

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office

WED. 30 NOV 1898

No. in Survey held at Glasgow
Reg. Book.Date, first Survey 7 MarchLast Survey 24 Nov 1898(Number of Visits 22)

on the

s.s. "BALMARINO."Tons { Gross 461.36
Net 89.47Master John Robinson Built at GroonBy whom built Aulsa S. B. CoWhen built 1898Engines made at GlasgowBy whom made Muir & Houstonwhen made 1898Boilers made at GlasgowBy whom made Muir & Houstonwhen made 1898

Registered Horse Power

Owners John Kelly EsqPort belonging to BelfastNom. Horse Power as per Section 28 85Is Electric Light fitted No.

ENGINES, &c. — Description of Engines Compound Screw No. of Cylinders 2 No. of Cranks 2
 Diameter of Cylinders 21" x 42" Length of Stroke 30 Revolutions per minute 110 Diameter of Screw shaft as per rule 8.64
 Diameter of Tunnel shaft as per rule none Diameter of Crank shaft journals 8 3/8" Diameter of Crank pin 8 3/8" Size of Crank webs as fitted 8 3/4"
 Diameter of screw 19" 6" Pitch of screw 12" 6" No. of blades 4 State whether moveable yes Total surface 28 sq. ft.
 No. of Feed pumps two Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work yes
 No. of Bilge pumps two Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps { Ballast 7 x 7 x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2 1/2" { Feed 7 x 4 1/4 x 10" In Holds, &c. Fore hold, two 2 1/2"

No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size yes 2 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 yesAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves & cocksAre 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 yesAre 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 yesAre 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 before launch Is the screw shaft tunnel watertight noneIs it fitted with a watertight door yes worked from yesBOILERS, &c. — (Letter for record (5) Total Heating Surface of Boilers 1380 sq. ft. Is forced draft fitted noNo. and Description of Boilers one single ended Working Pressure 115 lbs Tested by hydraulic pressure to 230 lbsDate of test 22/10/98 Can each boiler be worked separately yes Area of fire grate in each boiler 60 sq. ft. No. and Description of safety valves toeach boiler 2 Patent Spring 3 1/2" dia Area of each valve 9.62" Pressure to which they are adjusted 120 lbs Are they fittedwith easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 11" 3" Mean diameter of boilers 12" 6"Length 10-0" Material of shell plates steel Thickness 2 1/2" Description of riveting: circum. seams double long. seams treble (butt)Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 1" 5"Per centages of strength of longitudinal joint rivets 100 Working pressure of shell by rules 120 lbs Size of manhole in shell 16" x 12"Size of compensating ring McKeils No. and Description of Furnaces in each boiler 3 Plain Material steel Outside diameter 42"Length of plain part top 5-11" bottom 8-9 1/2" Thickness of plates crown 1 1/4" bottom 1 1/6" Description of longitudinal joint welded No. of strengthening rings noneWorking pressure of furnace by the rules 115 lbs Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4"Pitch of stays to ditto: Sides 8 x 9" Back 9 x 9" Top 7 1/2 x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135 lbsMaterial of stays steel Diameter at smallest part 1.19" Area supported by each stay 81" Working pressure by rules 117 End plates in steam space:Material steel Thickness 3/4" Pitch of stays 15 x 15" How are stays secured nuts Working pressure by rules 118 lbs Material of stays steelDiameter at smallest part 2.41" Area supported by each stay 325" Working pressure by rules 120 lbs Material of Front plates at bottom steelThickness 5/8" Material of Lower back plate steel Thickness 2 1/2" Greatest pitch of stays 12 9/16" Working pressure of plate by rules 125 lbsDiameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 3/4" Material of tube plates steel Thickness: Front 5/8" Back 5/8" Mean pitch of stays 9 1/2"Pitch across wide water spaces 14" Working pressures by rules 150 lbs Girders to Chamber tops: Material iron Depth andthickness of girder at centre 7 x 2-3/4" Length as per rule 2-8" Distance apart 7 1/2" Number and pitch of Stays in each 3-8"Working pressure by rules 115 lbs Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler workedseparately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivetholes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yesIf stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yesWorking pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

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 enter the donkey boiler ☒
Diameter of donkey boiler ☒ Length ☒ Material of shell plates ☒ Thickness ☒
Description of riveting long. seams ☒ Diameter 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:— *2 top end + 2 bottom end connecting rod bolts, 2 main bearing bolts, 1 set coupling bolts, 1 set of Feed + Bilge pump valves, etc.*

The foregoing is a correct description,

Manufacturer.

MUIR & HOBSON, LIMITED.

Colin Houston

Dates of Survey while building { During progress of work in shops - *1898: Mar. 7. 11. 18. April. 21. May. 26. 28. Aug. 26. Sept. 8. 15. 19. 27. 28. 30. Oct. 7. 12.*
During erection on board vessel - *22. 28. Nov. 4. 7. 11. 24.*
Total No. of visits *22*

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

ENGINES—Length of stern bush *3. 0"* Diameter of crank shaft journals *as per rule 8. 22"* Diameter of thrust shaft under collars *8 3/8"*

BOILERS—Range of tensile strength *28 to 32* Are they welded or flanged *neither* DONKEY BOILERS—No. ☒ Range of tensile strength ☒

Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith ☒

The Machinery of this vessel has been constructed under Special Survey, is of good material & workmanship has been securely fitted on board, and is in my opinion eligible to be classed in the Register Book & to have a record of L.M.C. 11.98. noted therein.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 11.98

A.C.H.

30. 11. 98.

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The amount of Entry Fee. £ *1. -* : When applied for, *14. 11. 98*
Special £ *12. 15* :
Donkey Boiler Fee £ *- : 10* :
Travelling Expenses (if any) £ : : When received, *17. 11. 98*

Committee's Minute

FRI. 2 DEC 1898

Assigned

+ 2 m.c. 11.98

MACHINERY CERTIFICATE WRITTEN.

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



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