

REPORT ON MACHINERY.

No. 21502

Port of GlasgowReceived at London Office JUL 9 FEB 1904No. in Survey held at GlasgowDate, first Survey 26th NovLast Survey 3-2-1904

Reg. Book.

(Number of Visits 15)on the S. S. "Guanche"Tons } Gross
Net

Master

Built at WorkingtonBy whom built R. Williamson & SonWhen built 1904Engines made at GlasgowBy whom made Ross & Duncanwhen made 1904Boilers made at GlasgowBy whom made Ross & Duncanwhen made 1904

Registered Horse Power

Owners Elders & Lippes LtdPort belonging to ManchesterNom. Horse Power as per Section 28 62Is Refrigerating Machinery fitted noIs Electric Light fitted no

ENGINES, &c.—Description of Engines

CompoundNo. of Cylinders 2No. of Cranks 2Dia. of Cylinders 16" 3/4"Length of Stroke 24"Revs. per minute 128

Dia. of Screw shaft

as per rule 7 1/2"Material of screw shaft ironIs 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

the propeller boss yes. If the liner is in more than one length are the joints burned the length no. If the liner does not fit tightly at the partbetween 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 for protected between the liners yesLength of stern bush 2'-5 1/2"

Dia. of Tunnel shaft

as per rule 6 1/2"

Dia. of Crank shaft journals

as per rule 7 1/2"as fitted 7 1/2"Dia. of Crank pin 7 1/2"Size of Crank webs 4 1/2" x 10 1/2"

Dia. of thrust shaft under

Halls 7 1/2"Dia. of screw 7'-5"Pitch of screw 10'-3"No. of blades 4State whether moveable noTotal surface 27 1/2No. of Feed pumps 1Diameter of ditto 2 1/2"Stroke 12"Can one be overhauled while the other is at work noNo. of Bilge pumps 1Diameter of ditto 2 1/2"Stroke 12"Can one be overhauled while the other is at work noNo. of Donkey Engines oneSizes of Pumps 5 1/2" x 4"

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 1-2 1/2"1-2" (1 & B 2 1/2")In Holds, &c. 2-2"No. of bilge injections 1sizes 2 3/4"Connected to condenser, or to circulating pump Circuffs a separate donkey suction fitted in Engine room & size 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 yesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre 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 plates yesThat pipes are carried through the bunkers hold & tank suction How are they protected under ceilingAre 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 31-12-03. Is the screw shaft tunnel watertight yesIs it fitted with a watertight door yesworked from yes

BOILERS, &c.—

(Letter for record S)Total Heating Surface of Boilers 1130 1/2Is forced draft fitted noNo. and Description of Boilers 1 Single-ended Mult.Working Pressure 135 lbsTested by hydraulic pressure to 260 lbsDate of test 29.12.03Can each boiler be worked separately yesArea of fire grate in each boiler 35.6 1/2

No. and Description of safety valves to

each boiler 2 Direct springsArea of each valve 4.9Pressure to which they are adjusted 135 lbsAre they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 2'-3"Mean dia. of boilers 11'-6"Length 10'-0"Material of shell plates steelThickness 25Range of tensile strength 27-32Are they welded or flanged noDescrip. of riveting: cir. seams Lap. D.P. long. seams D.P.S. I.R.Diameter of rivet holes in long. seams 15Pitch of rivets 6"3"Lap of plates or width of butt straps 15

Percentages of strength of longitudinal joint

rivets 87.5plate 84.5Working pressure of shell by rules 135 lbsSize of manhole in shell 16" x 12"No. of compensating ring 7 x 25top 6 3/4"bottom 8'-10"No. and Description of Furnaces in each boiler 2 plainMaterial steelOutside diameter 44"at bottom partial

Length of plain part

thickness of plates 24crown 32bottom 32Description of longitudinal joint weldNo. of strengthening rings partialWorking pressure of furnace by the rules 137 1/2Combustion chamber plates: Material steelThickness: Sides 17Back 17Top 17Bottom 17Mean pitch of stays 10.75Pitch of stays to ditto: Sides 8 1/2" x 8"Back 8" x 8"Top 8 1/2" x 8"If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 131 lbsMaterial of stays steelDiameter at smallest part 1 1/4"Area supported by each stay 66Working pressure by rules 150 lbsEnd plates in steam space: washersMaterial steelThickness 22Pitch of stays 16" x 15 1/2"How are stays secured nutsWorking pressure by rules 136 lbsMaterial of stays steelDiameter at smallest part 3 3/8"Area supported by each stay 248Working pressure by rules 135 lbsMaterial of Front plates at bottom steelThickness 4 1/2Material of Lower back plate steelThickness 5 1/2Greatest pitch of stays 13 1/2Working pressure of plate by rules 245 lbsDiameter of tubes 3 1/4"Pitch of tubes 4 1/4" x 4 1/2"Material of tube plates steelThickness: Front 11Back 21Pitch across wide water spaces 14"Working pressures by rules 146 + 133 lbsGirders to Chamber tops: Material iron

Depth and

thickness of girder at centre 6 1/2" x 13 1/4"Length as per rule 28' 8"Distance apart 8"Number and pitch of Stays in each 2-8 1/4"Working pressure by rules 140 lbsSuperheater or Steam chest; how connected to boiler yes

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

Lined 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

007626-007638-0350

DONKEY BOILER— No. _____ Description _____ When made _____ Where fixed _____

Made at _____ By whom made _____

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 boiler _____

enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of _____

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 _____ Descript _____

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 ends 2 Main bearing bolts & nuts. 1 set of coupling bolts & nuts. 1 set of Bilge & Speed pump valves. assortment of bolts & nuts. iron & c. 2 spare rings each for H.P. & L.P. pistons. 1 propeller.

The foregoing is a correct description,
Ross & Duncan Manufacturer.

Dates { During progress of work in shops - - } 1903: Nov. 26. 30 Dec. 2. 8. 10. 11. 15. 21. 24. 29. 1904: Jan. 11. 20.
{ During erection on board vessel - - } 1904: Jan. 25. 26. 27. 28.
while building { Total No. of visits 15.

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " "

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

The materials have been tested, & the work carried out under special survey. Both materials & workmanship being of good description. on completion this machine was securely fastened down & tried under steam at full power with satisfactory results.
In my opinion this vessel's machinery is eligible for classification with record of **L.M.C. 2.04.**

It is submitted that
this vessel is eligible for
THE RECORD L.M.C. 2.04

9.2.04
9.2.04

Certificate (if required) to be sent to _____

The amount of Entry Fee. £ 1 : : : When applied for, _____
Special £ 9 : 6 : : - 8 FEB 1904
Donkey Boiler Fee £ : : : When received, _____
Travelling Expenses (if any) £ 1 : 0 : : 107/10/04

Committee's Minute Glasgow - 8 FEB 1904

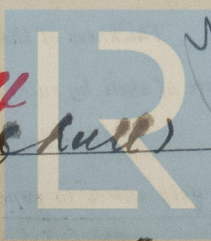
Assigned

L.M.C. 2.04
(Subject to classification of hull)
When fee is paid

A. J. Barrett
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

FRI. 12 FEB

MACHINERY CERTIFICATE
WRITTEN.



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Foundation