

REPORT ON MACHINERY

No. 29211

TUE. 28. MAR. 1916

Date of writing Report

19

When handed in at Local Office

22-3 10/16 Port of

Hull

No. in Survey held at

Hull

Reg. Book.

Date, First Survey

18/5/15

Last Survey

21.3-1916

No. 12 on the steel screw trawler "Recon"

(Number of Visits 56)

Master

Built at Beverley

By whom built Cook, Welton & Gemmell

Gross 248

Net 108

When built 1916-3

Engines made at

Hull

By whom made

C. D. Holmes & Co. Ltd. (No. 1143)

when made 1916-3

Boilers made at

Hull

By whom made

C. D. Holmes & Co. Ltd. (No. 1157)

when made 1916-3

Registered Horse Power

Owners G. F. Light

Port belonging to Grimsby

Nom. Horse Power as per Section 28

80

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

12 1/2" - 22" - 35"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule 7.31"

Material of

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

Is 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

Dia. of Tunnel shaft as per rule 6.6"

Dia. of Crank shaft journals as per rule 6.93"

Dia. of Crank pin 7"

Size of Crank webs 4 1/2" x 13 1/4"

Dia. of thrust shaft under

Collars 7"

Dia. of screw 8-9"

Pitch of Screw 10-9"

No. of Blades 4

State whether moveable no

Total surface 29 sq ft

No. of Feed pumps one

Diameter of ditto 2 3/8"

Stroke 14 1/4"

Can one be overhauled while the other is at work

No. of Bilge pumps one

Diameter of ditto 2 3/8"

Stroke 14 1/4"

Can one be overhauled while the other is at work

No. of Donkey Engines two 2 1/2" dia.

SIZES OF PUMPS 5 1/2" x 5" + 6 1/2" x 6" dia.

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

In Engine Room two 2" dia.

In Holds, &c. One 2" dia in each compartment

All suctions also connected to 2 1/2" dia.

No. of Bilge Injections one sizes 3 1/2"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size 2 1/2" dia.

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 stowhold 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 suctions

How are they protected

strong wooden 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

27-7-15

of Stern Tube

27-7-15

Screw shaft and Propeller

28-7-15

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Stewarts & Lloyd

Total Heating Surface of Boilers

1402

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

195 lbs

Tested by hydraulic pressure to

390 lbs

Date of test

8-12-15

No. of Certificate

3119

Can each boiler be worked separately

yes

Area of fire grate in each boiler

43.2 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

4.9 sq in

Pressure to which they are adjusted

200

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7" lagged

Mean dia. of boilers

16 1/2"

Length

10'-6"

Material of shell plates

steel

Thickness

1 3/16"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

Long. seams

J.P.A.B.

Diameter of rivet holes in long. seams

1 1/32"

Pitch of rivets

8 7/16"

Lap of plates or width of butt straps

16 5/8"

Per centages of strength of longitudinal joint

rivets 86.8

plate 85.5

Working pressure of shell by rules

197 lbs

Size of manhole in shell

12" x 16"

Size of compensating ring

7" x 1 3/16"

No. and Description of Furnaces in each boiler

3 plain

Material

steel

Outside diameter

40"

Length of plain part

top 76 3/4"

bottom 66"

Thickness of plates

crown 2 1/2"

bottom 1 3/32"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

197

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/16"

Back

2 3/32"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 3/4" x 8"

Back

9 3/4" x 9 3/4"

Top

10 1/2" x 8"

Bottom

11" x 8"

Are stays fitted with nuts or riveted heads

nuts

Working pressure by rules

200

Material of stays

steel

Diameter at smallest part

2.07"

Area supported by each stay

89 sq in

Working pressure by rules

209

End plates in steam space:

Material

steel

Thickness

1 5/32"

Pitch of stays

1/8" x 1/8"

How are stays secured

by nuts

Working pressure by rules

195

Material of stays

steel

Diameter at smallest part

6.33"

Area supported by each stay

324 sq in

Working pressure by rules

203

Material of Front plates at bottom

steel

Thickness

7/8"

Material of Lower back plate

steel

Thickness

3/32"

Greatest pitch of stays

15" x 9 7/8"

Working pressure of plate by rules

204

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4"

Material of tube plates

steel

Thickness: Front

7/8"

Back

7/8"

Mean pitch of stays

9 1/2"

Pitch across wide water spaces

15"

Working pressures by rules

250

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

10 3/4" x 1 1/4"

Length as per rule

35.8"

Distance apart

11"

Number and pitch of stays in each

three 8"

Working pressure by rules

197

Superheater or Steam chest; how connected to boiler

yes

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

yes

Length

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diam. of rivet

yes

Pitch of rivets

yes

Working pressure of shell by rules

yes

Diameter of flue

yes

Material of flue plates

yes

Thickness

yes

Stays

yes

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?

Yes

If so, is a report now forwarded? ✓

SPARE GEAR.

State the articles supplied:—

Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & pump valves, one main & one donkey check valve, one safety valve spring, 3 boiler tubes, & a quantity of bolts & nuts & iron of various sizes

The foregoing is a correct description,

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

Harold E. Shurclough

DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1915 May 15-21 Jun 2-15 21-30 Jul 5-12 16-20 22-23 26-27 29 Aug 10-13 19 Sep 7-10 14-28 Oct 5-8 12-16 20-22 25-27 Nov 2-5 16-25 26-27 30 Dec 7-23 1916 Jan 17-18 20-21 31 Feb 9-12 23-25 29 Mar 3-9 15-20 21
During erection on board vessel --
Total No. of visits 56

Is the approved plan of main boiler forwarded herewith

yes ✓

Dates of Examination of principal parts—Cylinders 23-12-15 Shafts 31-1-16 Covers 18-1-16 Pistons 31-1-16 Rods 31-1-16

Connecting rods 31-1-16 Crank shaft 21-1-16 Thrust shaft 23-12-15 Tunnel shafts ✓ Screw shaft 28-7-15 Propeller 28-7-15

Stern tube 20-7-15 Steam pipes tested 3-3-16 Engine and boiler seatings 27-7-15 Engines holding down bolts 25-2-16

Completion of pumping arrangements 21-3-16 Boilers fixed 29-2-16 Engines tried under steam 21-3-16

Main boiler safety valves adjusted 9-3-16 Thickness of adjusting washers per 3/16 lbs 1/4

Material of Crank shaft Iron Identification Mark on Do. 1557 FLS Material of Thrust shaft Iron Identification Mark on Do. 7341 DD

Material of Tunnel shafts ✓ Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 1508 FLS

Material of Steam Pipes solid drawn copper ✓ Test pressure 400 lbs ✓

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 Bonas, Rigardo ✓

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 boiler & steam pipes have been tested as above by hydraulic pressure & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion was tried under full working conditions & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 204 lbs.

In my opinion the vessel is eligible for the record & L.M.C. 3-16

It is submitted that this vessel is eligible for THE RECORD + LMC 3-16.

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 12 : 0 :
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ 2 :

When applied for,

27-3-16

When received,

31-3-16

Committee's Minute

Assigned

FRIDAY MAR. 1916

+ L.M.C. 3-16

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

Frank E. Sturgeon



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