

REPORT ON MACHINERY.

No. 26299

Received at London Office

SAT. DEC. 12. 1914

Date of writing Report

19

When handed in at Local Office

5. 12. 1914 Port of Sunderland

No. in Survey held at Sunderland

Date, First Survey

27 May 14

Last Survey

4-12-1914

Reg. Book.

Number of Visits

4399

Tons Gross 4399

Net 2791

on the new steel S/S "UMVUMA"

Master W. Rivers

Built at Sunderland By whom built Sir James Laing & Sons Ltd (No. 650)

When built 1914

Engines made at Sunderland

By whom made George Black Ltd (No. 1014)

when made 1914

Boilers made at Sunderland

By whom made George Black Ltd (No. 1014)

when made 1914

Registered Horse Power

Owners Bullard King & Co

Port belonging to London

Nom. Horse Power as per Section 28 504

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 27.44.73

Length of Stroke 48

Revs. per minute 70

Dia. of Screw shaft

as per rule 14.53

Material of screw shaft 9. Steel

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 and non-corrosive

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 5'-5"

Dia. of Tunnel shaft as per rule 13.33

Dia. of Crank shaft journals as per rule 12

Dia. of Crank pin 14 1/4

Size of Crank webs 21 1/4 x 9 1/4

Dia. of thrust shaft under

collars 14 3/8

Dia. of screw 14.0

Pitch of Screw 17-3

No. of Blades 4

State whether moveable no

Total surface 96 sq ft

No. of Feed pumps 2

Diameter of ditto 3 1/2

Stroke 30

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 4 3/8

Stroke 30

Can one be overhauled while the other is at work yes

No. of Donkey Engines 3

Sizes of Pumps 9x10x10

FEED 8x5x8

GENERAL 7 1/2 x 5 x 6

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

In Engine Room three @ 3 1/2

In Holds, &c. No. 1 hold - two @ 3 1/2. No. 2 hold - two @ 3 1/2.

Cross bunkers - two @ 3 1/2. No. 3 hold - two @ 3 1/2.

No. 4 hold - two @ 3 1/2.

Tunnel well - one @ 3 1/2.

No. of Bilge Injections 1

Is a separate Donkey Suction fitted in Engine room & size yes 5"

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 none

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 forward hold suction

How are they protected under timber boards

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

Dates of examination of completion of fitting of Sea Connections 16-10-14

of Stern Tube 16-10-14

Screw shaft and Propeller 21-10-14

Is the Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from

Top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel John Spence & Sons Ltd

Total Heating Surface of Boilers 7374 sq ft

Is Forced Draft fitted yes

No. and Description of Boilers three single ended marine

Working Pressure 180

Tested by hydraulic pressure to 360

Date of test 2-9-14

No. of Certificate 3243

Can each boiler be worked separately yes

Area of fire grate in each boiler 60 sq ft

No. and Description of Safety Valves to

each boiler two direct spring

Area of each valve 11.040

Pressure to which they are adjusted 180

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6"

Mean dia. of boilers 14'-10 1/2"

Length 11'-9"

Material of shell plates steel

Thickness 1 1/2"

Range of tensile strength 29 1/2-33

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams 15R

long. seams WBS. TR

Diameter of rivet holes in long. seams 15/16

Pitch of rivets 8 1/2

Lap of plates width of butt straps 1'-8"

Per centages of strength of longitudinal joint

rivets 89

plate 85.2

Working pressure of shell by rules 208

Size of manhole in shell 16" x 12"

Size of compensating ring flanged

No. and Description of Furnaces in each boiler 3 Doughton

Material steel

Outside diameter 3'-10"

Length of plain part top

Thickness of plates crown 9 1/16

Description of longitudinal joint welded

No. of strengthening rings

bottom

Working pressure of furnace by the rules 191

Combustion chamber plates: Material steel

Thickness: Sides 3/4"

Back 2 3/32"

Top 3/4"

Bottom 7/8"

Pitch of stays to ditto: Sides 10" x 9 3/4"

Back 10" x 9 3/4"

Top 9 3/4" x 9 3/4"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 192

Material of stays steel

Diameter at smallest part 2.030

Area supported by each stay 97.50

Working pressure by rules 187

End plates in steam space

Material steel

Thickness 1 1/16

Pitch of stays 23 1/2" x 20"

How are stays secured 15R

Working pressure by rules 193

Material of stays steel

Diameter at smallest part 8.950

Area supported by each stay 20 1/2" x 21 1/2"

Working pressure by rules 211

Material of Front plates at bottom steel

Thickness 6 1/4"

Material of Lower back plate steel

Thickness 1 5/16"

Greatest pitch of stays 15" x 10"

Working pressure of plate by rules 187

Diameter of tubes 2 3/4"

Pitch of tubes 4" x 3 1/8"

Material of tube plates steel

Thickness: Front 6 1/4"

Back 3 3/4"

Mean pitch of stays 9 7/8"

Pitch across wide water spaces 13 3/4"

Working pressures by rules 184

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 20 8 3/4" x 7 1/8"

Length as per rule 2-10 7/8"

Distance apart 9 3/4"

Number and pitch of stays in each 2 @ 9 3/4"

Working pressure by rules 182

Superheater or Steam chest; how connected to boiler none

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

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

Foundation

Foundation

Foundation

Foundation

Foundation

Foundation

Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fired _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

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 _____ Plates _____

Working pressure of shell by rules _____ 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 _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed, bilge and air pump valves, iron and bolts of various sizes, — air pump head valve, bucket, rod and tail guide bracket: — one impeller for circulating pump, one pair of bottom end bearings.

The foregoing is a correct description,
FOR GEORGE CLARK, LIMITED
Manufacturers

Manufacturer.

1098 рубли

2 The main offices & rulers.

Dates of Survey while building	During progress of work in shops - -	
	During erection on board vessel - - -	
	Total No. of visits	
1870	1	1
1871	1	1
1872	1	1
1873	1	1
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1998	1	

1914 May 27 Jun 10 19 26 Jul 1 9 14 Aug 6 10 12 18 20 22 Sept 2 10 14 18 22 26 28 30

Oct. 9, 13, 14, 15, 16, 19, 21, 22, 23, 26, 27, 30. Nov. 6, 7, 11, 14, 17. Dec. 1, 12

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 18-9-14 Slides 28-9-14 Covers 25-9-14 Pistons 25-8-14 Rods 10-9-14
Connecting rods 14-10-14 Crank shaft 15-10-14 Thrust shaft 8-10-14 Tunnel shafts 8-10-14 & 19-10-14 Screw shaft 16-10-14 Propeller 14-10-14
Stern tube 23-9-14 Steam pipes tested 7 & 12-11-14 Engine and boiler seatings 28-8-14 Engines holding down bolts 6-11-14
Completion of pumping arrangements 4-12-14 Boilers fixed 6-11-14 Engines tried under steam 14-11-14
Main boiler safety valves adjusted 14-11-14 Thickness of adjusting washers ~~P1 1/16", both 1/16"~~ P1 1/16", both 1/16", P2 1/16", both 1/16"
Material of Crank shaft Steel Identification Mark on Do. 21 RN 7-14 Material of Thrust shaft Steel Identification Mark on Do. 18530 F.C.
Material of ^{Del} Tunnel shafts Steel Identification Marks on Do. 18530 F.C. Material of Screw shafts Steel Identification Marks on Do. 18530 F.C.
Material of Steam Pipes lap welded wrought iron - 8 @ 5" x 5/16" ✓ Test pressure 540 lbs per sq" ✓

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

The materials and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the record \dagger L MC 12, 14

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 12.14. FD

The amount of Entry Fee .. £	3	:	-	:	When applied for,
Special £	45	:	4	:	8 12 1944
Donkey Boiler Fee £		:		:	When received,
Travelling Expenses (if any) £		:		:	10 12 1944

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

Committee's Minute

Assigned

THE DEC 15 1914

+ Lm 6. 12. 14

7.1

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RECEIVED OCT 16 1966
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Lloyd's Register
Foundation