

REPORT ON MACHINERY.

No. 28270

Received at London Office

MON FEB 15 1915

Date of writing Report

When handed in at Local Office

12.2.15 Port of Hull

No. in Survey held at
Reg. Book.

Date, First Survey

21-8-14 Last Survey

29-1-1915

(Number of Visits 39)

Gross 321

Net 139

When built 1915-1

Master

Built at

Leby

By whom built

Cochran & Sons Ltd

Engines made at

Hull

By whom made

Arnold & Smith Ltd (No 2595)

when made 1915-1

Boilers made at

Hull

By whom made

Arnold & Smith Ltd

when made 1915-1

Registered Horse Power

Owners

Hardy & Kelly, Crown S. F. G. Port belonging to

Gimby

Nom. Horse Power as per Section 28

90

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

13"-22 3/4"-37"

Length of Stroke

26"

Revs. per minute

Dia. of Screw shaft

as per rule 7.76

Material of

screw shafts

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

33"

Dia. of Tunnel shaft

as per rule 6.78

Dia. of Crank shaft journals

as per rule 7.12

Dia. of Crank pin

7 3/4"

Size of Crank webs

15" x 4 3/4"

Dia. of thrust shaft under

collars

7 3/4"

Dia. of screw

9"-F"

Pitch of Screw

11-0"

No. of Blades

4

State whether moveable

No. of Feed pumps

One

Diameter of ditto

2 7/8"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

One

Diameter of ditto

2 7/8"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Size of Pumps

6 1/2" x 4 3/4" x 6"

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

In Engine Room

One 2" dia

In Holds, &c.

One 2" dia

in each compartment

all suction also connected to jeton

No. of Bilge Injections

One

Size

3"

Connected to condenser or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

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

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 suction

How are they protected

Wood casings

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

20-10-14

of Stern Tube

20-10-14

Screw shaft and Propeller

5-1-14

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Yes

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Stewarts & Lloyds

Total Heating Surface of Boilers

1590 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

One single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

24-12-14

No. of Certificate

3050

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

47.5 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

5.94 sq in

Pressure to which they are adjusted

Smallest distance between boilers or uptakes and bunkers or woodwork

22"

Mean dia. of boilers

165 1/2"

Length

10'-6"

Material of shell plates

S

Thickness

1 3/32"

Range of tensile strength

24-33 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

double

long. seams

10.8 x 13.1

Diameter of rivet holes in long. seams

1 3/32"

Pitch of rivets

7 3/4"

Lap of plates or width of butt straps

17 1/2"

Per centages of strength of longitudinal joint

rivets 92.2

plate 85.0%

Working pressure of shell by rules

181

Size of manhole in shell

16" x 12"

Size of compensating ring

9 x 1 1/2"

No. and Description of Furnaces in each boiler

3 Plain

Length of plain part

top 80"

bottom 79"

Thickness of plates

crown 7 9/16"

Description of longitudinal joint

welded

No. of strengthening rings

1.6 ft

Working pressure of furnace by the rules

189

Combustion chamber plates: Material

S

Thickness: Sides

2 3/32"

Back

1 1/16"

Top

1 1/16"

Bottom

Pitch of stays to ditto: Sides

9" x 7 3/4"

Back

9 1/2" x 9"

Top

9" x 7 3/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

191

Material of stays

S

Diameter at smallest part

1 7/16"

Area supported by each stay

70 sq in

Working pressure by rules

201

End plates in steam space

Material

S

Thickness

1 3/32"

Pitch of stays

17 1/2" x 17 1/2"

How are stays secured

turned 1/4 turn

Working pressure by rules

180

Material of stays

Diameter at smallest part

6 10"

Area supported by each stay

306 sq in

Working pressure by rules

207

Material of Front plates at bottom

S

Thickness

2 7/32"

Material of Lower back plate

S

Thickness

2 7/32"

Greatest pitch of stays

14 3/4" x 9 1/4"

Working pressure of plate by rules

265

Diameter of tubes

3 1/2"

Pitch of tubes

4 15/16" x 4 3/4"

Material of tube plates

S

Thickness: Front

2 7/32"

Back

2 7/32"

Mean pitch of stays

Pitch across wide water spaces

14 3/4"

Working pressures by rules

197

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

9" x 2"

Length as per rule

36"

Working pressure by rules

189

Superheater or Steam chest; how connected to boiler

Yes

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

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Yes

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Yes

Area of safety valves to superheater

Yes

Are they fitted with easing gear

Yes

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

Two top end bolts & nuts; two bottom end bolts & nuts; one set of coupling bolts & nuts; two main bearing bolts & nuts; one set of feed, bilge, & air pump valves; one main & one donkey check valve; a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

W. Brackenbury

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1914: Aug 21, 24, 28, Sep 4, 9, 15, 18, 21, 25, 29, Oct 1, 14, 16, 20, 23, 27, 29, Nov 1, 11, 13, 18*
{ During erection on board vessel -- } *24, 28, Dec 1, 3, 5, 8, 11, 15, 18, 22, 24, 29, Jan 2, 5, 13, 15, 20, 24*
Total No. of visits *39*

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

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *24-11-14* Slides *22-12-14* Covers *22-12-14* Pistons *18-12-14* Rods *18-12-14*

Connecting rods *18-12-14* Crank shaft *15-12-14* Thrust shaft *11-11-14* Tunnel shafts *✓* Screw shaft *14-10-14* Propeller *5-1-15*

Stern tube *16-10-14* Steam pipes tested *15-1-15* Engine and boiler seatings *20-10-14* Engines holding down bolts *13-1-15*

Completion of pumping arrangements *29-1-15* Boilers fixed *13-1-15* Engines tried under steam *20-1-15*

Main boiler safety valves adjusted *20-1-15* Thickness of adjusting washers *P $\frac{7}{16}$, S $\frac{3}{8}$*

Material of Crank shaft *Steel* Identification Mark on Do. *1405FLS* Material of Thrust shaft *Steel* Identification Mark on Do. *1366FLS*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *1295FLS*

Material of Steam Pipes *Solid drawn copper* Test pressure *400 lb.*

Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *"Merisia"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this*

vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good, the boilers & steam pipes have been tested as above by hydraulic pressure & found sound & good. The machinery has been properly fitted & secured on board, & on completion tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation, which did not exceed 187 lbs.

In our opinion the vessel is eligible for the record. + LMC 1.15

*It is submitted that
this vessel is eligible for
THE RECORD. + LMC 1.15.*

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 13 : 10 :
Donkey Boiler Fee ... £ - : - :
Travelling Expenses (if any) £ - : 8 : 2

When applied for,

12/21/1915

When received,

Feb 27, 1915

Frank L. Sturgeon & P. Fitzgerald
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *TUE FEB 16 1915*

Assigned *+ LMC 1.15*



© 2020

Lloyd's Register
Foundation