

REPORT ON MACHINERY.

No.

28480

WEL 19 JAN 1910

Received at London Office

Date of writing Report 10th Jan 1910 When handed in at Local Office

Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 24th June, Last Survey 11th Jan 1910

Reg. Book.

(Number of Visits 34)

on the

S.S. "Bellavale"

Gross 459.

Tons Net 180.

Master

Built at

Glasgow

By whom built

Kachie & Thomson

When built 1910

Engines made at

Glasgow

By whom made

Muir & Houston Ltd (No 628)

when made

1910

Boilers made at

Do

By whom made

Do

when made

1910

Registered Horse Power

Owners

John Kelly

Port belonging to

Nom. Horse Power as per Section 28

99

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders

19¹/₂ x 4¹/₂

Length of Stroke

30"

Revs. per minute

100

Dia. of Screw shaft

as per rule

as fitted

9¹/₈

Material of

screw shaft

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

Yes

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

Yes

If two

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

Yes

Length of stern bush

3' 0¹/₂"

Dia. of Tunnel shaft

as per rule

as fitted

Dia. of Crank shaft journals

as per rule

as fitted

8¹/₈

Dia. of Crank pin

8¹/₈

Size of Crank webs

13 x 5¹/₂

Dia. of thrust shaft under

collars

8¹/₈

Dia. of screw

10' 0"

Pitch of Screw

4' 3"

No. of Blades

14

State whether moveable

No

No. of Feed pumps

2

Diameter of ditto

2³/₄"

Stroke

15"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3"

Stroke

15"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

Ballast 6" x 6" x 6" Duplex

General 7" x 4¹/₂ x 8"

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

In Engine Room

3" 1-2¹/₂" 1¹/₂" 1-2¹/₂"

In Holds, &c.

2-2"

No. of Bilge Injections

1

sizes

3¹/₂"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

2¹/₂"

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

What pipes are carried through the bunkers

None

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

Dates of examination of completion of fitting of Sea Connections

10. 12. 09

of Stern Tube

10. 12. 09

Screw shaft and Propeller

10. 12. 09

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Wm. Beardmore & Co. Glasgow Ltd &

Total Heating Surface of Boilers

1716 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

one single ended

Working Pressure

130 lbs

Tested by hydraulic pressure to

260 lbs

Date of test

10. 11. 09

No. of Certificate

10188

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

544 sq ft

No. and Description of Safety Valves to

each boiler

Double spring loaded

Area of each valve

7.068 sq in

Pressure to which they are adjusted

135 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4'-6"

Mean dia. of boilers

14'-6"

Length

10'-6"

Material of shell plates

Steel

Thickness

39/32"

Range of tensile strength

28/32 lbs

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D. Riv.

long. seams

T. A. D. B. S.

Diameter of rivet holes in long. seams

1¹/₈"

Pitch of rivets

7¹/₂"

Lap of plates or width of butt straps

1'-5"

Per centages of strength of longitudinal joint

rivets 87.7

plate 85

Working pressure of shell by rules

134 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

12" dia

No. and Description of Furnaces in each boiler

3 plain

Material

Steel

Outside diameter

3'-9"

Length of plain part

top 7'-7"

bottom 7'-3¹/₂"

Thickness of plates

crown 1¹/₁₆"bottom 1¹/₁₆"

Description of longitudinal joint

weld

No. of strengthening rings

one

Working pressure of furnace by the rules

143

Combustion chamber plates: Material

Steel

Thickness: Sides

9¹/₁₆"

Back

9¹/₁₆"

Top

9¹/₁₆"

Bottom

16"

Pitch of stays to ditto: Sides

9" x 8"

Back

9" x 9"

Top

8" x 8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

135

Material of stays

Steel

Diameter at smallest part

1'-4¹/₂"

Area supported by each stay

81 sq in

Working pressure by rules

143

End plates in steam space:

Material

Steel

Thickness

3¹/₂"

Pitch of stays

16" x 15"

How are stays secured

O. nuts

Working pressure by rules

132

Material of Front plates at bottom

Steel

Thickness

3¹/₄"

Material of Lower back plate

Steel

Thickness

3¹/₄"

Greatest pitch of stays

13¹/₂ x 9"

Working pressure of plate by rules

147

Diameter of tubes

3¹/₂"

Pitch of tubes

4¹/₈ x 4¹/₈"

Material of tube plates

Steel

Thickness: Front

4¹/₈ x 8.0

Back

5¹/₈"

Mean pitch of stays

9¹/₈"

Pitch across wide water spaces

1'-3"

Working pressures by rules

151 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

7' x 20¹/₈"

Length as per rule

2'-8"

Distance apart

8"

Number and pitch of stays in each

3 @ 8"

Working pressure by rules

148

Superheater or Steam chest; how connected to boiler

-

Can the superheater be shut off and the boiler worked

separately

-

Diameter

-

Length

-

Thickness of shell plates

-

Material

-

Description of longitudinal joint

-

holes

Pitch of rivets

-

Working pressure of shell by rules

-

Diameter of flue

-

Material of flue plates

-

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description				
Made at	By whom made		When made	Where fixed	
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 casing 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		Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed and bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes

The foregoing is a correct description,

FOR HUIR & HOUSTON, LIMITED.

Manufacturer.

Dates of Survey while building: During progress of work in shops— 1909. June 24, July 6, 10, 27, 29, Aug. 2, 6, 17, 26, 31, Sept. 3, 13, 20, 30, Oct. 5, 8, 11, 2, Oct. 27, 28, Nov. 2, 5, 9, 10, 17, 20, Dec. 10, 17, 18, 21, 30, 31—1910 Jan. 3, 11
Total No. of visits 34

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 20.9.09 Slides 30.9.09 Covers 30.9.09 Pistons 29.7.09 Rods 26.8.09
Connecting rods 26.8.09 Crank shaft 6.7.09 Thrust shaft 30.9.09 Tunnel shafts ✓ Screw shaft 30.9.09 Propeller 21.10.09
Stern tube 13.9.09 Steam pipes tested 21.12.09 Engine and boiler seatings 10.12.09 Engines holding down bolts 30.12.09
Completion of pumping arrangements 31.12.09 Boilers fixed 17.12.09 Engines tried under steam 3.1.10
Main boiler safety valves adjusted 30.12.09 Thickness of adjusting washers Port. 5/16" Star 1/4"
Material of Crank shaft Steel Identification Mark on Do. 2311 Material of Thrust shaft iron Identification Mark on Do. 2331
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts iron Identification Marks on Do. 2331
Material of Steam Pipes Copper Test pressure 400 lbs per sq. in.

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

The machinery has been built under special survey: the material and workmanship being good and satisfactorily tested under steam

It is submitted that above vessel is eligible for a record of + L.M.C. 1.10 in the Register Book

The shipping was approved in London letter of the 15.6.09

It is submitted that this vessel is eligible for THE RECORD + LMC 1.10

JSM 20/1/10

JSM

A. S. Thomas

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

The amount of Entry Fee .. £ 1.0.0 When applied for, 15/1/10
Special .. £ 14.17.0
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
When received, 22.1.10

Committee's Minute GLASGOW 18 JAN 1910

Assigned + LMC 1.10

19/1/10

These parts

Signal Letters

Official Num

129630

No., Date, and Po

Whether British or Foreign Built.

British.

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and

vessel

Number of Bulkhe

Number of water

and their capaci

Total to quarter the depth

to bottom of keel

No. of sets of Engines.

Description of

One Reciprocating

One direct acting

No. of Shafts.

Particulars

Description Man

Number

Iron or Steel

Loaded Pressure

GROS

Under Tonnage Deck

Space or spaces betw

Turret or Tank

Forecastle ... Brea

Bridge space

Poop on Break

Side Houses

Deck Houses

Chart Houses

Spaces for machinery

Section 78 (2) of th

1894.

Excess of Hatchways

Gross Tonna

Deductions, as per Co

Registered T

NOTE.—The only spac

Forec

Less co

" B-h

" S

Name of Mast

No. of Owners

Name, Residence, and

M.O.

Dated 6th Jan

30 (65181) Wt. 5356/65 10



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