 SEP 1946**

Assigned **+ LMC 6,46**
FITTED FOR OIL FUEL, 6,46, FLASH POINT ABOVE 150°F. F.D. C.L.

