

REPORT ON MACHINERY.

Port of Newcastle on TyneReceived at London Office 17 MAR 1903No. in Survey held at Newcastle
Reg. Book.Date, first Survey Sep 18 '02 Last Survey Mar 6 '03(Number of Visits 32)on the Screw Steamer "Coaster"Tons { Gross 269
Net 13Master P. Fairweather Built at Newcastle By whom built Wood Skinner & Co When built 1903Engines made at North Shields By whom made Baird Bros when made 1903Boilers made at S. Shields By whom made J. J. Eltringham and Co. when made 20.1.03.Registered Horse Power 50 Owners J. Thompson & Son Port belonging to NewcastleNom. Horse Power as per Section 28 50 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c.—Description of Engines

CompoundNo. of Cylinders two No. of Cranks twoDia. of Cylinders 16" - 32" Length of Stroke 22" Revs. per minute 100 Dia. of Screw shaft as per rule 6.75 Lgth. of stern bush 2-5"
Dia. of Tunnel shaft as per rule 6.5 Dia. of Crank shaft journals as per rule 6.5 Dia. of Crank pin 6 9/16 Size of Crank webs 10 1/2" Dia. of thrust shaft under collars 6 9/16 Dia. of screw 7.9" Pitch of screw 10 ft 6" No. of blades 4 State whether moveable no Total surface 21.6 sq ftNo. of Feed pumps one Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓No. of Donkey Engines one Sizes of Pumps 4 1/2 x 2 1/4 x 4 Duplex No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 3. 7/8" 1. 2 1/2" 3 = 2" and 1 = 2 1/2" In Holds, &c. 2 of 2" four each 2" 2"No. of bilge injections 1 sizes 2 1/2" 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 ✓Are 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 by bulkheadsAre 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 Nov 1902 Is the screw shaft tunnel watertight ✓Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—

(Letter for record S.)Total Heating Surface of Boilers 905 sq ftIs forced draft fitted noNo. and Description of Boilers One Cyl. Mult. Single end. Working Pressure 120 lb Tested by hydraulic pressure to 240 lbDate of test 20.1.03 Can each boiler be worked separately ✓ Area of fire grate in each boiler 31 sq ft No. and Description of safety valves to each boiler 2 Direct Spring Area of each valve 4.91 sq in Pressure to which they are adjusted 125 lb Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 10.11 3/4" Length 9'-6" Material of shell plates S.Thickness 25/32 Range of tensile strength 28/32 tons Are they welded or flanged ✓ Descrip. of riveting: cir. seams Lap. D.R. long. seams Lap. T.R.Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 4 1/2" (S.P.P.) Lap of plates 8 5/16Per centages of strength of longitudinal joint rivets 81 plate 75 Working pressure of shell by rules 121 lb Size of manhole in shell 16" x 12"Size of compensating ring 7 1/2 x 25/32 No. and Description of Furnaces in each boiler 2 Plain Material S. Outside diameter 40"Length of plain part top 7 3/4" bottom 10 2" Thickness of plates 19/32 crown 11/16 bottom 11/16 Description of longitudinal joint Lap. S.R. No. of strengthening rings ✓Working pressure of furnace by the rules 128 lb Combustion chamber plates: Material S. Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 11/16Pitch of stays to ditto: Sides 9 1/2 x 9 Back 10 1/4 x 8 1/2 Top ✓ If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 120 lbMaterial of stays S. Diameter at smallest part 1 1/2" Area supported by each stay 90 sq in Working pressure by rules 126 lb End plates in steam space:Material S. Thickness 13/16 Pitch of stays 15 x 14 1/2 How are stays secured D.N.W. Working pressure by rules 143 lb Material of stays S.Diameter at smallest part 1 1/2" Area supported by each stay 218 sq in Working pressure by rules 136 lb Material of Front plates at bottom S.Thickness 13/16 Material of Lower back plate S. Thickness 3/4" Greatest pitch of stays 14 x 10 1/2 Working pressure of plate by rules 129 lbDiameter of tubes 3 1/2" Pitch of tubes 4 1/2 x 4 7/8 Material of tube plates S. Thickness: Front 27/32 Back 25/32 Mean pitch of stays 11 7/8 b.Pitch across wide water spaces 14 1/2" Working pressures by rules 120 lb Girders to Chamber tops: Material none Depth andthickness of girder at centre Palm Stay Length as per rule 2 1/2 ft Distance apart 11 1/2" Number and pitch of Stays in each ✓Working pressure by rules ✓ Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler workedseparately ✓ 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 ✓If 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— No. Description *none fitted*
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 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
Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength
Descrip. of riveting long. seams Dia. of rivet holes Whether patched 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: *Two top end bolts and nuts, two bottom end bolts and nuts. two main bearing bolts & nuts. Spare coupling bolts & nuts. Spare feed & bilge pump valves assorted iron, bolts & nuts*

The foregoing is a correct description,

Jos. J. Elvingham & Co. Manufacturers of Lumber *Baird Bros. Makers of Engine.*

Dates During progress of work in shops— *Eng. 1902 Sep. 1. Oct. 13. 21. Nov. 12. 24. Dec. 10. 19. 29. 1902. Jan. 29. Feb. 2. 11. 17. Mar. 26*
of Survey During erection on board vessel— *Blk. 1903 Sep. 22. Oct. 6. 10. Oct. 15. 21. 28. Nov. 7. 17. 26. Dec. 5. 12. 17. 1903. Jan. 6. 13. 20.*
while building Total No. of visits *32* Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " " *Yes*

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

Material of screw shaft *Woot-iron* 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 *Yes*
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*

This boiler has been constructed under special survey.

The materials and workmanship are sound and good.

On completion it was examined under an hydraulic pressure of 240 lbs and found satisfactory at that pressure.

The engine built under special survey the workmanship and material found good and efficient.

The main steam pipe tested under hydraulic pressure to 240 lbs and found efficient at that pressure.

The machinery fitted aft. tried under steam and found satisfactory.

*In our opinion this vessel is worthy of the notation of **L.M.C 3.03.** to be made in the Register Book—*

It is submitted that this vessel is eligible for THE RECORD. **L.M.C 3.03**

Yes
18.3.03

The amount of Entry Fee. £ 1 : : :
Special £ 8 : : :
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : :
When applied for, *16 MAR 1903*
When received, *17 MAR 1903*

Committee's Minute

FRI. 20 MAR 1903

Assigned

+ L.M.C 3.03

W. Lane *For J. G. Macdillop & Self*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Leonard G. Macdillop



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MACHINERY CERTIFICATE WRITTEN.