

REPORT ON MACHINERY.

No. 26207

Received at London Office

TUE. MAY 20. 1913

Date of writing Report

19

When handed in at Local Office

19-5-13 Port of

Hull

No. in Survey held at

Hull

Date, First Survey

Feb 12th

Last Survey

May 10th 1913

30 up. on the

H.M.S. "VOLATUS"

(Number of Visits)

19

Gross

293

Net

132

Master

Built at

Selby

By whom built

Cochrane & Sons Ltd.

When built

1913.

Engines made at

By whom made

when made

1913.

Boilers made at

Hull

By whom made

Messrs. Charles R. Holmes & Co. Ltd.

when made

1913.

Registered Horse Power

Owners

H.M.S. "VOLATUS" Fishing Co.

Port belonging to

Grimsby.

Nom. Horse Power as per Section 28

49

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

22"-22"-36"

Length of Stroke

24"

Revs. per minute

113

Dia. of Screw shaft

as per rule 4.44"

Material of

Screw

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

If two

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

Length of stern bush

36"

Dia. of Tunnel shaft

as per rule 6.674"

Dia. of Crank shaft journals

as per rule 4.468"

Dia. of Crank pin

4 1/2"

Size of Crank webs

4 3/8" x 14"

Dia. of thrust shaft under

collars

4 1/2"

Dia. of screw

9'-0"

Pitch of Screw

11'-0"

No. of Blades

4

State whether moveable

No.

Total surface

29 sq ft

No. of Feed pumps

Diameter of ditto

2 3/8"

Stroke

14 1/2"

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

2 3/8"

Stroke

14 1/2"

Can one be overhauled while the other is at work

No. of Donkey Engines

SIZES OF PUMPS

8" x 4 1/2" x 6"

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

In Engine Room

Two 2" - one forward & one aft.

In Holds, &c.

One 2" - aft. one 2" - fore.

No. of Bilge Injections

sizes

3"

Connected to condenser, or to circulating pump

pump

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

0

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

Hold suction

How are they protected

Wood casing

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

24.2.13

of Stern Tube

24.2.13

Screw shaft and Propeller

24.2.13

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Phoenix

Abt. Norden

Union of Nordic

Total Heating Surface of Boilers

1295 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

One up. mult. simple m.d.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

400 lbs.

Date of test

26.4.13

No. of Certificate

1977.

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

48 sq ft

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

4.9 sq ft

Pressure to which they are adjusted

205 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4"

EXT. Mean dia. of boilers

13'-6"

Length

10'-6"

Material of shell plates

S

Thickness

1 3/16"

Range of tensile strength

29 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D. 8. 2.

long. seams

Y 9. 2. B. 5.

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

8"

Lap of plates or width of butt straps

16 5/8"

Per centages of strength of longitudinal joint

rivets 85%

plate 85%

Working pressure of shell by rules

206 lbs.

Size of manhole in shell

16" x 12"

Size of compensating ring

4" x 1 3/16"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

38"

Length of plain part

top 6.4"

Thickness of plates

crown 26"

Description of longitudinal joint

Weld

No. of strengthening rings

3 x 3 x 3/4" bars on bottom

Working pressure of furnace by the rules

204 lbs.

Combustion chamber plates: Material

S

Thickness: Sides

23"

Back

32"

Top

23"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/2"

Back

10 1/2" x 8 1/2"

Top

11 1/2" x 8 1/2"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

205 lbs.

Material of stays

S

Diameter at smallest part

2 1/4"

Area supported by each stay

100 sq in

Working pressure by rules

206 lbs.

End plates in steam space:

Material

S

Thickness

1 3/32"

Pitch of stays

18" x 19"

How are stays secured

D. 1. 2. 2.

Working pressure by rules

205 lbs.

Material of Front plates at bottom

S

Thickness

1 1/16"

Material of Lower back plate

S

Thickness

29"

Greatest pitch of stays

14 1/2" x 8"

Working pressure of plate by rules

206 lbs.

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 5"

Material of tube plates

S

Thickness: Front

15"

Back

7"

Pitch across wide water spaces

14" x 14"

Working pressures by rules

315 lbs.

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

10 3/4" - 1 3/4"

Length as per rule

2-11 1/2"

Working pressure by rules

211 lbs.

Superheater or Steam chest; how connected to boiler

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

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

Yes

003357-003368-0299

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 _____
 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 each left & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each fuel & life pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & CO. LTD. Manufacturers.

Arthur Holmes DIRECTOR. 1913: Feb 12, 15, 24, 26 Mar 7, 17, 27, 31 Apr 3, 11, 16, 17, 25, 28, May 7, 9, 10
 Dates of Survey while building { During process of work in shops - - - May 7, 9, 10
 { During erection on board vessel - - -
 Total No. of visits 19

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

Dates of Examination of principal parts—Cylinders *2.4.13* Slides *16.4.13* Covers *11.4.13* Pistons *16.4.13* Rods *25.4.13*
 Connecting rods *25.4.13* Crank shaft *17.4.13* Thrust shaft *25.4.13* Tunnel shafts *r* Screw shaft *15.2.13* Propeller *15.2.13*
 Stern tube *15.2.13* Steam pipes tested *6.5.13* Engine and boiler seatings *24.2.13* Engines holding down bolts *6.5.13*
 Completion of pumping arrangements *10.5.13* Boilers fixed *4.5.13* Engines tried under steam *4.5.13*
 Main boiler safety valves adjusted *4.5.13* Thickness of adjusting washers *Forward 13" aft 12"*
 Material of Crank shaft *Iron* Identification Mark on Do. *Nº 10527.6* Material of Thrust shaft *Steel* Identification Mark on Do. *Nº 10527*
 Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *Nº 10527*
 Material of Steam Pipes *Solid drawn upper* Test pressure *400 lbs. per sq. inch hydraulic*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure, & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be placed with the notation of 1.4.6.5.13 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.13.

The amount of Entry Fee .. £ 1 : 0 :
 Special .. £ 11 : 14 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : 8/2 :
 When applied for, 19.5.13
 When received, 31.5.13

Committee's Minute FRI MAY 22 1913

Assigned

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



Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN.