

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 18 SEP 1925

WEST HARTLEPOOL

Date of writing Report 7<sup>th</sup> Aug 1925 When handed in at Local Office 1<sup>st</sup> Sept. 1925 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 21<sup>st</sup> January Last Survey 9<sup>th</sup> September 1925  
 Reg. Book. S.S. "KIWITEA" (Number of Visits 71) Tons Gross Net

Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 975 When built 1925

Engines made at ditto By whom made Central Marine Engine No. 975 when made 1925

Boilers made at ditto By whom made Engine Works Boiler No. 975 when made 1925

Registered Horse Power Owners Union S.S. Co. Ltd of New Zealand Port belonging to Wellington N.Z.

Nom. Horse Power as per Rule 274 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Ocean going

**ENGINES, &c.**—Description of Engines Triple expansion Revs. per minute 3

Dia. of Cylinders 20½-33½-55 Length of Stroke 39 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 10.95 Crank pin dia. 11 3/32 Crank webs Mid. length breadth 16 5/8 Thickness parallel to axis 6 7/8  
as fitted 11 3/32 Mid. length thickness 6 5/8 shrunk Thickness around eye-hole 4 13/16

Intermediate Shafts, diameter as per Rule 10.43 Thrust shaft, diameter at collars as per Rule 10.95  
as fitted none as fitted 11 3/32

Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 11.615 Is the tube shaft fitted with a continuous liner yes  
as fitted as fitted 12 screw

Bronze Liners, thickness in way of bushes as per Rule .65 Thickness between bushes as per Rule .49 Is the after end of the liner made watertight in the  
as fitted 3 1/32 as fitted 2 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

Propeller, dia. 14-3 Pitch 12-3 No. of Blades 4 Material bronze whether Moveable no Total Developed Surface 63 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 Stroke 26 Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/2 Stroke 26 Can one be overhauled while the other is at work yes

Feed Pumps No. and size 2 main 3x26, 1 G.S. 7 1/2 x 5 x 6 dup Pumps connected to the No. and size 2 main 3 1/2 x 26, 1 Ball 9 x 10 1/2 x 10 duplex  
How driven steam Harbour fed 8 1/2 x 15 main Bilge Line How driven steam

Ballast Pumps, No. and size 1 9 x 10 1/2 x 10 dup. Lubricating Oil Pumps, including Spare Pump, No. and size yes

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 3 of 2 1/2

In Holds, &c. no 1 2 of 2 3/4 no 2 2 of 4

**Main Water Circulating Pump Direct Bilge Suctions, No. and size** 1 of 6 **Independent Power Pump Direct Suctions to the Engine Room Bilges,**  
No. and size 1 of 4 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 both

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 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 none How are they protected yes

What pipes pass through the deep tanks yes 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 no Is it fitted with a watertight door yes worked from yes

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 5076 square feet

Is Forced Draft fitted no No. and Description of Boilers 2 single ended Working Pressure 190 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes

(If not state date of approval)

Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

**SPARE GEAR.** State the articles supplied:—2 bolts & nuts for Con. Rod top ends, 2 ditto bottom ends, 2 ditto main bearings, 1 set coupling ditto, 1 set feed & bilge pump valves, 1 set piston springs, 1 piston rod, 1 slide rod, 1 pair crank pin bearings, 1 main bearing, 1 crank web, 1 crank body part, 1 crank pin, 1 set packing rings for H.P. M.P. & L.P. pistons, 1 air pump rod, 1 propeller shaft, 1 propeller, 1 feed pump ram, 8 fibre valves for circulating pump, 8 rubber valves for ballast pump, 1 set piston rings for donkey feed pump, 24 condenser tubes, 12 boiler tubes, Assorted bolts, nuts, and iron.

The foregoing is a correct description,  
 FOR THE CENTRAL MARINE ENGINE WORKS,  
 (W. Gray & Co. Ltd.)  
 MANAGER DIRECTOR, C.M.E.W.

Manufacturer.



1925

During progress of work in shops - - - Jan. 21 Feb. 16, 18, 23, Mar. 4, 9, 13, 17, 19, 24, 26, 31, Apr. 1, 3, 7, 9, 15, 16, 17, 20, 21, 23, 24, 27, 28, 29, 29, 30, May 1, 4, 5, 11, 13, 14, 21, 22, 25, 27, 28, 29, Jun. 3, 4, 5, 9, 10, 11, 18, 19, 19, 22, 23, 27, July 1, 3, 7, 8, 16, 16, 22, 23, 28, 29, Aug. 1, 11, 13, 14, 21, 22, 25, 27, 28, 29, Sep. 2, 4, 8, 9.

Dates of Survey while building - - -

Total No. of visits 41.

Dates of Examination of principal parts - Cylinders 13.3.25 - 8.5.25 Slides 5.5.25 - 8.5.25 Covers 1.4.25 - 8.5.25  
 Pistons 27.4.25 - 28.5.25 Piston Rods 1.4.25 - 22.5.25 Connecting rods 16.2.25 - 22.5.25  
 Crank shaft 9.4.25 - 11.5.25 Thrust shaft 31.3.25 - 11.5.25 Intermediate shafts  
 Tube shaft Screw shaft 20.4.25 - 18.6.25 Propeller 22.6.25  
 Stern tube 9.4.25 - 22.6.25 Engine and boiler seatings 27.6.25 Engines holding down bolts 23.7.25  
 Completion of pumping arrangements 23.7.25. Boilers fixed 23.7.25. Engines tried under steam 27.8.25  
 Main boiler safety valves adjusted 27.8.25. Thickness of adjusting washers P.P. 1 1/32 S 5/16 S.P. 5/16 S 1/32.  
 Crank shaft material Ingot steel Identification Mark 7656 Thrust shaft material Ingot steel Identification Mark 7655  
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
 Screw shaft, material Ingot steel Identification Mark 7582 Steam Pipes, material L.W. steel Test pressure 600 lbs Date of Test 6.5 - 28  
 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 carrying and burning oil fuel been complied with  
 Is this machinery duplicate of a previous case yes If so, state name of vessel "Kartigi"

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

A surface feed heater fitted, the coils & header of which were tested at 450lb and the body to 400lb.

This vessel's machinery has been built and installed under special survey. The materials and workmanship are good and efficient.

On completion it was tried under working conditions under full steam, with satisfactory results and is now eligible to have the notation **ILMC 9**.

It is submitted that  
 this vessel is eligible for  
**THE RECORD + LMC 9.25. CL**

JWD  
 21/9/25  
 JRR

The amount of Entry Fee ... £ 4 : - :  
 Special ... £ 66 : 2 :  
 Donkey Boiler Fee ... £ - : - :  
 Travelling Expenses (if any) £ - : - :  
 When applied for, 17.9.25  
 When received, 19.25

R.D. Shilstone W.H. Roberts  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned + L.M.C. 9.25 L

TUES. 22 SEP 1925



CERTIFICATE WRITTEN

The Surveys are requested not to write on or below the space for Committee's Minute.