

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne

Received at London Office

No. in Survey held at South ShieldsDate, first Survey Nov 27th 1900 Last Survey Sept 12th 1901

Reg. Book.

(Number of Visits 33)on the S/S Ballesteros IIITons { Gross
Net

Master

Built at ZaltbommelBy whom built J. MeijerWhen built 1901Engines made at South ShieldsBy whom made G. J. Guywhen made 1901Boiler made at South ShieldsBy whom made J. T. Eltringham & Cowhen made 1901

Registered Horse Power

Owners Ballesteros & CoPort belonging to AriboNom. Horse Power as per Section 28 34Is Refrigerating Machinery fitted noIs Electric Light fitted noENGINES, &c.—Description of Engines CompoundNo. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 12" 27" Length of Stroke 18" Revs. per minute 134 Dia. of Screw shaft 5.98" as per rule 6.46" as fitted 6.46" Lgth. of stern bush 2'-0 1/2"
 Dia. of Tunnel shaft 5 1/2" as fitted 5 1/2" Dia. of Crank shaft journals 5 1/2" as fitted 5 1/2" Dia. of Crank pin 5 1/2" Size of Crank webs 8 1/2" x 3 1/2" Dia. of thrust shaft under collars 5 1/2" Dia. of screw 6'-10 1/2" Pitch of screw 9'-0" No. of blades 4 State whether moveable no Total surface 169
 No. of Feed pumps 1 Diameter of ditto 2" Stroke 10" Can one be overhauled while the other is at work —
 No. of Bilge pumps 1 Diameter of ditto 2" Stroke 10" Can one be overhauled while the other is at work —
 No. of Donkey Engines 1 Sizes of Pumps 2 1/4" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" dia In Holds, &c. Two 2" dia.

No. of bilge injections 1 sizes 2 1/2" Connected no to circulating pump no Is a separate donkey suction fitted in Engine room & size no 2"
 Are all the bilge suction pipes fitted with roses no Are the roses in Engine room always accessible no Are the sluices on Engine room bulkheads always accessible no
 Are all connections with the sea direct on the skin of the ship no Are they Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no 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 no Are the blow off cocks fitted with a spigot and brass covering plate no
 What pipes are carried through the bunkers no How are they protected —
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times no
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges no
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock 20/8/01 Is the screw shaft tunnel watertight no
 Is it fitted with a watertight door — worked from —

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 6069 Is forced draft fitted no

No. and Description of Boilers 1 Single ended Multitubular Working Pressure 140 lbs Tested by hydraulic pressure to 280 lbs
 Date of test 8-2-01 Can each boiler be worked separately — Area of fire grate in each boiler 249 No. and Description of safety valves to each boiler Two spring valves Area of each valve 3.98" Pressure to which they are adjusted 145 lbs Are they fitted with easing gear no
 Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 8'-11 1/4" Length 9'-0" Material of shell plates Steel
 Thickness 3/4" Range of tensile strength 28 1/2 tons Are they welded or flanged no Descrip. of riveting: cir. seams D.R. lap long. seams T.R. lap
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 4 1/2" Lap of plates or width of butt straps 7 1/2"
 Per centages of strength of longitudinal joint rivets 75% plate 75% Working pressure of shell by rules 142 lbs Size of manhole in shell 12" x 16"
 Size of compensating ring 4" x 3/4" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 33"
 Length of plain part top 6'-0" bottom 8'-0" Thickness of plates crown 9/16" bottom 3/32" Description of longitudinal joint S.R. lap No. of strengthening rings —
 Working pressure of furnace by the rules 145 lbs Combustion chamber plates: Material S Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 2 1/32"
 Pitch of stays to ditto: Sides 9" x 8" Back 8 1/2" x 8" Top 9 1/2" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 151 lbs
 Material of stays Steel Diameter at smallest part 1 1/32" Area supported by each stay 72" Working pressure by rules 157 lbs End plates in steam space:
 Material Steel Thickness 3/32" Pitch of stays 15 1/2" x 19 1/2" How are stays secured DN + Washers Working pressure by rules 143 lbs Material of stays Steel
 Diameter at smallest part 2 1/8" Area supported by each stay 302.25" Working pressure by rules 151 lbs Material of Front plates at bottom Steel
 Thickness 2 1/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 11" x 8 1/2" Working pressure of plate by rules 183 lbs
 Diameter of tubes 3" Pitch of tubes 4 1/4" x 4 1/8" Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 8 1/2" x 12 1/2"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 185 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5" x 15" Length as per rule 1'-10" Distance apart 3" Number and pitch of Stays in each 2-9 1/2"
 Working pressure by rules 142 lbs Superheater or Steam chest; how connected to boiler Flange Can the superheater be shut off and the boiler worked separately —
 Diameter 2'-6" Length 2'-9" Thickness of shell plates 1/2" Material Steel Description of longitudinal joint S.R. lap Diam. of rivet holes 1/8" Pitch of rivets 2 1/4" Working pressure of shell by rules 156 lbs 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—

Description

None

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:— One propeller. Two top end and two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set feed & lift pump valves assorted bolts and nuts, Iron of various sizes

The foregoing is a correct description,

J. H. Ellingham & Co. Manufacturer of Main Boilers

ppr. Geo. J. Green Engineer Builder

Dates of Survey while building { During progress of work in shops - 1900. Nov. 26. Dec. 12. 1901. Jan. 10. 29. Feb. 11. Mch. 11. Apr. 3. 26. May. 14. July 25. Aug. 20. 26. 30. Sept. 26. 1902
During erection on board vessel - 1900. Nov. 29. 10. 20. 22. 27. Dec. 5. 10. 12. 14. 1901. Jan. 16. 22. Feb. 1. 4
Total No. of visits 33

Is the approved plan of main boiler forwarded herewith M/S

" " " donkey " " " " ✓

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 M/S If the liner is in more than one length are the joints burned ✓

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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners M/S

The machinery of this vessel has been built under special survey. The materials & workmanship are sound and good and under the vessel ship in our opinion to have record of L.M.C. 9.01

After the Engines & boiler had been lifted into place the casing was riveted up in a satisfactory manner.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.01

C.M.

19.9.01

19.9.01

The amount of Entry Fee. £ 1 : : : When applied for, 18 SEP 1901
Special £ 8 : : :
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : : When received, 21.9.01

G. A. Hake & A. C. Farrington
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. SEP 20 1901

Assigned

MACHINERY CERTIFICATE

Lloyd's Register Foundation

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

Newcastle-on-Tyne