

# REPORT ON MACHINERY

Wm. No. 11819  
No. 35686  
THU. -6. JAN. 1916

Received at London Office

Date of writing Report 27-12-1915 When handed in at Local Office 29-12-1915 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 19/5/15 Last Survey 27-12-1915  
 Reg. Book. on the Machinery for the S. S. "Vale of Youth" of Dumbuck & Co. 92 419 (Number of Visits 23)  
 Master Nightingale Built at Aburdeen By whom built J. Duthie and Co. 92 419 When built 1915 Gross 226 Tons  
 Engines made at Coatbridge By whom made W. Beardmore & Co. Ltd. 92 450 when made 1915 Net 88  
 Boilers made at Glasgow By whom made D. Rowan & Co. 92 226 when made 1915  
 Registered Horse Power 41 Owners Vale of Leven Steam Fishing Co. Ltd. Port belonging to Aburdeen  
 Nom. Horse Power as per Section 28 41 Is Refrigerating Machinery fitted for cargo purposes 90 Is Electric Light fitted 90

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 11 1/2, 20, 34 Length of Stroke 23 Revs. per minute 108 Dia. of Screw shaft 6 3/4 Material of screw shaft W.S.  
 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 no 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 no Length of stern bush 2-9"  
 Dia. of Tunnel shaft 6-01" Dia. of Crank shaft journals 6 3/4" Dia. of Crank pin 6 3/4" Size of Crank webs 14 1/4 x 4 1/2" of thrust shaft under collars 6 3/4" Dia. of screw 8-6" Pitch of Screw 11-6" No. of Blades 4 State whether moveable 90 Total surface 31 sq. ft.  
 No. of Feed pumps 1 Diameter of ditto 2 7/8" Stroke 11 1/2" Can one be overhauled while the other is at work no  
 No. of Bilge pumps 1 Diameter of ditto 2 7/8" Stroke 11 1/2" Can one be overhauled while the other is at work no  
 No. of Donkey Engines 2 Sizes of Pumps 3 1/4 x 3 1/2 x 5; 5 1/2 x 4 1/4 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2-2 1/2" Eng. Room aft, 1 Eng. Room fore In Holds, &c. 2-2 1/2" Blushwell & hold  
1-2" Freshwater Tank. Ejector drawing from all parts with separate s.c. 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 no  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Values and Cocks  
 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 Suction from stokehold, Blushwell & 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 25.10.15 of Stern Tube 22.10.15 Screw shaft and Propeller 25.10.15  
 Is the Screw Shaft Tunnel watertight Stone Is it fitted with a watertight door worked from

OILERS, &c.—(Letter for record S.) Manufacturers of Steel  
 Total Heating Surface of Boilers 1250 sq. ft. Is Forced Draft fitted 90 No. and Description of Boilers  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 24-5-15 No. of Certificate 13224  
 Can each boiler be worked separately yes Area of fire grate in each boiler 38 sq. ft. No. and Description of Safety Valves to each boiler 2 Spring in abn. th Area of each valve 4-9" Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork about 7" Mean dia. of boilers 12-6" Length 10-3" Material of shell plates  
 Thickness See Glasgow Report Range of tensile strength See Glasgow Report Are the shell plates welded or flanged See Glasgow Report Description of riveting: cir. seams  
 Long. seams See Glasgow Report Diameter of rivet holes in long. seams See Glasgow Report Pitch of rivets See Glasgow Report Lap of plates or width of butt straps  
 Per centages of strength of longitudinal joint See Glasgow Report Working pressure of shell by rules See Glasgow Report Size of manhole in shell  
 Size of compensating ring See Glasgow Report No. and Description of Surfaces in each boiler See Glasgow Report Material See Glasgow Report Outside diameter  
 Length of plain part See Glasgow Report Thickness of plates See Glasgow Report Description of longitudinal joint See Glasgow Report No. of strengthening rings  
 Working pressure of furnace by the rules See Glasgow Report Combustion chamber plates: Material See Glasgow Report Thickness: Sides See Glasgow Report Back See Glasgow Report Top See Glasgow Report Bottom See Glasgow Report  
 Pitch of stays to ditto See Glasgow Report Sides See Glasgow Report Back See Glasgow Report Top See Glasgow Report If stays are fitted with nuts or riveted heads See Glasgow Report Working pressure by rules  
 Material of stays See Glasgow Report Diameter at smallest part See Glasgow Report Area supported by each stay See Glasgow Report Working pressure by rules See Glasgow Report End plates in steam space:  
 Material See Glasgow Report Thickness See Glasgow Report Pitch of stays See Glasgow Report How are stays secured See Glasgow Report Working pressure by rules See Glasgow Report Material of stays See Glasgow Report  
 Diameter at smallest part See Glasgow Report Area supported by each stay See Glasgow Report Working pressure by rules See Glasgow Report Material of Front plates at bottom See Glasgow Report  
 Thickness See Glasgow Report Material of Lower back plate See Glasgow Report Thickness See Glasgow Report Greatest pitch of stays See Glasgow Report Working pressure of plate by rules See Glasgow Report  
 Diameter of tubes See Glasgow Report Pitch of tubes See Glasgow Report Material of tube plates See Glasgow Report Thickness: Front See Glasgow Report Back See Glasgow Report Mean pitch of stays See Glasgow Report  
 Pitch across wide water spaces See Glasgow Report Working pressures by rules See Glasgow Report Girders to Chamber tops: Material See Glasgow Report Depth and  
 Thickness of girder at centre See Glasgow Report Length as per rule See Glasgow Report Distance apart See Glasgow Report Number and pitch of stays in each See Glasgow Report  
 Working pressure by rules See Glasgow Report Superheater or Steam chest; how connected to boiler See Glasgow Report Can the superheater be shut off and the boiler worked  
 Separately See Glasgow Report Diameter See Glasgow Report Length See Glasgow Report Thickness of shell plates See Glasgow Report Material See Glasgow Report Description of longitudinal joint See Glasgow Report Diam. of rivet  
 plates See Glasgow Report Pitch of rivets See Glasgow Report Working pressure of shell by rules See Glasgow Report Diameter of flue See Glasgow Report Material of flue plates See Glasgow Report Thickness See Glasgow Report  
 Stiffened with rings See Glasgow Report Distance between rings See Glasgow Report Working pressure by rules See Glasgow Report End plates: Thickness See Glasgow Report How stayed See Glasgow Report  
 Working pressure of end plates See Glasgow Report Area of safety valves to superheater See Glasgow Report Are they fitted with easing gear See Glasgow Report



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety No. in Reg. Book. \_\_\_\_\_  
 Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_  
 If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_  
 Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Rivets \_\_\_\_\_  
 Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Plates \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_  
 Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied:— 2 Connecting Rods Top and 2 Bottom end bolts  
 2 main bearing bolts, 1 set of coupling bolts, 1 set of Head & Bilge pump valves, a quantity of assorted bolts and nuts. Iron of various sizes.  
 1 set each Air & Exc. pump valves; 1 each main donkey check valve; 1 safety valve spring. *R.H.*  
 The foregoing is a correct description, for **WILLIAM BEARDMORE & CO., LIMITED.**  
 Manufacturer. *W.S. Wilson*

Dates of Survey while building  
 During progress of work in shops -- 1915 May 19-26 June 9-17-29 July 5-28 Aug 13-25 Sept 3-8-15-21-28 Oct 8-14-23-30  
 During erection on board vessel -- Nov 3-17-26 Dec 7-27  
 Total No. of visits 23 (14)  
 Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 28-9-15 Slides 28-9-15 Covers 8-9-15 Pistons 28-9-15 Rods 30-10-15  
 Connecting rods 30-10-15 Crank shaft 8-10-15 Thrust shaft 14-11-15 Tunnel shafts 24-12-15 Screw shaft 23-10-15 Propeller 23-10-15  
 Stern tube 14-10-15 Steam pipes tested 24.2.16 Engine and boiler seatings 29.4.15 Engines holding down bolts 14.1.16  
 Completion of pumping arrangements 4.2.16 Boilers fixed 24.2.16 Engines tried under steam 7.3.16  
 Main boiler safety valves adjusted 7.3.16 Thickness of adjusting washers Port 7/16" Stair 1/2"  
 Material of Crank shaft Mild steel Identification Mark on Do. 4040 70.7.5-10-15 Material of Thrust shaft Mild steel Identification Mark on Do. 4040 70.7.23-  
 Material of Tunnel shafts Mild steel Identification Marks on Do. 4141 Material of Screw shafts W.S Identification Marks on Do. 4040 70.7.23-  
 Material of Steam Pipes Copper 3 1/4 bore S.Y. 1349 Test pressure 360 lbs per sq inch.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The machinery has been built under special survey in accordance with the approved plans and the rules of the society. The material and workmanship are of good quality throughout. This machinery together with the Boiler. U.S. rept. No 35846 has now been fitted on board and tried under steam at moorings, with satisfactory results and is now in good order, and in my opinion entitled to the record **LMC. 3.16.** in the Register Book.  
*Ridley Powell*

It is submitted that this vessel is eligible for THE RECORD + LMC 3.16.

*J.W.D.* 29/3/16  
*F.R.R.*

The amount of Entry Fee	£ 1 : 0 : 0	When applied for,
Special	£ 4 : 2 : 0	5/1/16
Donkey Boiler Fee	£ 3 : 11 : 0	When received,
Travelling Expenses (if any)	£ :	8-4-1916 19/4/16

**Hed. A. Ferguson.**  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASGOW 5 JAN 1916  
 Assigned Defered for completion

MACHINERY CERTIFICATE WRITTEN.



Glasgow

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

LMC 4/1/16