

## REPORT ON MACHINERY.

Port of Barrow in Furness

THUR, 7 APR 1898

Received at London Office

No. in Survey held at BarrowDate, first Survey Dec. 24/96 Last Survey Mar. 28th 1898

Reg. Book.

13 on the Iron Screw Steamer Blandine Kennedy(Number of Visits 145)Gross 2986.73Net 1921.59Master Cowie Built at LeithBy whom built Ramag & FergusonWhen built 1882-4Engines made at BarrowBy whom made Vickers Sons & Maxsonwhen made 1898Boilers made at 100By whom made 100when made 1898Registered Horse Power 225Owners Caymer & Co. LtdPort belonging to GlasgowNom. Horse Power as per Section 28 358 362ENGINES, &c.— Description of Engines Triple Expansion No. of Cylinders ThreeDiameter of Cylinders 24 1/2 40 67 Length of Stroke 48 Revolutions per minute 132 Diameter of Screw shaft as per rule 14Diameter of Tunnel shaft as fitted 13 1/2 Diameter of Crank shaft journals 14 Diameter of Crank pin 14 1/2 Size of Crank webs 25 x 10Diameter of screw 16 1/2 Pitch of screw 20 1/2 No. of blades 4 State whether moveable yes Total surface 75 ftNo. of Feed pumps two Diameter of ditto 7 Stroke 2 1/2 Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yesNo. of Donkey Engines two Sizes of Pumps 9 1/2 x 10 and centrifugal No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room two 3" In Holds, &c. no, hold two 3" No 2 hold two 3"No. of bilge injections / sizes 4 1/2 Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size ye 2 1/2"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 yesAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks BothAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers none How are they protected —Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock 4/12/97 Is the screw shaft tunnel watertight yesIs it fitted with a watertight door yes worked from upper deckBOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 4729.78No. and Description of Boilers Two Single Ended Working Pressure 180 Tested by hydraulic pressure to 360Date of test 2.7.97 Can each boiler be worked separately yes Area of fire grate in each boiler 57.75 No. and Description of safety valves toeach boiler Two Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 180 Are they fittedwith easing gear yes Smallest distance between boilers or uptakes, and bunkers or woodwork 12 Mean diameter of boilers 15.0Length 11.9 Material of shell plates Steel Thickness 1 1/2 Description of riveting: circum. seams 1 double long. seams 10 ButtsDiameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/16 Lap of plates or width of butt straps 26 3/8, 35-20 3/8Percentages of strength of longitudinal joint 85-43 Working pressure of shell by rules 185 Size of manhole in shell 15 x 19 1/2Size of compensating ring 2 7/8 x 5 6/16 No. and Description of Furnaces in each boiler 3 Purvis Material Steel Outside diameter 37 1/2Length of plain part top 10 1/2 bottom 9 Thickness of plates top 9/16 bottom 9/16 Description of longitudinal joint butted No. of strengthening rings 4Working pressure of furnace by the rules 189 Combustion chamber plates: Material Steel Thickness: Sides 9/32 7/8 Back 9/32 Top 9/32 Bottom 5/8Pitch of stays to ditto: Sides 8 7/8 x 7 1/4 Back 8 Top 7 1/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 190Material of stays Steel Diameter at smallest part 1 1/2 1/4 Area supported by each stay 59.8 Working pressure by rules 182 End plates in steam space:Material Steel Thickness 1 3/64 Pitch of stays 15 x 5 How are stays secured W nuts Working pressure by rules 230 Material of stays SteelDiameter at smallest part 2 1/2 Area supported by each stay 22.5 Working pressure by rules 193 Material of Front plates at bottom SteelThickness 7/8 Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 15 1/2 Working pressure of plate by rulesDiameter of tubes 2 1/2 Pitch of tubes 34 x 35 7/8 Material of tube plates Steel Thickness: Front 1 1/64 7/8 Back 3/4 Mean pitch of stays 110 1/2Pitch across wide water spaces 14 Working pressures by rules 186 Girders to Chamber tops: Material Steel Depth andThickness of girder at centre 2 7/8 x 15 1/8 Length as per rule 29 Distance apart 7 1/2 Number and pitch of Stays in each three 7 1/4Working pressure by rules 198 Superheater or Steam chest; how connected to boiler — Can the superheater be shut off and the boiler workedseparately yes Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivetholes — 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 —



DONKEY BOILER— Description *New 10 B fitted in 1893*  
Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed *on Deck*  
Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_  
No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can  
enter the donkey boiler \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ 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 \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_  
Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:—

*The foregoing is a correct description.*  
VICKERS, SONS, & MAXIM, LIMITED.  
Manufacturer.

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

Dates of Survey while building  
During progress of work in shops— 1896. Dec. 2. 7. 9. 14. 16. 18. 21. 23. 1897. Jan. 6. 11. 15. 18. 21. 22. 25. 28. Feb. 1. 3. 5. 8. 9. 12. 15. 17. 19. 22. 23. 26. March. 1. 3. 5. 8. 10. 12. 15. 17. 19. 22. 24. 26. 29. 31.  
During erection on board vessel— April. 26. 28. 12. 13. 14. 15. 23. 26. 27. 28. 30. May. 3. 4. 6. 10. 13. 14. 19. 20. 21. 24. 26. 27. 28. June. 1. 2. 3. 6. 18. 21. 28. July. 12. 6. 9. 13. 22. Aug. 25. Sept. 28. 13. 17. 24. 27. 30. Oct. 5. 11. 14. 18. 22. 25.  
Total No. of visits Novem. 2. 4. 7. 10. 11. 15. 17. 23. 26. 30. Dec. 2. 4. 6. 8. 11. 13. 14. 15. 16. 21. 22. 1898. Jan. 10. 11. 12. 14. 17. 19. 24. 26. 28. Feb. 7. 8. 10. 12. 14. 15. 17. 21. 23. 28. Mar. 1. 3. 22. 23. 24. 25. 28.

The Engines of this Vessel have been converted into triple expansion by Messrs. Vickers Sons and Maxim Ltd. How done:— New H.P. Engine fitted complete new Piston Liners and Slide Valves fitted to D.P. Engines Piston Rods and Slide Spindles skinned up and new neck & gland bush fitted New cross head fitted to D.P. and new Piston Rod to L.P. New metal fitted to main bearing and new crankshaft fitted Condenser and all Pumps examined and overhauled Weir feed Pump, heater and evaporator fitted

Vessel placed on depositing dock sea cocks and connections overhauled and Part renewed new screw shaft fitted.

New main Boilers with Howdson System of forced draught.

Donkey Boilers examined found good, Safety Valves examined and adjusted.

The Machinery of this Vessel is now in good order and safe working condition eligible in my opinion to have the notation +NB 3.98 +LMC 3.98 and +TPD 98 in the Register Book.

Certificate (if required) to be sent to

It is submitted that this vessel is eligible for THE RECORD. +L.N. 6.3.98 +L.B. 3.98

The amount of Entry Fee £  
Special 100% 19 : 0  
Donkey Boiler Fee 1 : 18  
Travelling Expenses (if any) 17 : 2  
When applied for, 6th April 1898  
When received, 15/4/98

Donkey Boilers surveyed due 7.9.98  
Jas. Easthope  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

+LMC 3.98 +NB 3.98  
TPD 98

MACHINERY CERTIFICATE  
WRITTEN 1998



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Lloyd's Register  
Foundation

\*\*\* These  
Signal Le

Official

859

No., Date,  
Whether B  
Foreign

Number of  
Number of  
Rigged  
Stern  
Build  
Galleries  
Head  
Framework  
vessel  
Number of  
Number of  
and the

Total to qu  
at side a

No. of  
Engines

One Trip  
Set  
Num  
Iron  
Press

Under Ton  
Closed-in s  
Space or  
Poop  
Forecast  
Round E  
Other cl  
Excess  
Spaces

Deductions

Name

No. of  
Name, Res.

Part  
tons  
New

Dated 3

W B & L (439w)