

REPORT ON MACHINERY.

Port of MIDDLESBROUGH-ON-TEES

Received at London Office 18

MUN 25 JUL 1898

in Survey held at StocktonDate, first Survey 2nd Dec 1897 Last Survey 16th July 1898

book.

(Number of Visits 31)

on the

S. S. Euston.Tons { Gross 2728
Net 1747.When built 1898Built at StocktonBy whom built Robner & Sones made at StocktonBy whom made Blair & Coy Ltdwhen made 1898.rs made at StocktonBy whom made Blair & Coy Ltdwhen made 1898.tered Horse Power 200.Owners Euston S. S. CoyPort belonging to CardiffHorse Power as per Section 28 245.Is Electric Light fitted No.INES, &c.—Description of Engines Triple ExpansionNo. of Cylinders 3.No. of Cranks 3.Diameter of Cylinders 22 1/2, 37 1/2, 61" Length of Stroke 42" Revolutions per minute 58 Diameter of Screw shaft 10 1/2" as per rule 10 1/2" as fitted 12 1/2"Diameter of Tunnel shaft 11 3/4" as fitted Diameter of Crank shaft journals 12" Diameter of Crank pin 12 1/2" Size of Crank webs BuiltDiameter of screw 16'-0" Pitch of screw 16'-6" No. of blades 4. State whether moveable Not. Total surface 7309. ft.No. of Feed pumps 2. Diameter of ditto 3" Stroke 30" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2. Diameter of ditto 4 1/2" Stroke 30" Can one be overhauled while the other is at work YesNo. of Donkey Engines 2. Sizes of Pumps 9" x 10" 4" x 8" No. and size of Suctions connected to both Bilge and Donkey pumpsEngine Room Three. Centre 3 1/2" wings 3" In Holds, &c. Fore, Main & aft holds two eachDiameter of bilge injections 1 sizes 7" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 4"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 NoneAll 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 YesHow are they protected —At pipes are carried through the bunkers NoneAll pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times YesThe 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 on Stocks Is the screw shaft tunnel watertight apparentlyIs it fitted with a watertight door Yes worked from upper platformMILLERS, &c.— (Letter for record (S) Total Heating Surface of Boilers 3760 sq. ft. Is forced draft fitted Noand Description of Boilers 2. S.E. Multitubular Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbsNo. of tests 265.98 Can each boiler be worked separately Yes Area of fire grate in each boiler 50" No. and Description of safety valves toeach boiler two dir. Act. Spring Area of each valve 7.06" Pressure to which they are adjusted 165 lbs Are they fittedwith easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork no side bunkers Mean diameter of boilers 14'-7 7/8"Length 10'-0" Material of shell plates Steel Thickness 1 1/32" Description of riveting: circum. seams ends of r.b. long. seams d. butt r.b.Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 1 row 8 3/8" 2 rows 4 3/16" Lap of plates & width of butt straps 6 1/2" & 19 1/4"Percentage of strength of longitudinal joint 89. Working pressure of shell by rules 169 lbs Size of manhole in shell 17" x 13"Use of compensating ring 31.27. 1 1/32" No. and Description of Furnaces in each boiler 3 Ribbed Material Steel Outside diameter 41"Length of plain part top 6'-3" bottom 5'-3" Thickness of plates crown 5/16" bottom 3/16" Description of longitudinal joint welded No. of strengthening rings —Working pressure of furnace by the rules 170 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 15/16"Pitch of stays to ditto: Sides 7 1/2" x 7 1/2" Back 7 1/2" x 6 3/4" Top 7 1/2" x 7 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182 lbsMaterial of stays Steel Diameter at smallest part 1 1/16" Area supported by each stay 543" Working pressure by rules 198 lbs End plates in steam space:Material Steel Thickness 15/16" Pitch of stays 15" How are stays secured d. nuts washers Working pressure by rules 185 lbs Material of stays SteelDiameter at smallest part 2 3/8" Area supported by each stay 225" Working pressure by rules 197 lbs Material of Front plates at bottom SteelThickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 12" Working pressure of plate by rules 240 lbsDiameter of tubes 3 1/4" Pitch of tubes 4 5/8" x 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 1 3/16" Mean pitch of stays 9 1/8"Pitch across wide water spaces 14" Working pressures by rules 195 lbs Girders to Chamber tops: Material Steel Depth andThickness of girder at centre 7 x 1 1/2" Length as per rule 27 1/2" Distance apart 7 1/2" Number and pitch of Stays in each 3. 7 1/4"Working pressure by rules 174 lbs 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 rivetPitch 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 —

2 DONKEY BOILERS

Description

Vertical with x tubes.

Made at *Muktra*

By whom made

*Riley Bros.*When made *20.6.98*

Where fixed

*Stockhold -*Working pressure *160 lbs* tested by hydraulic pressure to *320 lbs* No. of Certificate *1727* Fire grate area *180* Description of safety valves *air spring*No. of safety valves *1* Area of each *9.62* Pressure to which they are adjusted *160 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*Diameter of donkey boiler *5'-6"* Length *12'-0"* Material of shell plates *steel* Thickness *19/32*Description of riveting long. seams *d. butt str* Diameter of rivet holes *7/8* Whether punched or drilled *drill* Pitch of rivets *3 3/4*Lap of plating *—* Per centage of strength of joint *76.7* Thickness of shell crown plates *5/8* Radius of do. *5 ft* No. of stays to do. *6*Dia. of stays *2"* Diameter of furnace Top *4'-5"* Bottom *4'-10 3/4"* Length of furnace *4'-7"* Thickness of furnace plates *1 1/16* Description of joint *lap*Thickness of furnace crown plates *5/8* Stayed by *as above* Working pressure of shell by rules *192 lbs*Working pressure of furnace by rules *161 lbs* Diameter of uptake *13"* Thickness of uptake plates *1/2* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:—

*Top and bottom end bolts & nuts
Main bearing & coupling bolts & nuts. Feed pump
valves seat, bilge pump valves. Piston springs.*

The foregoing is a correct description,
FOR BLAIR & CO., LIMITED.

W. Borrie

Manufacturers of Engines & Main boilers

SECRETARY.

Dates of Survey while building
During progress of work in shops—
During erection on board vessel—
Total No. of visits *Thirty seven*

1897. Dec. 2. 4. 1898. Jan. 11. Feb. 2. Apr. 10. 25. May 5. 11. 14. 26. 28. June 2. 6. 7. 8. 9. 10. 13. 14. 15.
17. 20. 21. 23. 24. 27. 28. 30. July 15. 5. 6. 7. 11. 12. 14. 16.

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

These engines and boilers have been built under special survey and are of good workmanship and materials. — They have been properly fitted on board the vessel and on completion tried under steam with satisfactory results at moorings.

*This vessel's machinery is now in good working order and in my opinion eligible to the notation: **L.M.C. 7.98.** —*

It is submitted that
this vessel is eligible for
THE RECORD.

+ L.M.C. 7.98

25/7/98

The amount of Entry Fee. . . £ 2 : : :
Special . . . £ 32 : 5 : :
Donkey Boiler Fee . . . £ : : :
Travelling Expenses (if any) £ : : :
When applied for. . . 22. 7. 98
When received. . . 22. 7. 98

Copies of Minute

TUES. 26 JUL 1898

MACHINERY CERTIFICATE

Assigned

+ L.M.C. 7.98

WRITTEN.

John Sanderson

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



© 2021

Lloyd's Register
Foundation