

REPORT ON MACHINERY.

No. 4351
H.M. No. 12795

Port of MIDDLESBROUGH ON TEES.

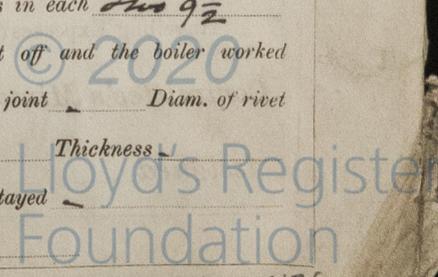
Received at London Office 19

No. in Survey held at Stockton Date, first Survey 14th Sept 05 Last Survey 14th Dec. 1905
 Reg. Book. Supplement on the Steel S.S. "Venus" (Number of Visits 27)
 Master J. V. Edmunds Built at W. Hartlepool By whom built W. Gray & Co. Ltd. Tons { Gross 3152.22 Net 2017.18 When built 1905
 Engines made at Stockton By whom made Blair & Co. Ltd. when made 1905
 Boilers made at Stockton By whom made Blair & Co. Ltd. when made 1905
 Registered Horse Power _____ Owners Navis & Dixon Ltd. Port belonging to London
 Nom. Horse Power as per Section 28 288 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Direct acting trip up No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24-39-64 Length of Stroke 42 Revs. per minute 57 Dia. of Screw shaft as per rule 13.5 Material of W. Iron
as fitted 14.5 screw shaft)
 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 4-10
 Dia. of Tunnel shaft as per rule 11.76 Dia. of Crank shaft journals as per rule 12.35 Dia. of Crank pin 13.5 Size of Crank webs 20x8.5 Dia. of thrust shaft under
as fitted 12.5 collars 13.5 Dia. of screw 17-0 Pitch of screw 16.5 No. of blades 4 State whether moveable No Total surface 78 sq
 No. of Feed pumps 2 Diameter of ditto 3 Stroke 30 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4.5 Stroke 30 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps Feed 4x8 Bilge 9x10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three 3 diameter In Holds, &c. Six 3 dia. Tunnel well Suction 3 dia
 No. of bilge injections 1 sizes 6.5 Connected to condenser, or to circulating pump CR Is a separate donkey suction fitted in Engine room & size Yes 4
 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 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
 What pipes are carried through the bunkers None How are they protected No
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock now new Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door Yes worked from Top platform.

BOILERS, &c.— (Letter for record 7) Total Heating Surface of Boilers 4450 sq Is forced draft fitted No
 No. and Description of Boilers Two Cyl. Multitubular Working Pressure 180 lb Tested by hydraulic pressure to 360 lb
 Date of test 1-11-05 Can each boiler be worked separately Yes Area of fire grate in each boiler 61.5 sq No. and Description of safety valves to
 each boiler Two Spring Area of each valve 8.29 sq Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18 Dia. of boilers 15-7.5 Length 10-3 Material of shell plates Steel
 Thickness 5/16 Range of tensile strength 27/32 Are they welded or flanged No Descrip. of riveting: cir. seams LD 17 in long seams D 13 in (Harp)
 Diameter of rivet holes in long. seams 1.576 Pitch of rivets One row 3.5 Two 4.5 Lap of plates or width of butt straps 1-7.5
 Per centages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 182 lb Size of manhole in shell 17x13
 plate 8.5
 Size of compensating ring 31.25-19.5 No. and Description of Furnaces in each boiler 3 Main Material Steel Outside diameter 3-11
 Length of plain part top 6-7.5 Thickness of plates crown 9/16 Description of longitudinal joint Welded No. of strengthening rings No
 bottom 6-7.5 Working pressure of furnace by the rules 187 lb Combustion chamber plates: Material Steel Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 13/16
 Pitch of stays to ditto: Sides 9x8.5/4 Back 9x8.5/8 Top 9x9.5/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181 lb
 Material of stays Top steel Back & sides iron Diameter at smallest part 1.916 Area supported by each stay 90.25 sq Working pressure by rules 182 lb End plates in steam space:
 Material Steel Thickness 1.32 Pitch of stays 19x20.5 How are stays secured Nuts Working pressure by rules 182 lb Material of stays Steel
 Diameter at smallest part 3 Area supported by each stay 384.7 sq Working pressure by rules 183 lb Material of Front plates at bottom Steel
 Thickness 1.52 Material of Lower back plate Steel Thickness 1.52 Greatest pitch of stays 16x8.5/8 Working pressure of plate by rules 222 lb
 Diameter of tubes 3.5 Pitch of tubes 4.5x4.5/8 Material of tube plates Steel Thickness: Front 1.52 Back 13/16 Mean pitch of stays 9.5
 Pitch across wide water spaces 14.5 Working pressures by rules 201 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7x19.0 Length as per rule 26.5 Distance apart 9.5 Number and pitch of Stays in each Two 9.5
 Working pressure by rules 189 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked
 separately No Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet
 holes _____ 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 _____

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?



DONKEY BOILER— 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 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 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,
FOR BLAIR & CO., LIMITED.

W. Eschellby

Manufacturer.

of main engines & boilers

Dates of Survey while building

During progress of work in shops - - 1905 Sept: 14-24-29 Oct: 2-2-5-10-12-13-14-18-22-25-26-31 Nov: 1-1-3-3-16-21-22-24-29

During erection on board vessel - - 24 Hpl. 19 05 Dec. 6-12-14-30

Total No. of visits 24

Is the approved plan of main boiler forwarded herewith No. 7 Blair donkey

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

The boiler and machinery of this vessel have been constructed under special survey, the materials and workmanship are good & efficient - and when tested under steam were found satisfactory and in our opinion eligible for the notification **F.M.C. 12-05** in the Register Book. Subject to repairs to Donkey Boiler see Report attached

It is submitted that this vessel is eligible for **THE REGOBD F.M.C. 12-05**

subject to the S. Pr. being permanently repaired on vessel's return.

Emd.

21-12-05

The amount of Entry Fee.. £ 2 : 0 : 0 When applied for, 5-12-05

Special £ 24 : 8 : 0

Donkey Boiler Fee £ : : When received, 11-12-05

Travelling Expenses (if any) £ : : 1905

Geo. A. Milner & A. Graham
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 22 DEC 1905

Assigned

+ L.M.C. 12 05 subject

MACHINERY CERTIFICATE WRITTEN.



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Lloyd's Register Foundation

No. in Reg. Book

Master

Engines

Boilers

Registered

MULTI

(Letter for)

Boilers

No. of safety valves

Are they

Smallest

Material

Descrip.

Lap of

rules

boiler

Descript

plates

Top

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THOMA

Dates of Survey while building

Certificate (if required) to be sent to

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