

REPORT ON MACHINERY.

Port of Newcastle on Tyne

Received at London Office

No. in Survey held at Newcastle

Date, first Survey March 6 Last Survey Oct 7 1901

Book. on the 5/8 "BATTENHALL"

(Number of Visits 27)

Tons { Gross 2144
Net 1578

Builder G. M. W. Stephens Built at Blyth

By whom built The Blyth SBC

When built 1901-10

Machinery made at Newcastle

By whom made The North Eastern Marine Eng'g Co when made 1901-10

Boilers made at Newcastle

By whom made The North Eastern Marine Eng'g Co when made 1901-10

Registered Horse Power

Owners Lombard & Co. Ltd.

Port belonging to London

Horse Power as per Section 28 234

Is Refrigerating Machinery fitted No

Is Electric Light fitted No

MACHINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

of Cylinders 22-36-59 Length of Stroke 39" Revs. per minute 75 Dia. of Screw shaft as per rule 12.55 Lgth. of stern bush 4.6"
 as per rule 10.43 Dia. of Crank shaft journals as per rule 10.95 as fitted 12.2" Dia. of Crank pin 11" Size of Crank webs 7x2 1/4" Dia. of thrust shaft under
 of Tunnel shaft as fitted 10.2" Dia. of screw 15-0" Pitch of screw 15-0" No. of blades 4 State whether moveable yes Total surface 69 sq ft

of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 18" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 18" Can one be overhauled while the other is at work yes

of Donkey Engines 2 Sizes of Pumps Feed 6x4x6, Ball 8x9x10 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room four 2 3/4" & one 3 1/2" In Holds, &c. fore, main & after main holds
two 2 3/4" each, hold tunnel well one 3" each.

of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 3 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 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

Are all pipes 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 yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes

Were stern tube, propeller, screw shaft, and all connections examined in dry dock before launch Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from upper deck

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 3750 sq ft Is forced draft fitted No

and Description of Boilers Two Multi. Single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

of test 26.7.01 Can each boiler be worked separately yes Area of fire grate in each boiler 52 sq ft No. and Description of safety valves to
 boiler 2 direct springs Area of each valve 4.06 sq in Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 13-9 1/8" Length 10-6" Material of shell plates Steel

Strength 1/32 Range of tensile strength 29.52 Are they welded or flanged no Descrip. of riveting: cir. seams DR long. seams DBS, DR

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 15 3/8"

Percentages of strength of longitudinal joint: rivets 83.6 Working pressure of shell by rules 160 lbs Size of manhole in shell 16x12
 plate 82.3

of compensating ring end flanged in No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 39"

Height of plain part top 6-3" Thickness of plates crowns 2-3" Description of longitudinal joint DBS, SR No. of strengthening rings none
bottom 6-9" bottom 3-2"

Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/8" Back 1/8" Top 1/8" Bottom 1/8"

of stays to ditto: Sides 10x10 Back 10 3/4x9 1/4 Top 10x10 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 163 lbs

Material of stays Steel Diameter at smallest part 1 1/2" eff Area supported by each stay 100 sq in Working pressure by rules 161 lbs End plates in steam space:
 Material Steel Thickness 1 3/8" Pitch of stays 21x25 1/2" How are stays secured DN & W Working pressure by rules 166 lbs Material of stays Steel

Diameter at smallest part 3 1/2" eff Area supported by each stay 506 sq in Working pressure by rules 179 lbs Material of Front plates at bottom Steel

Thickness 1/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14 1/2" all Working pressure of plate by rules 185 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2x4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 9"

across wide water spaces 14 1/2" all Working pressures by rules 170 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 1/2x1 1/2" Length as per rule 31" Distance apart 10" Number and pitch of Stays in each two-10"

Working pressure by rules 160 lbs Superheater or Steam chest: how connected to boiler none Can the superheater be shut off and the boiler worked
 independently no

Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet
 Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

Reinforced 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 —

006387-006400-0207

DONKEY BOILER— No. 1 Description Vertical
 Made at Stockton By whom made Riley Bros When made 2-8-01 Where fixed stokehold
 Working pressure 80% tested by hydraulic pressure to 160% No. of Certificate 2539 Fire grate area 28sq Description of safety valves direct spring
 No. of safety valves 2 Area of each 4-9 Pressure to which they are adjusted 80% If fitted with easing gear yes If steam from main boilers can enter the donkey boiler No
 Dia. of donkey boiler 7-0 Length 14-0 Material of shell plates steel Thickness 7/16 Range of tensile strength 27,32 Descrip. of riveting long. seams d 7 lap Dia. of rivet holes 7/16 Whether punched or drilled punched Pitch of rivets 3 1/4
 Lap of plating H 1/2 Per centage of strength of joint 82-6 Rivets 7-3 Thickness of shell crown plates 9 Radius of do. 5-0 No. of Stays to do. 4
 Dia. of stays 1 1/2 Diameter of furnace Top 5-5 Bottom 6-0 Length of furnace 5-3 Thickness of furnace plates 5/8 Description of joint lap sr Thickness of furnace crown plates 7/16 Stayed by as crown of shell Working pressure of shell by rules 82-7%
 Working pressure of furnace by rules 86% Diameter of uptake 17 Thickness of uptake plates 7/16 Thickness of water tubes 3/8

SPARE GEAR. State the articles supplied:— Two top stoves two bottom stoves two main bearing bolts one set coupling bolts, one set feed cone set ledge pump valves, one set piston spring one propeller and a quantity of assorted bolts etc.

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.
 The foregoing is a correct description,

S. Hunter Manufacturer.
 DIRECTOR

Dates of Survey while building
 During progress of work in shops— 1901. Mch 12. 18. Apr. 19. 26. 29. May 6. 8. 29. June 7. 12. July 3. 9. 19. 24. 26. 30. Aug 1. 2. 11. 15. 21. 23. 26. 28. Sep. 1
 During erection on board vessel — Oct 7
 Total No. of visits 24
 Is the approved plan of main boiler forwarded herewith no
 " " " donkey " " " no

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

Material of screw shaft Iron Is the screw shaft fitted with a continuous liner the whole length of the stern tube no
 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 no If two liners are fitted, is the shaft lapped or protected between the liners yes

The machinery of this vessel has been constructed & fitted on board under Special Survey the workmanship is sound & good.
 The machinery has been tried under steam as required by the Rules & found satisfactory & is in our opinion eligible for the record of +L.M.C 10-01 in the Register Book.

The plan of main boiler is retained for dealing with duplicate.

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 10, 01

H.L.
10/10/01
10.10.01

The amount of Entry Fee... £ 2 : 0 : 0 When applied for.
 Special ... £ 31 " 14 : 05 : 10
 Donkey Boiler Fee ... £ : : :
 Travelling Expenses (if any) £ : : :
 When received, 11.10.01

Robert Haig, J. C. Surpin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned

FRI. OCT 11 1901
+L.M.C. 10. 01

MACHINERY CERTIFICATE
 WRITTEN.



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Certificate (if required) to be sent to Newcastle-on-Tyne.

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