

REPORT ON MACHINERY.

No. 66117.
SAT. MAY. 23. 1914

Received at London Office

Date of writing Report 14th May 1914 When handed in at Local Office MAY 22 1914 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Reg. Book. 88 (Dup) on the V. S. Motor vessel "Arum" Date, First Survey 11th Feb. 1913 Last Survey 18th May 1914 (Number of Visits 130

Master Davis Built at Newcastle By whom built Swan Hunter & Wigham Richardson Ltd When built 1914

Engines made at Newcastle By whom made Swan Hunter & Wigham Richardson Ltd when made 8

Boilers made at By whom made when made

Registered Horse Power Owners Lower Motor Co Port belonging to London

Norm. Horse Power as per Section 28 302 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Two Cycle single acting Diesel motors No. of Cylinders 8 No. of Cranks 8

Dia. of Cylinders 410^{mm} Length of Stroke 860^{mm} Revs. per minute 125 Dia. of Screw shaft as per rule 9¹/₂ Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

Is the propeller boss If the liner is in more than one length are the joints burned 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 Length of stern bush 38¹/₂

Dia. of Tunnel shaft as per rule 9¹/₂ Dia. of Crank shaft journals as per rule 11 Dia. of Crank pin 11 Size of Crank webs 6¹/₂ x 18¹/₂ Dia. of thrust shaft under

collars 9¹/₂ Dia. of screw 10¹/₂ - 3 Pitch of Screw 9¹/₂ - 6 No. of Blades 4 State whether moveable No Total surface 36 ft

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps 1 Each Eng: Diameter of ditto 4¹/₂ Stroke 10¹/₂ Can one be overhauled while the other is at work Yes

No. of Donkey Engines 5 1 Aux. Comp Sizes of Pumps (6x6x6) (6x6x6) (8x9x8) (4x2x4) No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 - 3¹/₂ & 1 - 2 Connected to Oil Pump In Holds, &c. 8 of 3¹/₂

No. of Bilge Injections 1 sizes 5 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3¹/₂

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Yes Are the Discharge Pipes 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

That pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Dates of examination of completion of fitting of Sea Connections 28. 10. 13 of Stern Tube 28. 10. 13 Screw shaft and Propeller 26. 3. 14

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

OILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

plates Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? *Yes. Two Cochran. If so, is a report now forwarded? Yes*

SPARE GEAR. State the articles supplied:— *1 Working Cylinder, 1 Guide Shoe, 15 Cyl. Studs & nuts, 1 Working Piston complete, 10 Bottom Cyl. Studs & nuts, 1 Working Cyl. cover, 1 Fuel valve complete, 3 Fuel valve spindles, 6 Fuel spray, 1 Fuel valve lever, 1 Scav. Piston valve, 1 Scav. Ecc. strap, 1 Scav. Ecc. shaver & block, 8 Scav. Piston ring, 1 Connecting Rod, 1 Pair of top and brasses, 1 Pair of Bottom and brasses, 1 Set of large main bearings, 1 Set of small main bearings, 1 Cam shaft complete with cam, 2 Pairs of Cam shaft brasses, 1 Fuel pump complete, 1 Suction & discharge valve for water pumps, 3 Thrust Shoss, 1 Propeller shaft, 2 P.S. propellers, 1 Set of Coupling bolts & nuts, 1 Set of valves for each pump fitted Assorted bolts, nuts & lock of white metal etc.*

The foregoing is a correct description,

SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

G.F. Sweet

Manufacturer.

1913
Dates of Survey while building
During progress of work in shops - - - Feb. 11. 17. 27. 28. Mar. 11. 20. 27. Apr. 3. 7. 11. 15. 17. 23. 29. May 2. 6. 9. 15. 16. 20. 21. 23. 27. 28. Jun. 2. 4. 9. 11. 17. 20. Jul. 1. 4. 8. 10. 16. 21. 24. Aug. 1. 6. 12. 14. 18. 25. 28. 29. Sep. 3. 10. 15. 19. 26. Oct. 3. 9. 13. 14. 16. 17. 24. 27. 28. 29. Nov. 3. 10. 12. 14. 15. 20. 24. 25. 26. 28. Dec. 1. 4. 8. 9. 10. 11. 12. 15. 17. 23. 30. 1914 Jan. 7. 9. 12. 13. 14. 15. 19. 20. 26. 30 Feb. 5. 9. 11. 13. 16. 19. 24. 27. Mar. 2. 9. 10. 12. 13. 16. 19. 23. 24. 26. 27. 30. 31. Apr. 3. 4. 6. 8. 16. 20. 23. 27. 28. 30. May 4. 5. 6. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Jun. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Jul. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Aug. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Sep. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Oct. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Nov. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. Dec. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 3. 11. 13 Slides 24. 2. 14 Covers 3. 11. 13 Pistons 3. 11. 13 Rods 24. 2. 14

Connecting rods 24. 2. 14 Crank shafts 10. 9. 13 Thrust shafts 9. 3. 14 Tunnel shafts 9. 3. 14 Screw shafts 9. 3. 14 Propellers 8. 11. 14

Stern tubes 16. 10. 13 Steam pipes tested ✓ Engine and boiler seatings 28. 10. 13 Engines holding down bolts 30. 3. 20. 4. 14

Completion of pumping arrangements 30. 4. 14 Boilers fixed ✓ Engines tried under steam 30. 4. 14

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓

Material of Crank shaft: Steel Identification Mark on Do. 4644 H Material of Thrust shaft: Steel Identification Mark on Do. 2457 MB

Material of Tunnel shafts: Steel Identification Marks on Do. 2484 MB Material of Screw shafts: Steel Identification Marks on Do. 2456 MB

Material of Steam Pipes: ✓ Test pressure ✓

Is an installation fitted for burning oil fuel A/B only Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 49 of the Rules 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 material & workmanship are good. It has been efficiently fitted on board and tried under working conditions at full & manoeuvring powers ahead and astern and found satisfactory. The approximate speed of the vessel is 10 1/2 knots: maximum revs: 125 ahead 130 astern and the minimum number of revs: at which the engines will run is 40

In our opinion the vessel is eligible to have the notation

of L.M.C. 5. 14

It is submitted that this vessel is eligible for

THE RECORD. + L.M.C. 5. 14.

Oil engines 8 Cy. 16 1/2 - 33 7/8 2 SC. 5A.

2 DB. 100 lb.

Annual Survey

The amount of Entry Fee ... £ 3 : 0 : When applied for, MAY 18 1914
Special ... £ 35 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received, MAY 21 1914

Committee's Minute

TUE. MAY 26. 1914

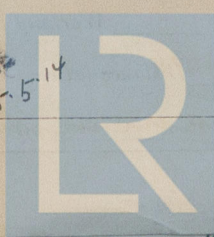
Assigned

+ L.M.C. 5. 14

Oil Engines

Wm. Cowie & R. W. Coomber
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

REGISTERED
WRITTEN 25-5-14



© 2020

Lloyd's Register Foundation

Rpt. 5b.

Date of writing

No. in Sur Reg. Book.

841

Port.

We re
van Hunter
handwritten S.
Specially Surveye

We hereby

For boilers
Horse Power,
above 200. Th
than £2 2s.

MEM.—In
all cases where
to be defrayed

No. 6112.

This request is ma

reign Shipping, u

hile the Committee us

ed that neither the Cor

port or certificate iss

or for any error of jud

21 FEB. 1913

Secretary,

Lloyd's Register

GENERAL

The

842

Port.

We re
van Hunter
handwritten S.
Specially Surveye

We hereby

For boiler
Horse Power
above 200. 1
than £2 2s.

MEM.—In
all cases whe
to be defraye

No. 6113.

This request is m

oreign Shipping,

hile the Committee C

ed that neither the C

port or certificate iss

or for any error of ju

REGISTER OF SHI

Secretary, 1913

Lloyd's Regis

GLASGOW

Survey

Travel

Comm

Assigne