

# REPORT ON MACHINERY.

No. 11415

Received at London Office THU. APR. 29. 1915.

Date of writing Report 28. 4. 1915 Where handed in at Local Office 28. 4. 1915 Port of Aberdeen  
 No. in Survey held at Aberdeen Date, First Survey 21. 9. 14 Last Survey 23. 4. 1915  
 Reg. Book. on the S.S. "EVELINE NUTTEN" (Number of Visits 40) Gross 182.85  
 Master  Built at Aberdeen By whom built Wall Russell & Co. Ltd. No. 566 When built 1915  
 Engines made at Aberdeen By whom made Wall Russell & Co. Ltd. No. 566 when made 1915  
 Boilers made at do By whom made do do when made 1915  
 Registered Horse Power 64 Owners Ernest Charles Nutten Port belonging to Aberdeen  
 Nom. Horse Power as per Section 28 64 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 12 1/2, 20, 33 Length of Stroke 21 Revs. per minute 110 Dia. of Screw shaft 6 1/4 Material of screw shaft Scraper  
 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  
 in the propeller boss Yes If the liner is in more than one length are the joints burned length 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 Length of stern bush 2' 5"  
 Dia. of Tunnel shaft 6 1/4 Dia. of Crank shaft journals 6 1/4 Dia. of Crank pin 6 1/4 Size of Crank webs 9 1/2 x 4 1/2 Dia. of thrust shaft under  
 collars 6 1/4 Dia. of screw 8 1/4 Pitch of Screw 11" 3" No. of Blades 4 State whether moveable No Total surface 297  
 No. of Feed pumps 1 Diameter of ditto 2 3/8 Stroke 12 Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 1 Diameter of ditto 2 3/8 Stroke 12 Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines one Sizes of Pumps 5 1/4 x 3 1/2 x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room one of 2" Stokehold one of 2" In Holds, &c. Fishhold & Slushwell each of 2"  
 Also ejector drawing from all parts, and with separate suction to engine room 2" dia.  
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 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 None  
 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 stokehold 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  
 What pipes are carried through the bunkers two from fishhold, slushwell & F.W. tank How are they protected strong wood casing  
 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 1. 3. 15 of Stern Tube 1. 3. 15 Screw shaft and Propeller 1. 3. 15  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record (7)) Manufacturers of Steel W. Pearson & Co. Ltd. Shedanarkshire S. G. Ltd.  
 Total Heating Surface of Boilers 1258 1/2 Is Forced Draft fitted No No. and Description of Boilers one, cyl. mult. single ended  
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 Date of test 9. 4. 15 No. of Certificate 843  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 35.4 1/2 No. and Description of Safety Valves to  
 each boiler 2 direct spring Area of each valve 5.929 Pressure to which they are adjusted 165 Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork about 4" Mean dia. of boilers 12' 0" Length 10' 0" Material of shell plates S.  
 Thickness 15/16 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams d. r. lap  
 long. seams double straps Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 6 3/8 3 3/8 Lap of plates or width of butt straps 12 1/4 x 10 1/4  
 Per centages of strength of longitudinal joint  
 rivets 82.6 Working pressure of shell by rules 161.4 Size of manhole in shell 16 x 12  
 plate 81.3  
 Size of compensating ring 28" dia x 15" No. and Description of Furnaces in each boiler 2: plain Material S. Outside diameter 44 1/2  
 Length of plain part top 28" bottom 28" Thickness of plates top 3/8" bottom 3/8" Description of longitudinal joint weld No. of strengthening rings 3 1/2 x 3 1/2  
 Working pressure of furnace by the rules 165 Combustion chamber plates: Material S. Thickness: Sides 3/8" Back 5/8" Top 5/8" Bottom 3/8"  
 Pitch of stays to ditto: Sides 9 1/4 x 9 1/2" Back 9 1/4 x 8 3/4" Top 9 x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 166  
 Material of stays Iron Diameter at smallest part 1 9/16 Area supported by each stay 81.0 Working pressure by rules 148 End plates in steam space  
 Material S. Thickness 15/16 Pitch of stays 16 x 16 How are stays secured d. r. w. l. Working pressure by rules 162.5 Material of stays S.  
 Diameter at smallest part 2 5/16 Area supported by each stay 256.0 Working pressure by rules 140 Material of Front plates at bottom S.  
 Thickness 3/8 Material of Lower back plate S. Thickness 15/16 Greatest pitch of stays 13 x 9 1/4 Working pressure of plate by rules 234  
 Diameter of tubes 3 1/4 x 4 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S. Thickness: Front 3/8" Back 13/16" Mean pitch of stays 9"  
 Pitch across wide water spaces 14" Working pressures by rules 13 232.8 Girders to Chamber tops: Material S. Depth and  
 thickness of girder at centre 2 3/4 x 1 3/8 Length as per rule 29 1/2 Distance apart 9" Number and pitch of stays in each two 9"  
 Working pressure by rules 161.4 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - Two top, & 2 bottom end bolts & nuts; 2 main bearing, and one set coupling bolts & nuts; 1 set each, Air, circulating, Feed & Bilge pump valves; 1 each main & donkey check valve; 1 safety valve spring; bolts and nuts assorted, and iron of various sizes.

The foregoing is a correct description,

for HALL, RUSSELL & CO., LTD.

*James H. Hunter*

Manufacturers of main engines & Boilers.

Dates of Survey while building: During progress of work in shops - 1914 Sept 21 - Oct 29 - Nov 5 - Dec 8, 10, 15, 22, 30. 1915 Jan 5, 13, 14, 19, 30 - Feb 1, 3, 8, 10, 11, 19, 22. During erection on board vessel - - - - - Max 1, 2, 4, 8, 10, 12, 15, 18, 22, 25, 31. Apr 5, 8, 9, 13, 14, 15, 19, 21, 23. Total No. of visits 40/

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts - Cylinders  $\frac{5.13}{7} \frac{3.19}{2} \frac{2.18}{3}$  Slides  $\frac{3}{2} \frac{18}{3}$  Covers  $\frac{5}{7} \frac{8}{2}$  Pistons  $\frac{15}{12} \frac{5}{7} \frac{19}{2}$  Rods  $\frac{10}{12} \frac{5}{7} \frac{19}{2} \frac{3.8}{3}$  Connecting rods  $\frac{12}{12} \frac{5}{7} \frac{19}{2} \frac{3}{3}$  Crank shaft 2, 3, 15 Thrust shaft  $\frac{15}{12} \frac{5}{7} \frac{11}{2}$  Tunnel shafts  $\frac{15}{12} \frac{5}{7} \frac{11}{2}$  Screw shaft  $\frac{5}{7} \frac{30}{12} \frac{3.11}{2}$  Propeller  $\frac{3.10}{2}$  Stern tube 3, 2, 15 Steam pipes tested 15, 4, 15 Engine and boiler seatings  $\frac{14}{8} \frac{14}{2}$  Engines holding down bolts 25, 31 Completion of pumping arrangements 9, 4, 15 Boilers fixed 14, 4, 15 Engines tried under steam 21, 4, 15 Main boiler safety valves adjusted 21, 4, 15 Thickness of adjusting washers Port  $\frac{9}{32}$  Starboard  $\frac{9}{32}$  bare Material of Crank shaft I & S Identification Mark on Do. 14/2D(DIN) Material of Thrust shaft S Identification Mark on Do. 923A Material of Tunnel shafts S Identification Marks on Do. 924A Material of Screw shafts S Identification Marks on Do. 925A Material of Steam Pipes Copper solid drawn 3/2 bore No 8 B.W.G. Test pressure 320 lbs per square inch 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 Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case yes If so, state name of vessel "Agnes Mutter" Repl No 11683

General Remarks (State quality of workmanship, opinions as to class, &c.)

These Engines, and the boiler, have been constructed under Special Survey and in accordance with the Secretary's letter, the Rules, & approved plan. The materials, and workmanship, are good. When completed, and properly fitted on board, they were tried under steam at moorings with satisfactory results, and are now in good working order, and in my opinion entitled to the record L.M.C. 4.15 in the Register Book

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 4.15.

*J.W.D.*  
30/4/15.

*Ridley Russell*

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... £ 1 : : When applied for, 28.11.15  
Special ... £ 10 : 1 : :  
Donkey Boiler Fee ... £ : : : When received, 13  
Travelling Expenses (if any) £ : : : 24/5/15 29/5/15

Committee's Minute FRI. APR. 30 1915

Assigned

+ L.M.C. 4.15

MACHINERY CERTIFICATE 22113



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Aberdeen Office

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