

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 4th Mar. 1940 When handed in at Local Office 4th Mar. 1940 Port of Hongkong
 No. in Survey held at Hongkong Date, First Survey Aug. 16th 1939 Last Survey Mar. 2nd 1940
 Reg. Book. on the Single Screw Steamer "KARUAH" (Number of Visits 32) Tons { Gross 1341.90
 Net 514.55
 Built at Hongkong By whom built The Hongkong & Whampoa Dock Co. Ltd Yard No. 819 When built 1940
 Engines made at Wallsend By whom made North Eastern Mar. Eng. Co. Ltd Engine No. 2934 When made 1939
 Boilers made at Renfrew By whom made Babcock & Wilcox Ltd Boiler Nos. 6/1358 When made 1939
 Registered Horse Power 237 Owners The Newcastle & Hunter River Steamship Co. Ltd Port belonging to Newcastle, N.S.W.
 Nom. Horse Power as per Rule 237 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Trade for which Vessel is intended Australian Coast

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 105
 Dia. of Cylinders 16 1/2 x 28 1/2 x 48 Length of Stroke 33 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 9.72 as per Rule 9.72 Crank pin dia. 10 Crank webs Mid. length breadth 17 Thickness parallel to axis 6 1/4
 as fitted 10 Mid. length thickness 6 1/4 shrunk Thickness around eye-hole P 5" J 5 3/8
 Intermediate Shafts, diameter 9.26 as per Rule 9.26 Thrust shaft, diameter at collars 10 as per Rule 9.72
 as fitted 9 3/4 as fitted 10
 Tube Shafts, diameter 10.25 as per Rule 10.25 Is the { tube } shaft fitted with a continuous liner { yes
 as fitted 10 3/4 as fitted 10 3/4 { screw }
 Bronze Liners, thickness in way of bushes 6.09 as per Rule 6.09 Thickness between bushes 4.56 as per Rule 4.56 Is the after end of the liner made watertight in the
 as fitted 5 1/8 as fitted 9/16 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 one length
 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 fits tightly
 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 No If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 3' 9 3/4"
 Propeller, dia. 11'-8" Pitch 11'-9" No. of Blades 4 Material Stone's Bronze whether Moveable Fixed Total Developed Surface 51 sq. feet
 Feed Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓
 Bilge Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓
 Feed Pumps { No. and size 2-Weir 6"x8 1/2"x18" Vert. Pumps connected to the { No. and size 1-6"x8 1/2"x18" Weir Vert. | 1-9"x8"x18" Weir Vert.
 How driven Steam Main Bilge Line { How driven Steam | Steam
 Ballast Pumps, No. and size 1-9"x8"x18" Weir Vert. Lubricating Oil Pumps, including Spare Pump, No. and size ✓
 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 1-3" in E.R. 2-3" in B.R.
 In Pump Room ✓ In Holds, &c. 3-2 1/2" in N°1 Hold + 3-2 1/2" in N°2 Hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-8" dia Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 2-4" dia. 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 + 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 below
 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 Bilge + ballast suction How are they protected 1/4" mild steel plate covers
 What pipes pass through the deep tanks F.P. tank suction 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 None Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record W.T. Sp.) Total Heating Surface of Boilers 3576 sq ft
 Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both
 No. and Description of Boilers 2-Babcock & Wilcox Water Tube Working Pressure 235 lbs.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? No. (See Glasgow report N° 61661)
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
 Can the donkey boiler be used for domestic purposes only ✓

PLANS. Are approved plans forwarded herewith for Shafting 1706 30/3/39 Main Boilers 19/4/39 Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters 30/3/39 General Pumping Arrangements 3/5/39 + 19/5/39 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 See attached list.

HONGKONG & WHAMPOA DOCK Co., Ltd.
 The foregoing is a correct description.

Hook.
 CHIEF MANAGER Manufacturer.



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Lloyd's Register

013390-013396-0249

1939

During progress of work in shops - - Hongkong. Aug. 16, 30, Sept. 5, 11, 22, Oct. 3, 6, 31, Nov. 9, 13, 28, Dec. 15.

Dates of Survey while building

During erection on board vessel - - 1939 Dec. 8, 9, 18, 27, 29, 1940 Jan. 2, 10, 16, 20, 23, 29, 31, Feb. 5, 6, 12, 17, 22, 26, 29, March 2nd.

Total No. of visits Hongkong. 32.

Dates of Examination of principal parts—Cylinders 19-5-39 Slides 8+14/6/39 Covers 19-5-39

Pistons 8-6-39 Piston Rods 3-5-39 Connecting rods 8-6-39

Crank shaft 29-4-39 Thrust shaft 15-12-39 Intermediate shafts 15-12-39

Tube shaft ✓ Screw shafts 15-12-39 Propeller 15-12-39

Stern tube 15-12-39 Engine and boiler seatings Dec. 8, 1939. Engines holding down bolts 10-1-40

Completion of fitting sea connections 8-12-39

Completion of pumping arrangements 22-2-40 Boilers fixed 16-1-40 Engines tried under steam 26-2-40

Main boiler safety valves adjusted 22-2-40 Thickness of adjusting washers Port Boiler 7/16" - 15/32" Superheater 13/32" Starboard Boiler 7/16" - 15/32" Superheater 7/16"

Crank shaft material Steel Identification Mark R.M. 28-4-39 Thrust shaft material Steel Identification Mark 15-12-39 T.S.M.

Intermediate shafts, material Steel Identification Marks 15-12-39 T.S.M. Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material Steel Identification Mark 15-12-39 T.S.M. Steam Pipes, material Steel Test pressure 205 lbs. Date of Test 6-2-40

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 No 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? Yes, except attached pumps If so, state name of vessel S.S. "Muluwinba"

General Remarks (State quality of workmanship, opinions as to class, &c. This engine has been built under special survey in accordance with the requirements of the Rules (See Newcastle-on-Tyne Report No. 97653) +, together with the auxiliary machinery, have been satisfactorily fitted in the vessel. Materials + workmanship are good.

See Manchester Report No. 9656 for oil engine electric generator set.

Forging report enclosed, certificates for pumps, valves, Filters, Evaporator, Distiller, Thrust Block etc. produced, but stated required by Owners in Sydney.

Plan of piping arrangements as fitted enclosed.

The machinery has been tested under full working conditions + found satisfactory + it is recommended that the vessel be classed with Lloyds' Machinery Certificate + the record of + LMC 3-40, C.L., Water Tube Boilers, be made in the Register Book.

The amount of Entry Fee (£4) = £8 6s

Installation (1/2 full fee) £23 14s = £38 4s

Engine Forging ✓ £12s

Donkey Boiler Fee ✓

Travelling Expenses (if any) £7s

Total £64 9s

When applied for, 4th Mar 1940

When received, 2-5-1940

J. S. Morrison
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned 2 (W.T.B) Sph. 3D, C.



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