

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office JUL 3 1902

No. in Survey held at Glasgow

Date, first Survey 20th March 1901 Last Survey 21st June 1902

Reg. Book. S.S. "Targuak"

(Number of Visits 64)

Gross 3858.75
Net 2440.52

Master C. Harvie Built at Glasgow By whom built A. Stephen & Sons Ltd When built 1902

Engines made at Glasgow By whom made A. Stephen & Sons Ltd when made 1902

Boilers made at Glasgow By whom made A. Stephen & Sons Ltd when made 1902

Registered Horse Power 520 Owners African S.S. Co. Port belonging to Liverpool

om. Horse Power as per Section 28 520 Is Refrigerating Machinery fitted yes Is Electric Light fitted yes

GINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks 3
Dia. of Cylinders 27 43 72 Length of Stroke 48 Revs. per minute 90 Dia. of Screw shaft 14 1/4 as per rule 14 1/4 as fitted 15 1/4 Lgth. of stern bush 60
Dia. of Tunnel shaft 13 1/4 as per rule 13 1/4 as fitted 13 1/4 Dia. of Crank shaft journals 14 1/4 as per rule 14 1/4 as fitted 14 1/4 Dia. of Crank pin 14 1/4 Size of Crank webs 9 1/2 x 26 1/4 Dia. of thrust shaft under
flars 14 1/4 Dia. of screw 16 1/2 Pitch of screw 17 1/2 No. of blades 4 State whether moveable yes Total surface 75 sq ft
No. of Feed pumps 2 Diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work yes
No. of Donkey Engines one Sizes of Pumps 8 x 10 1/2 x 24 9 x 12 x 14 9 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room Iron 3 1/2 In Holds, &c. Iron 3 1/2

No. of bilge injections 2 sizes 6 Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size yes 3 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 yes
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
That pipes are carried through the bunkers yes How are they protected yes

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
Then were stern tube, propeller, screw shaft, and all connections examined in dry dock yes Is the screw shaft tunnel watertight apparently
Is it fitted with a watertight door yes worked from top platform

ILERS, &c.— (Letter for record 3) Total Heating Surface of Boilers 7863 sq ft Is forced draft fitted yes
No. and Description of Boilers 2 Main 1 Aux 1 single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
Date of test Can each boiler be worked separately yes Area of fire grate in each boiler 73 1/4 No. and Description of safety valves to
each boiler 1 pair direct spring Area of each valve 12 1/2 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 18 Mean dia. of boilers 16-3 Length 12 Material of shell plates steel
Thickness 1 1/2 Range of tensile strength 28 1/2-32 Are they welded or flanged no Descrip. of riveting: cir. seams double lap long. seams triple butt
Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 9 3/32 Lap of plates or width of butt straps 22 1/2
Percentages of strength of longitudinal joint 86.3 Working pressure of shell by rules 210 lbs Size of manhole in shell 16 x 12
plate 86.8

No. and Description of Furnaces in each boiler 4 Monomers Material steel Outside diameter 44
Length of plain part top bottom Thickness of plates crown 17 32 Description of longitudinal joint rolled No. of strengthening rings 1
Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material steel Thickness: Sides 19 Back 32 Top 32 Bottom 16
No. of stays to ditto: Sides 7 1/16 Back 7 1/16 Top 7 1/16 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 210 lbs
No. of stays steel Diameter at smallest part 1 1/2 Area supported by each stay 61 Working pressure by rules 198 lbs End plates in steam space:
Thickness 1 3/32 Pitch of stays 15 1/4 x 15 1/4 How are stays secured 27 nuts Working pressure by rules 268 lbs Material of stays steel
at smallest part 5 3/4 Area supported by each stay 232 Working pressure by rules 230 Material of Front plates at bottom steel
Thickness 13 Material of Lower back plate steel Thickness 13 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 360 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 3/8 x 3 3/8 Material of tube plates steel Thickness: Front 13 Back 13 Mean pitch of stays 9 1/16
Pitch across wide water spaces 13 1/2 Working pressures by rules 290 lbs Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 8 7/8 Length as per rule 2-6 3/4 Distance apart 7 1/16 Number and pitch of Stays in each (3) 7 1/16
Working pressure by rules 280 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
separately yes 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
stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed yes
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear yes

DONKEY BOILER— No. Description *non*

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 Dia. of donkey boiler Length Material of shell plates Thickness Range of tens

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

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:— 1 set of coupling bolts & nuts 1 set top end bolts & nuts 1 set bottom end bolts and nuts 2 main bearing bolts & nuts 1 set of 2nd & bilge pump valves, iron of various sizes & bolts & nuts assorted.

The foregoing is a correct description,
 Alex. Scott, J. Manufacturer.

Dates During progress of work in shops: 1901 Mar. 20, 29 Apr. 5, 9, 12, 15, 23 May 10, 23, 30 Jun. 3, 4, 21, 24 May 10, 23, 30 Jun. 3, 4, 21, 24 July 9, Aug 10, 17, 21, 26 Mar. 7, 19, 20 Apr. 9, 15 May 5, 6, 20 Jun 2, 3, 21

During erection on board vessel: 12, 29, Sep 2, 13, 19, 25, 30, Oct 15, 20, Nov 4, 13, 16, 27 Dec 6, 20, 25, 27, 1902 Jan. 14, 15, 22, 27, 28, 30 Feb. 3, 5, 10, 17, 21, 26 Mar. 7, 19, 20 Apr. 9, 15 May 5, 6, 20 Jun 2, 3, 21

Total No. of visits 64.

Is the approved plan of main boiler forwarded herewith *Yes* S.S. Bountin

General Remarks (State quality of workmanship, opinions as to class, &c. *good LMC 6 02.*)

Material of screw shaft *Lock fast bar iron* 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

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

non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners

This machinery has been built under special survey. it has been well fitted on board and tried under steam and is in my opinion eligible to have the above notification in the Register book

One forging report is hereto appended

It is submitted that this vessel is eligible for THE RECORD — LMC 6-02 F.D. Elec. Light. Ref. Machinery

The amount of Entry Fee... £ 3 : : When applied for, 28/6/02

Special ... £ 46 5 : : When received, 28/6/02

Donkey Boiler Fee ... £ : :

Travelling Expenses (if any) £ : :

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

Committee's Minute GLASGOW. 23 JUL 1902

Assigned

+ L.M.C. 6.02