

Rpt. 4.

REPORT ON MACHINERY.

No. 70362

Date of writing Report

19

When handed in at Local Office

16 OCT 1917

Received at London Office

FRI 19 OCT 1917

No. in Survey held at
Reg. Book.

Newcastle-on-Tyne

Date, First Survey

30 Oct 1914

Last Survey

12 Oct 1914

on the SCREW STEAMER "CLANGULA"

(Number of Visits)

90

Tons
Gross 1755
Net 870

Master

Built at Newcastle

By whom built

Swan Hunter & Wigham Richardson

When built

1914

Engines made at

Newcastle-on-Tyne

By whom made

Swan Hunter & Wigham Richardson

When made

1914

Boilers made at

Newcastle-on-Tyne

By whom made

Swan Hunter & Wigham Richardson

When made

1914

Registered Horse Power

Owners

Cork Steamship Coy

Port belonging to

Gork

Nom. Horse Power as per Section 28

318

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Expansion

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders

20 1/2 - 34 - 56

Length of Stroke

42

Revs. per minute

75

Dia. of Screw shaft

as per rule 12 1/2

Material of

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

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 4' 1 1/2"

Dia. of Tunnel shaft

as per rule 10 1/2

Dia. of Crank shaft journals

as per rule 11 1/2

Dia. of Crank pin

11 1/2

Size of Crank webs

16 1/2 x 7 1/2

Dia. of thrust shaft under

collars

Dia. of screw

14 1/2

Pitch of Screw

16 1/2

No. of Blades

4

State whether moveable

No

Total surface

70 sq. ft.

No. of Feed pumps

2

Diameter of ditto

3 1/2

Stroke

22

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2

Stroke

22

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

6 x 6 x 6, 8 x 9 x 8, 14 x 3 x 6

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

In Engine Room

Three

1-2" dia + 2-2 1/2" dia

In Holds, &c.

H: 1 Hold 2-2 1/2" dia H: 2 Hold 2-2 1/2" dia

No. of Bilge Injections

1

sizes

4"

Connected to condenser, or to circulating pump

C.P.

Is a separate Donkey Suction fitted in Engine room & size

Yes

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

Hold Suctions

How are they protected

By strong 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

3/9/14

of Stern Tube

3/9/14

Screw shaft and Propeller

3/9/14

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from upper platform.

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel J. Spencer & Sons Ltd.

Total Heating Surface of Boilers

5000

Is Forced Draft fitted

Yes

No. and Description of Boilers

J. Cylinders 2, Multi: Single

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

2/8/14

No. of Certificate

8986

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

42 sq. ft.

No. and Description of Safety Valves to

each boiler

2: One on Spring

Area of each valve

3.06

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

14"

Mean dia. of boilers

12 1/2"

Length

11 1/2"

Material of shell plates

Steel

Thickness

3/32"

Range of tensile strength

29 1/2 to 33 1/2

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap Double

long. seams

Butt straps

Diameter of rivet holes in long. seams

1"

Pitch of rivets

3"

Lap of plates or width of butt straps

18"

Per centages of strength of longitudinal joint

rivets 86.1

plate 85.4

Working pressure of shell by rules

182 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

22 1/2 x 36 1/2 x 3 1/2

No. and Description of Furnaces in each boiler

2: Daington's

Material

Steel

Outside diameter

47 1/8"

Length of plain part

top 4' 10 1/2"

bottom 4' 10 1/2"

Thickness of plates

crown 3/16"

bottom 3/16"

Description of longitudinal joint

Weld

No. of strengthening rings

none

Working pressure of furnace by the rules

183 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

3/32"

Back

3/32"

Top

3/32"

Bottom

3/32"

Pitch of stays to ditto: Sides

9" x 8 1/2"

Back

8 1/2" x 8 1/2"

Top

8 1/2" x 9"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

194 lb

Material of stays

Steel

Diameter at smallest part

2 1/8"

Area supported by each stay

46.4

Working pressure by rules

239 lb

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18" x 14"

How are stays secured

Drum

Working pressure by rules

183 lb

Material of stays

Steel

Diameter at smallest part

4 1/4"

Area supported by each stay

252

Working pressure by rules

188 lb

Material of Front plates at bottom

Steel

Thickness

3/32"

Material of Lower back plate

Steel

Thickness

3/32"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

272 lb

Diameter of tubes

2 1/2"

Pitch of tubes

3 1/2" x 3 1/2"

Material of tube plates

Steel

Thickness: Front

3/32"

Back

3/4"

Mean pitch of stays

9 3/8"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

184 lb to 239 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2" x 1 1/2"

Length as per rule

30 1/2"

Distance apart

9"

Number and pitch of stays in each

2: 8 1/2"

Working pressure by rules

182 lb

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

VERTICAL DONKEY BOILER—

Manufacturers of Steel *home*

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 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 _____ Rivets _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ 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:— 2 main bearing Bolts, 2 Conn. Rod Bolt End Bolts, 2 Conn Rod Top End Bolts, 1 set Coupling Bolts, 1 set Packing Ring for H.P. & M.P. Pistons, 1 set Sea Pump valves, 1 set Reg. pump valves, Glands & Bushes for H.P. & M.P. Piston Rods, 1 Propeller, 56 Fire Bars, a quantity of Assorted Bolts & Nuts of various sizes.

The foregoing is a correct description, *Iron of various sizes.*

G. F. Tweedy Manufacturer.

Dates of Survey while building _____
 During progress of work in shops --- *Oct. 30 Nov. 2 3 5 10 13 20 23 29 Dec. 5 7 12 15 18 21 27 28 Jan. 5 8 10 11 20 22 26 27 Feb. 1 5 9 12 15 28 Mar. 2 5 6 7 9 12 15 16 17 19 22 26 28 Apr. 1 23 24 26 30 May 4 7 8 10 11 23 Jun 1 7 11 15 20 22 Jul 2 4 9 13 17 24 Aug 2 3 10 20 31 Sep 3 6 10 14 17 19 22 24 25 26 28 Oct 1 4 5 12*
 During erection on board vessel --- *23 Jun 1 7 11 15 20 22 Jul 2 4 9 13 17 24 Aug 2 3 10 20 31 Sep 3 6 10 14 17 19 22 24 25 26 28 Oct 1 4 5 12*
 Total No. of visits _____

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

Dates of Examination of principal parts—Cylinders *3/9/17* Slides *4/7/17* Covers *25/9/17* Pistons *23/1/17* Rods *22/3/17*
 Connecting rods *11/6/17* Crank shaft *31/1/17* Thrust shaft *27/12/16* Tunnel shafts *19/4/17* Screw shaft *17/4/17* Propeller *17/4/17*
 Stern tube *31/8/17* Steam pipes tested *17/9/17* Engine and boiler seatings *2/7/17* Engines holding down bolts *28/9/17*
 Completion of pumping arrangements *25/9/17* Boilers fixed *28/9/17* Engines tried under steam *25/9/17*
 Main boiler safety valves adjusted *25/9/17* Thickness of adjusting washers *F 3/8 A 3/8 P 3/8 S 1/8*
 Material of Crank shaft *Steel* Identification Mark on Do. *4388* Material of Thrust shaft *Steel* Identification Mark on Do. *4388*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *4388* Material of Screw shafts *Steel* Identification Marks on Do. *4388*
 Material of Steam Pipes *Luxwelded Wrot Lion* Test pressure *5240 lb*

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

The Engines and Boilers of this vessel were built under Special Survey and the materials and workmanship are of good quality. When completed they were examined under steam and found to work satisfactorily.

The Machinery throughout is now in good and efficient condition and eligible in our opinion to have the record of L.M.C. 10, 17, marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10, 17, F.D.

TJS
20.10.17

The amount of Entry Fee .. £ *3* : : :
 Special .. £ *35* : *18* : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) .. £ : : :
 When applied for, *16 OCT 1917*
 When received, *20/10/17*

Committee's Minute

Assigned

TUE OCT 23 1917

+ L.M.C. 10, 17

Thomas In Brook *Wm. Austin*
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



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 Lloyd's Register
 Foundation

NEWCASTLE-ON-TYNE

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Rpt. 13.

Port of

No. in Reg. Book

Owners

Yard No.

DESCRIPTION

One

Capacity

Where is

Position of

Positions

in Pa

Qualities

If cut out

circu

If vessel

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P.S.H.