

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 4-12-26 Port of Belfast
 No. in Survey held at Belfast Date, First Survey 18th Nov. 1925 Last Survey 1st Dec. 1926
 Reg. Book. 75761 on the STEEL TWIN SC. LLANDAFF CASTLE (Number of Visits 10.5)
 Built at Belfast By whom built Workman Clark & Co. Ltd. Yard No. 488 Tons { Gross 10900
 Engines made at Belfast By whom made Workman Clark & Co. Ltd. Engine No. 488 Net 6700
 Boilers made at Belfast By whom made Workman Clark & Co. Ltd. Boiler No. 488 When built 1926
 Registered Horse Power Owners Union Castle Mail S.S. Co. Ltd. Port belonging to London
 Nom. Horse Power as per Rule 1086 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which Vessel is intended Ocean-going

ENGINES, &c.—Description of Engines Inverted Quadruple expansion Twin Screw Revs. per minute 80
 Dia. of Cylinders 33"-33 1/2"-48"-70" Length of Stroke 51" No. of Cylinders 8 No. of Cranks 8
 Crank shaft, dia. of journals as per Rule 13.8" Crank pin dia. 15 1/2" Crank webs Mid. length breadth 2 1/2" Thickness parallel to axis 10"
 as fitted 14 1/2" Mid. length thickness 10" shrunk Thickness around eye-hole 6 1/2"
 Intermediate Shafts, diameter as per Rule 13.14" Thrust shaft, diameter at collars as per Rule 13.8"
 as fitted 13 3/4" as fitted 14 1/2"
 Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 14.58"
 as fitted — as fitted 15 1/2" Is the { tube } shaft fitted with a continuous liner { Yes
 as fitted — as fitted 15 1/2" as fitted — as fitted 16"
 Bronze Liners, thickness in way of bushes as per Rule 7/16" Thickness between bushes as per Rule 5/16"
 as fitted 16" as fitted 16" Is the after end of the liner made watertight in the
 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 —
 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 62"
 Propeller, dia. 17'3" Pitch 19'9" No. of Blades 3 Material Bunge whether Moveable Yes Total Developed Surface 75 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. two Diameter 5 3/4" Stroke 25 1/2" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size Three 16" x 12" x 24" One 9" x 10" x 24" Pumps connected to the { No. and size four — one 12" x 11" x 24" — Two 8" x 9" x 18" — One 110 Tons/Hr.
 How driven Steam Main Bilge Line How driven Steam Steam Electric
 Ballast Pumps, No. and size One 12" x 14" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size none
 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 Two 3 1/2" (A.S.M. S.H.) Two 3" (A.S.M. S.H.) One 3" in E. Rafter recess One 3" in Tunnel Well
 In Holds, &c. No. 1 Hold 2-3 1/2"; No. 2 Hold 2-3 1/2"; Bunker Hold 2-3"; No. 3 Hold 3-3"; No. 4 Hold 1-3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size Two 11" **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
 No. and size Three 5 1/2" (Ash Expeller Two 10") 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 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 Forward Bilge Suctions How are they protected wood cased
 What pipes pass through the deep tanks 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 Yes Is it fitted with a watertight door Yes worked from Deck

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 19668 sq. ft.
 Is Forced Draft fitted No No. and Description of Boilers 2 S.E. and 3 D.E. Cyl. mult. Working Pressure 220 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:— Two Connecting top-end Bolts & nuts; Two Connecting rod bottom-end Bolts & nuts; Two Main Bearing Bolts; Eight Coupling Bolts; One pair top-end bushes; One pair bottom-end bushes; One feed
 check valve; Two sets H.P. piston rings; Two sets I.P. piston rings; One air pump bucket & rod; One air pump head valve
 complete; One complete set of thrust pads; Two eccentric strap bolts & nuts; Three safety valve springs; One spring for
 each side of escape valve; Two propeller blades and four blade sheds; One set of suction and delivery valves for
 main engine bilge pumps.
 Assorted bolts, nuts and rivets.

The foregoing is a correct description,

FOR WORKMAN, CLARK & CO., LIMITED.

Manufacturer, J. Cunningham



If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship? RULE.—The words which do not apply should be deleted.

REPORT ON STEAM RECIPROCATING MACHINERY

1925
 Nov. 18. 24. 26. 27 Dec 1. 3. 10. 11. 16 Jan 5. 6. 7. 8. 15. 26 Feb 1. 2. 4. 6. 15. 16. 17
 During progress of work in shops -- 18. 19. 24. 25 Mar 1. 3. 8. 9. 10. 11. 12. 17. 23. 24 Apr 22. 23. 27. 30 May 4. 7. 22. 25
 Dates of Survey while building
 During erection on board vessel --- 27 June 1. 2. 3. 7. 9. 10. 11. 16. 17. 21. 29 July 1. 2. 7. 8. 26. 27. 28. 29. 30 Aug 2. 3. 5. 6. 7. 20. 24. 25
 Total No. of visits 22. 25 Dec 1 = **105**

Dates of Examination of principal parts—Cylinders 24. 8. 26 Slides 5. 8. 26 Covers 5. 8. 26
 Pistons 16. 2. 26 Piston Rods 9. 3. 26 Connecting rods 7. 7. 26
 Crank shaft 22. 4. 26 Thrust shaft 22. 4. 26 Intermediate shafts 26. 7. 26
 Tube shaft ✓ Screw shaft 26. 7. 26 Propeller 8. 7. 26
 Stern tube 29. 6. 26 Engine and boiler seatings 1. 6. 26 Engines holding down bolts 28. 9. 26
 Completion of fitting sea connections 29. 7. 26
 Completion of pumping arrangements 2. 11. 26 Boilers fixed 28. 9. 26 Engines tried under steam 17. 11. 26
 Main boiler safety valves adjusted 17. 11. 26 Thickness of adjusting washers *Found 3/16" PA 3/8" S.F. 5/16" SA 3/8" All Bolts Pt. 5. all 3/8"*
 Crank shaft material S.M. INGOT STEEL Identification Mark 480 W.B. Thrust shaft material S.M. INGOT STEEL Identification Mark 6452 M.B.
 Intermediate shafts, material S.M. INGOT STEEL Identification Marks 6436 M.B. 6450 M.B. 6464 M.B. 6451 M.B. 6485 M.B. Tube shaft, material Identification Mark 1. 3. 26 15
 Screw shaft, material S.M. INGOT STEEL Identification Mark 6516 M.B. Steam Pipes, material S.D. Steel Test pressure 660 lbs Date of Test
 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 ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under special survey. The materials and the workmanship are sound and good. The main and auxiliary engines have been tried out under steam with satisfactory results. In my opinion the vessel is now eligible to be classed in the Society's Register, Book with notation L.M.C. 12. 26 C.L.

It is submitted that
 this vessel is eligible for
THE RECORD. + LMC 12. 26. CL.

J.W.D.
 7/12/26

R. Lee Ames
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 6 :-
 Special ... £ 127 : 3
 Donkey Boiler Fee ... £ :-
 Travelling Expenses (if any) £ :-
 When applied for, 1st Dec. 26
 When received, 18. 12. 26

Committee's Minute TUES. 7 DEC 1926
 Assigned *+ L.M.C. 12. 26 C.L.*

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

