

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 28.12.29 When handed in at Local Office 28 Dec 29 Port of Hull
 Received at London Office 31 DEC 1929
 No. in Survey held at Hull. Date, First Survey 22 Jun 29 Last Survey 23 Dec 19 29
 Reg. Book. 1375 on the T.S.S. "MARKLAND" (Number of Visits 47)
 Built at Hull. By whom built Earle's S.B. & Co. Ltd Yard No. 644 Tons { Gross 2453.84 Net 1694.94
 Made at Hull. By whom made do Engine No. 644 When built 1929
 Made at Hull. By whom made do Boiler No. 644 when made 1929
 Horse Power Owners Mury Shipping Co. Ltd. Port belonging to Liverpool N.S.
 Power as per Rule 334 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yps
 which Vessel is intended

S, &c.—Description of Engines Twin Screw Triple Expansion
 Cylinders 16" 27" 44" Length of Stroke 33" No. of Cylinders 6 Revs. per minute 118
 Dia. of journals as per Rule 8.66 as fitted 8 7/8 Crank pin dia. 8 7/8 No. of Cranks 6
 Crank webs Mid. length breadth 14" Mid. length thickness 5 3/4" shrunk Thickness parallel to axis 5 3/4"
 Thrust shaft, diameter at collars as per Rule 8.66 as fitted 8 7/8 Thickness around eye-hole 3 15/16"
 Shaft, diameter as per Rule 8.25 as fitted 8 1/2
 Screw Shaft, diameter as per Rule 9.1 as fitted 10" Is the { tube } shaft fitted with a continuous liner { Yps }
 Is the { screw } Is the after end of the liner made watertight in the { Yps }
 Thickness in way of bushes as per Rule 3/4" as fitted 3/4" Thickness between bushes as per Rule 3/4" as fitted 3/4"
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 Are the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive
 Is an approved Oil Gland or other appliance fitted at the after end of the propeller shaft
 Length of Bearing in Stern Bush next to and supporting propeller 3'-6"
 No. of Blades 4. Material C.S. whether Moveable Yps Total Developed Surface 41.0 sq. feet
 Pumps connected to the Main Bilge Line { No. and size One 12" x 13" x 12" One 7" x 5" x 8" How driven Steam }
 Lubricating Oil Pumps, including Spare Pump, No. and size
 Independent means arranged for circulating water through the Oil Cooler
 In Engine and Boiler Room 2 @ 2 1/2" E.R. 2 @ 2 1/2" Stokes. 1 @ 2 1/2" Cofferdam. 1 @ 2 1/2" best keel.
 2 @ 2 1/4" No. 1 Hold 4 @ 2 1/2" No. 2 Hold 4 @ 2 1/2" No. 3 Hold 4 @ 2 1/2" No. 4 Hold
 1 @ 2 1/2" No. 5 Hold 1 @ 2 1/2" E.R. Well.

Circulating Pump Direct Bilge Suctions, No. and size 2 @ 6 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 One @ 6 1/2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yps
 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 Yps
 Connections fitted direct on the skin of the ship Yps Are they fitted with Valves or Cocks Both Yps
 sufficiently high on the ship's side to be seen without lifting the stokehold plates Yps Are the Overboard Discharges above or below the deep water line Below
 fitted with a Discharge Valve always accessible on the plating of the vessel Yps Are the Blow Off Cocks fitted with a spigot and brass covering plate Yps
 How are they protected
 Have they been tested as per Rule Yps
 Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yps
 Is the Shaft Tunnel watertight Yps Is it fitted with a watertight door Yps worked from Top platform
 MILERS, &c.—(Letter for record (5)) Total Heating Surface of Boilers 5205 Sq. feet.
 No. and Description of Boilers Three Simple ended Working Pressure 180 lbs sq
 REPORT ON MAIN BOILERS NOW FORWARDED? Yps
 DONKEY BOILER FITTED? No If so, is a report now forwarded? Yps
 Are approved plans forwarded herewith for Shafting Main Boilers Yps Auxiliary Boilers Donkey Boilers
 General Pumping Arrangements Yps Oil fuel Burning Piping Arrangements Yps.

YEAR. State the articles supplied: 8 Top end bolts & nuts, 4 Bottom end bolts & nuts, 4 main
 bolts & nuts, 2 sets coupling bolts & nuts, Air & bilge pump valves,
 up & valves for feed pumps, Impeller, Shaft & spare rings for
 pump, 2 Pairs crank pin brasses, 4 pairs crosshead brasses, Piston valve
 spare rings for H.P. & I.P. pistons, 2 Safety valve springs, 2 valves and
 for main checks, ant. checks, surface & bottom blow down valves,
 tubes, 10 Plain tubes, 5 stay tubes, Escape valve springs for each
 One tail shaft & 4 propeller blades, with studs & nuts,
 rings, also bolts & nuts including bolts & nuts for eye covers etc
 down bolts, & pint ring studs & nuts, Spare part is also included for
 for 2 & electric engines, and oil burning installation.

The foregoing is a correct description,
 FOR EARLE'S
 SHIPBUILDING & ENGINEERING CO. LIMITED
 A.H. Tycker
 ASSISTANT MANAGER

Manufacturer.



1929.

Dates of Survey while building

During progress of work in shops -- June 22. July 1. Aug 7. 19. 21. 28. Sept 4. 7. 12. 13. 19. 20. 23. 26. 27. 30.

During erection on board vessel --- Oct 10. 14. 23. 24. 31. Nov 4. 6. 8. 11. 15. 15. 18. 18. 19. 19. 20. 21. 22. 23. 26. 27. 30. Dec 5. 7. 12. 13. 16. 20. 23. 23.

Total No. of visits 47.

Dates of Examination of principal parts—Cylinders ^{P.} 21.8.29 ^{S.} 4.9.29
 1.P. 12.9.29 20.9.29
 L.P. 12.9.29 20.9.29 Slides 10.10.29 Covers As for cylinders

Pistons 10.10.29 Piston Rods 7.9.29 Connecting rods 7.9.29

Crank shaft ^{P.} 4.9.29 ^{S.} 27.9.29 Thrust shaft P+S. 4.9.29 Intermediate shafts Darlington

Tube shaft Darlington Screw shaft Darlington Propeller 6.11.29

Stern tube 6.11.29 Engine and boiler seatings 27.11.29 Engines holding down bolts 27.11.29

Completion of fitting sea connections 18.11.29

Completion of pumping arrangements ^{Water} 16.12.29 ^{Gil} 27.11.29 Boilers fixed 27.11.29 Engines tried under steam 16.12.29

Main boiler safety valves adjusted 5.12.29 Thickness of adjusting washers ^{S.} 1/32 ^{C.} 23/64 ^{P.} 23/64

Crank shaft material Steel Identification Mark ^{logs} 472 Thrust shaft material Steel Identification Mark ^{logs} 472

Intermediate shafts, material Steel Identification Marks 6406 M.R Tube shaft, material Steel Identification Mark 6406 M.R

Screw shaft, material Steel Identification Mark 6406 M.R Steam Pipes, material Steel Test pressure 540 lbs Date of Test 21.11.29

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 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. It has been satisfactorily fitted on board, tried under full working conditions & found in good order, together with oil fuel & water pumping arrangements. It is eligible in my opinion to have record of +L.M.C. 12.29 C.L.

When leaving the River Thames for seaport on the 22nd December 1929 the nut of the port tail shaft loose coupling worked slack. The nut, coupling & keys all examined & found in good order. The coupling & nut hardened up & placed in good order. Some parts of starboard shaft were also examined & all found in good order.

It is submitted that this vessel is eligible for +L.M.C. 12.29 C.L. F.D. Fitted for oil fuel 12.29 F.P. above 150°F.

The amount of Entry Fee ... £ 5 : 0 :
 Special ... * £ 75 : 11 :
 Donkey Boiler Fee ... £ 0 : 3 :
 Travelling Expenses (if any) £ :

When applied for, * 30 Dec 29.
 When received, * 3.1.30 Edb.
 John S. Mackintosh
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 10 JAN 1930

Assigned +L.M.C. 12.29 Fitted for Oil Fuel 12.29 F.P. above 150°F



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