

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 25 JUN 1927

Date of writing Report 19 When handed in at Local Office 24<sup>th</sup> June 1927 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 25<sup>th</sup> Nov. 1926 Last Survey 13<sup>th</sup> June 1927  
 Reg. Book. on the Tw. Sc. LAGUNILLA (Number of Visits)  
 Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 792 Tons { Gross Not  
 Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 792 When built 1927  
 Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 792 when made 1927  
 Registered Horse Power Owners Andrew Weir & Co. Port belonging to London  
 Nom. Horse Power as per Rule 196 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 Twin screw triple expansion inverted Revs. per minute 125  
 Dia. of Cylinders 13 1/2" - 23 1/2" - 36" Length of Stroke 27" No. of Cylinders 6 No. of Cranks 6  
 Crank shaft, dia. of journals as per Rule 7 3/8" Crank pin dia. 7 3/8" Crank webs Mid. length breadth 11 1/2" Thickness parallel to axis 4 1/8"  
 as fitted 7 3/8" Mid. length thickness 4 3/8" shrunk Thickness around eye-hole 3 1/2"  
 Intermediate Shafts, diameter as per Rule 6.858" Thrust shaft, diameter at collars as per Rule 7.3"  
 as fitted none as fitted 7 3/8"  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 7.6" Is the screw shaft fitted with a continuous liner Yes  
 as fitted 7 3/8" as fitted 7 3/8"  
 Bronze Liners, thickness in way of bushes as per Rule .526" Thickness between bushes as per Rule .391" Is the after end of the liner made watertight in the propeller boss Yes  
 as fitted 5/8" as fitted 7/16"  
 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 36"  
 Propeller, dia. 9'0" Pitch 9'6" No. of Blades 4 Material Bronze whether Moveable no. Total Developed Surface each 28 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes  
 Feed Pumps No. and size Two 8 1/2" x 6" x 15" Pumps connected to the Main Bilge Line No. and size 9.5 8 1/2" x 6" x 13" Ballast 9 10" x 24"  
 How driven Steam How driven Steam  
 Ballast Pumps, No. and size One 9" x 10" 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 Forward one 2 1/2" Aft one 3 1/2" (Engine Room Cofferdam from O. 7. Runners 2-2 1/2")  
 In Holds, &c. Connected to pumps in cargo pump room Forward pump room 1-2" No. 7 Buoyancy Spaces 2-2 1/2"  
 No. 2 Buoyancy Spaces 2-2 1/2" No. 3 Buoyancy Spaces 2-2 1/2" Aft Cofferdam one 2 1/2" (frames 41 & 43)  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Two 4" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3 3/4"  
 Are all the Bilge Suction Pipes in holds and 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 pass through the bunkers none How are they protected  
 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 Is it fitted with a watertight door worked from

**MAIN BOILERS, &c.**—(Letter for record S.) Total Heating Surface of Boilers 3702 sq. ft.  
 Is Forced Draft fitted no. No. and Description of Boilers Two single-ended cyl. hull Working Pressure 180 lbs.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? none If so, is a report now forwarded?  
 PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
 (If not state date of approval) Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

**SPARE GEAR.** State the articles supplied:— Two Top End Bolts + nuts Two Bottom End Bolts + nuts Two main Bearing Bolts  
 One set Coupling Bolts One set packing rings for H.P. & I.P. pistons One set valves for each donkey pump  
 Two sets valves for each of feed, bilge, air and circulating pumps, One top end trash, One bottom end trash  
 Two eccentric Shafts One pair pump link brasses each 1 1/2" One bucket rod with nut complete for air and circulating pumps  
 One set safety valve springs One set shaft Two Cast Iron propellers 2 Condenser tubes  
 One set escape valve springs One set valve lids for boiler valves, Two Oil fuel burner 18 lbs. One suction + one delivery filler bucket  
 Assorted bolts, nuts + dm.

The foregoing is a correct description,  
 HARLAND AND WOLFF, LIMITED,  
 Scherbeck  
 Manufacturer.



NOTE.—The words which do not apply should be deleted.

1926 Nov. 25. 30 Dec 6 <sup>1927</sup> Jan 5. 14. 25. 27. 28 Feb 7. 9. 14. 15. 16. 28  
 During progress of work in shops - Mar 2. 3. 7. 9. 11. 14. 15. 16. 17. 18. 22. 23. 24. 25. 28. 29. 30. 31 Apr 4. 6  
 Dates of Survey while building - 8. 11. 22. May 6. 9. 31 June 1. 2. 3. 6. 7. 13  
 During erection on board vessel -  
 Total No. of visits 46

Dates of Examination of principal parts—Cylinders 3. 3. 27 Slides 22. 3. 27 Covers 3. 3. 27  
 Pistons 22. 3. 27 Piston Rods 23. 3. 27 Connecting rods 23. 2. 27  
 Crank shaft 11. 3. 27 Thrust shaft 11. 3. 27 Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft 29. 3. 27 Propeller 22. 4. 27  
 Stern tube 18. 5. 27 Engine and boiler seatings 26. 5. 27 Engines holding down bolts 6. 6. 27  
 Completion of fitting sea connections 26. 5. 27  
 Completion of pumping arrangements 13. 6. 27 Boilers fixed 6. 6. 27 Engines tried under steam 13. 6. 27  
 Main boiler safety valves adjusted 13. 6. 27 Thickness of adjusting washers *Prin. Boiler P+S 3/8" Star. Boiler P 1/16" S 3/8"*  
 Crank shaft material *S.M. Ingot Steel* Identification Mark *Nº 1 R.L.A.* Thrust shaft material *S.M. Ingot Steel* Identification Mark *Nº 1. R.L.A.*  
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material *S.M. Ingot Steel* Identification Mark *Nº 1 R.L.A.* Steam Pipes, material *S.P. Copper* Test pressure *360 lbs* Date of Test *11. 3. 27*  
 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 carrying and burning oil fuel been complied with *Yes* ✓  
 Is this machinery duplicate of a previous case *Yes* ✓ If so, state name of vessel *"Amhoris"* ✓

**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 workmanship are sound and good. It has been efficiently installed on board the vessel and both main and auxiliary engines have been tried under steam. The oil fuel pipe lines have been tested in accordance with the rules and the controls of the oil fuel valves and fire extinguishing line are capable of being operated locally and from outside the engine room.  
 In my opinion the machinery of this vessel is eligible for notation in the Society's Register Book + L.M.C. 6. 26 C.L. FITTED FOR OIL FUEL 6. 27 F.P. ABOVE 150°F.

It is submitted that  
 this vessel is eligible for  
**THE RECORD. + L.M.C. 6. 27. CL.**  
 Fitted for oil fuel 6. 27. F.P. above 150°F.

*W.D.*  
 27/6/27  
*[Signature]*

Certificate to be sent to Registrar

The amount of Entry Fee ... £ 3 : - } When applied for,  
 Special ... £ 49 : - } 24 June 1927  
 Donkey Boiler Fee ... £ : : }  
 Travelling Expenses (if any) £ : : }  
 When received, 2/8/27

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

Committee's Minute TUES. 28 JUN 1927  
 Assigned + L.M.C. 6. 27 CL.  
 Fitted for Oil Fuel 6. 27 F.P. above 150°F

