

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 21 AUG 1930

Date of writing Report 20.8.1930 When handed in at Local Office 20 Aug 1930 Port of Hull.

No. in Survey held at Hull Date, First Survey 5 May 1930 Last Survey 18 Aug 1930
(Number of Visits 25)

Reg. Book. on the T.S.S. 'LIMPOPO' Tons { Gross 646.89 Net 285.84

Built at Hull By whom built Messrs S. B. & Co. Ltd Yard No. 678 When built 1930

Engines made at Hull By whom made do Engine No. 678 when made 1930

Boilers made at Hull By whom made do Boiler No. 678 when made 1930

Registered Horse Power Owners Empresa Do Limpopo (A. Couto). Port belonging to Lourenço Marques.

Nom. Horse Power as per Rule 116 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes.

Trade for which Vessel is intended Foreign.

ENGINES, &c.—Description of Engines *Twin Screw, Triple Expansion* Revs. per minute 6

Dia. of Cylinders 11 1/4" 18" 30" Length of Stroke 18" No. of Cranks 6

Crank shaft, dia. of journals as per Rule 5.57 Crank pin dia. 5 3/4" Crank webs Mid. length breadth 11" Thickness parallel to axis 3 3/4" ✓
as fitted 5 3/4" Crank webs Mid. length thickness 3 3/4" shrunk Thickness around eye-hole 2 5/8"

Intermediate Shafts, diameter as per Rule 5.3 Thrust shaft, diameter at collars as per Rule 5.54 ✓
as fitted 5 3/8" as fitted 5 3/4" ✓

Tube Shafts, diameter as per Rule 6.2 Is the tube shaft fitted with a continuous liner? no ✓
as fitted 6 3/4" as fitted 6 3/4" Is the screw shaft fitted with a continuous liner? no ✓

Bronze Liners, thickness in way of bushes as per Rule none Thickness between bushes as fitted Is the after end of the liner made watertight in the propeller boss? ✓
as fitted none as fitted 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 shaft? yes. If so, state type *Vickers Type* Length of Bearing in Stern Bush next to and supporting propeller 2'-5" ✓

Propeller, dia. 4'-8" Pitch 8'-0" No. of Blades 4 Material *Cast Iron* whether Moveable no Total Developed Surface 21 sq. feet

Feed Pumps worked from the Main Engines, (EACH ENG) Diameter 2 3/4" Stroke 9" Can one be overhauled while the other is at work? yes ✓

Bilge Pumps worked from the Main Engines, (EACH ENGINE) Diameter 2 3/4" Stroke 9" Can one be overhauled while the other is at work? yes ✓

Feed Pumps { No. and size *one 6" x 4" x 6" DUPLEX* Pumps connected to the Main Bilge Line { No. and size *one 7" x 4" x 9" (DUPLEX)*
How driven *Steam* How driven *Steam*

Ballast Pumps, No. and size *one 4" x 4" x 4"* Lubricating Oil Pumps, including Spare Pump, No. and size *one 4" x 4" x 4"*

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 2 @ 2 1/2" Forward 2 @ 2 1/2" Aft. ✓

In Holds, &c. 2 @ 2 1/2" in No. 1. 2 @ 2 1/2" in No. 2. 1 @ 2 1/2" in Tunnel well. ✓
1 @ 2 1/2" in fore peak and aft peak.

Main Water Circulating Pump Direct Bilge Suctions, No. and size *one 4 1/2"* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one 3"*

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 sized 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? none ✓ How are they protected? ✓

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 *upper platform*.

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers 2240 sq. feet.

Is Forced Draft fitted? no No. and Description of Boilers 2 Single ended Working Pressure 180 lbs sq. in.

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 Main Boilers yes ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)

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

SPARE GEAR. State the articles supplied:— 2 Bolts + nuts for top ends, bottom ends and main bearings. Set of coupling bolts + nuts. Valves for air, feed, bilge and donkey pumps. 2 Safety valve springs. Main and donkey check valves. Set of rings for each piston. 6 peak ring studs. 3 Boiler tubes. 4 Condenser tubes. Bolts + iron of various sizes

FOR EARLE'S SHIPBUILDING & ENGINEERING CO. LIMITED.

G. H. Stafford

Manufacturer.

MANAGER



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1930. May 5. 8. 17. 21. 27. 31. June 11. 16. 18. 25. July 3. 7. 9. 10. 14. 16. 18. 24. 25.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits 875.

Dates of Examination of principal parts—Cylinders 11. 6. 30 Slides 14. 7. 30 Covers 11. 6. 30
 Pistons 14. 7. 30 Piston Rods 3. 7. 30 Connecting rods 3. 7. 30
 Crank shaft 25. 6. 30 Thrust shaft 9. 7. 30 Intermediate shafts 9. 7. 30
 Tube shaft ✓ Screw shaft 9. 7. 30 Propeller 14. 7. 30
 Stern tube 9. 7. 30 Engine and boiler seatings 22. 7. 30 Engines holding down bolts 22. 7. 30
 Completion of fitting sea connections 14. 7. 30
 Completion of pumping arrangements 15. 8. 30 Boilers fixed 22. 7. 30 Engines tried under steam 18. 8. 30
 Main boiler safety valves adjusted 31. 7. 30 Thickness of adjusting washers 3/8" 11/32" 11/32" 11/32"
 Crank shaft material Steel Identification Mark LLOYDS 516 Thrust shaft material Steel Identification Mark LLOYDS 516
 Intermediate shafts, material Steel Identification Marks LLOYDS 516 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Steel Identification Mark LLOYDS 516 Steam Pipes, material S.D. Copper Test pressure 360 lbs Date of Test 25. 7. 30
 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 ✓
 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 of this vessel has been built under Special Survey & the materials & workmanship are sound & good. They have been satisfactorily fitted on board & tried under working conditions & found in good order.

It is eligible in my opinion to have record of + L.M.C. 8-30 C.L.S.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 8-30 O.G.

J.H. 24/8/30
 W.D.A.
 CERTIFICATE WRITTEN.

The amount of Entry Fee ... £ 3 : 0.0 When applied for,
 Special ... £ 29 : 0.0 20 Aug 1930
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 22/8/30

W. H. Waggott for Self
 Engineer Surveyor to Lloyd's Register of Shipping.
 J.H. Mackurdy

Committee's Minute
 Assigned + L.M.C. 8-30 O.G.
 FRI. 22 AUG 1930 FRI. 19 DEC 1930
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