

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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Date of writing Report 19<sup>th</sup> Oct 1929, When handed in at Local Office 29. 10. 1929. Port of West Hartlepool  
 Date, First Survey 26<sup>th</sup> June Last Survey 23<sup>rd</sup> Oct. 1929  
 No. in Survey held at West Hartlepool (Number of Visits 54.)  
 Reg. Book. S.S. "DUNELMIA" Tons Gross 5207 Net 3226  
 1026, on the S.S. "DUNELMIA" When built 1929  
 Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 1028  
 Engines made at ditto By whom made Central Marine Engine No. 1028 when made 1929  
 Boilers made at ditto By whom made Engine Works Boiler No. 1028 when made 1929.  
 Registered Horse Power Owners Metcalf, Pon & Co. Ltd. Port belonging to West Hartlepool.  
 Nom. Horse Power as per Rule 494. Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which Vessel is intended Ocean going

GINES, &c.—Description of Engines Triple expansion Revs. per minute 69  
 Dia. of Cylinders 26" 43" 71" Length of Stroke 48. No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.54 as fitted 14" Crank pin dia. 14" Crank webs Mid. length breadth 20 1/2" Thickness parallel to axis 8 1/2"  
 Intermediate Shafts, diameter as per Rule 12.9" as fitted 13 1/4" Thrust shaft, diameter at collars as per Rule 13.54" as fitted 14"  
 Tube Shafts, diameter as per Rule 14.4" as fitted 15" Is the tube screw shaft fitted with a continuous liner yes  
 Bronze Liners, thickness in way of bushes as per Rule 7.4" as fitted 3/4" Thickness between bushes as per Rule 5.5" as fitted 2" 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 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 yes  
 Propeller, dia. 18'-0" Pitch 17'-6" No. of Blades 4 Material bronze whether Moveable yes Total Developed Surface 103. sq. feet  
 Main Engines, No. 1 Diameter 42" Stroke 28" Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 28" Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 2. 9 1/2" x 7 x 21" Pumps connected to the { No. and size 2 main 4 1/2" x 28" 2 9 1/2" x 10 1/2" x 10"  
 How driven Steam 1. 7 1/2" x 5 x 6 duplex Main Bilge Line How driven Steam duplex  
 Ballast Pumps, No. and size 2 9 1/2" x 10 1/2" x 10 duplex 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 Four of 2 1/4" dia. Dry tank 1 of 3" Tunnel one of 2 1/4"  
 Holds, &c. No 1 Two of 3" No 2 two of 3 1/4" No 3 two of 2 1/4" No 4 two of 2 1/4"  
 No 5 two of 3" No 6 two of 2 1/4" diameter

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One of 5"  
 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 oil 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 yes  
 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  
 Do all Pipes pass through the bunkers Forward suction How are they protected under timber boards  
 Do all 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 yes Is it fitted with a watertight door yes worked from upper deck

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 7356 square feet.  
 Forced Draft fitted yes No. and Description of Boilers Three, single ended Working Pressure 180 lbs  
 A REPORT ON MAIN BOILERS NOW FORWARDED? yes  
 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 connec. rod top ends. 2 ditto for bottom ends. 2 ditto for main bearings 1 set coupling bolts & nuts. 1 set suction & delivery valves for bilge pump. 4 sets triple horn valves & springs for main feed pumps. 4 ditto for general service pump. 2 air pump valves. 2 circ. pump valves. 8 ballast pump valves. 1 set ring complete for H.P. piston 1 set springs for M.P. piston. 1 set metallic packing segments for piston rods 1 ditto for valve spindles. 2 main feed pump bucket rings. propeller shaft. 2 cast iron propeller blades. 3 condenser tubes. feed check valves. 1 safety valve spring. 10 boiler tubes. Bolts, nuts and iron assorted.

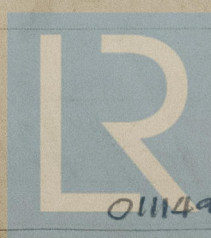
The foregoing is a correct description.

(W. Gray &amp; Co. Ltd.)

Onobio

Manufacturer.

MANAGING DIRECTOR C.M.E.W.



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Dates of Survey while building  
 During progress of work in shops --- 1929.  
 June 26. 27. 28. July 1. 3. 4. 8. 9. 12. 16. 17. 18. 22. 23. 24. 28. 29. 30. 31. Aug. 1. 12. 13. 14. 15. 16. 20. 21. 22. 24. Sep. 2. 3.  
 During erection on board vessel --- 10. 11. 12. 13. 16. 17. 20. 23. 24. 27. 30. Oct. 1. 2. 3. 4. 7. 9. 11. 17. 21. 23.  
 Total No. of visits 54.

Dates of Examination of principal parts—Cylinders 17.7.29-12.9.29 Slides 15.8.29-11.9.29 Covers 15.8.29  
 Pistons 15.8.29-12.9.29 Piston Rods 24.7.29-23.8.29 Connecting rods 30.7.29-11.9.29  
 Crank shaft 17.7.29-3.9.29 Thrust shaft 27.6.29-3.9.29 Intermediate shafts 22.7.29-17.9.29  
 Tube shaft ✓ Screw shaft 3.7.29-17.9.29 Propeller 23.8.29-17.9.29  
 Stern tube 14.8.29-16.9.29 Engine and boiler seatings 10.9.29 Engines holding down bolts 7.10.29-11.10.29  
 Completion of fitting sea connections 10.9.29  
 Completion of pumping arrangements 17.10.29 Boilers fixed 7.10.29 Engines tried under steam 23.10.29.  
 Main boiler safety valves adjusted 17.10.29 Thickness of adjusting washers P.P.  $\frac{3}{32}$  S.  $\frac{5}{16}$  C.P.  $\frac{5}{16}$  S.  $\frac{3}{32}$  S.P.  $\frac{5}{16}$  S.  $\frac{5}{16}$   
 Crank shaft material S.M. Eng. Steel. Identification Mark 1756 R.W.F. Thrust shaft material S.M. 9. St. Identification Mark 1879 R.W.F.  
 Intermediate shafts, material S.M. 9. St. Identification Marks 1829. 1864 1879 1892 R.W.F. Tube shaft, material ✓ Identification Mark  
 Screw shaft, material S.M. 9. St. Identification Mark 1892 R.W.F. Steam Pipes, material Lap welded Steel Test pressure 600 lb. Date of Test 1-10-29.  
 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.)

This vessel's machinery has been built and installed under Special Survey.  
 The materials and workmanship are good.  
 On completion it was tried at sea under full steam, and found satisfactory, and in my opinion is eligible to have the notation  $\boxtimes$  L.M.C. 10.29.

It is submitted that  
 this vessel is eligible for  
 THE RECORD.

+ L.M.C. 10.29 C.L. F.D.

J. H. 7/11/29

The amount of Entry Fee ... £ 5 : 0 :  
 Special ... £ 99 : 2 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :

When applied for,

1-11-29

When received,

12-11-29

R. D. Shilston

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 NOV 1929

Assigned

CERTIFICATE WRITTEN



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