

REPORT ON MACHINERY.

No. 19166.

Port of Hull

Received at London Office

WED, 10 JUL 1907

No. in Survey held at

Hull

Date, first Survey

Mar 21st

Last Survey

24 July 1907

Reg. Book.

560

on the

Steel S. K. Celtic(Number of Visits 28)

Tons

Gross 264Net 111

Master

Built at

Hull

By whom built

Messrs Earle's & Co Ltd

When built

1907

Engines made at

By whom made

Messrs

when made

1907

Boilers made at

By whom made

Earle's & Co Ltd

when made

1907

Registered Horse Power

Owners

Grimby Steam Fishing Co. Ltd

Port belonging to

Grimby

Nom. Horse Power as per Section 28

80

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

12³/₄ - 22 - 36

Length of Stroke

24

Revs. per minute

110

Dia. of Screw shaft

as per rule 7³/₄as fitted 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

YesIf the liner is in more than one length are the joints burned one length 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

—

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

Length of stern bush

2'-10¹/₂'

Dia. of Thrust shaft

as per rule 6⁵/₈as fitted 7¹/₂

Dia. of Crank shaft journals

as per rule 6⁵/₈as fitted 7¹/₂

Dia. of Crank pin

4¹/₂

Size of Crank webs

14 x 4¹/₂

Dia. of thrust shaft under

collars

7¹/₂

Dia. of screw

9'-0"

Pitch of Screw

11' 0" + 12' 0"

No. of Blades

4

State whether moveable

No

Total surface

27¹/₂

No. of Feed pumps

1

Diameter of ditto

3"

Stroke

12"

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

3"

Stroke

12"

Can one be overhauled while the other is at work

No. of Donkey Engines

one

Sizes of Pumps

6" x 3" x 6"

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

In Engine Room

one 2" + one 3"In Holds, &c. one 2" from aft slush well, one 2" from forward slush well, one 2" from below fishroom floor, one 2" from fore Comp.

No. of Bilge Injections

sizes 3/2

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 3"

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 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

3.7.07

of Stern Tube

3.7.07

Screw shaft and Propeller

3.7.07

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

—

worked from

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel

W. Beardmore & Co

Total Heating Surface of Boilers

1400^{sq} ft

Is Forced Draft fitted

No

No. and Description of Boilers

One Cyl. Multi

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

14.6.07

No. of Certificate

1568

Can each boiler be worked separately

—

Area of fire grate in each boiler

37.2^{sq} ft

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

4.9

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Int. Mean dia. of boilers

13'-0"

Length

10'-6"

Material of shell plates

Steel

Thickness

1³/₂"

Range of tensile strength

28 - 32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

L.D.

long. seams

D.B.S.F.B.

Diameter of rivet holes in long. seams

1¹/₂"

Pitch of rivets

7¹/₂"

Lap of plates or width of butt straps

15¹/₂"

Per centages of strength of longitudinal joint

rivets 84.9plate 85.0

Working pressure of shell by rules

185 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

31" x 28" x 1³/₂"

No. and Description of Furnaces in each boiler

Two plain

Material

Steel

Outside diameter

3'-8¹/₂"

Length of plain part

top 5'-9"bottom 5'-9"

Thickness of plates

crown 4.9"bottom 6.4"

Description of longitudinal joint

Welded

No. of strengthening rings

Two

Working pressure of furnace by the rules

180 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

5"

Back

5¹/₂"

Top

5"

Bottom

5"

Pitch of stays to ditto: Sides

9" x 8"

Back

9¹/₂" x 8¹/₂"

Top

9" x 8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

186 lbs

Material of stays

Steel

Diameter at smallest part

1¹/₂"

Area supported by each stay

76.2^{sq} ft

Working pressure by rules

185 lbs

End plates in steam space:

Material

Steel

Thickness

1¹/₂"

Pitch of stays

17" x 18"

How are stays secured

into end plates

Working pressure by rules

185 lbs

Material of stays

Steel

Diameter at smallest part

2¹/₂"

Area supported by each stay

306^{sq} ft

Working pressure by rules

211 lbs

Material of Front plates at bottom

Steel

Thickness

1⁵/₈"

Material of Lower back plate

Steel

Thickness

7¹/₂"

Greatest pitch of stays

4¹/₂" x 8¹/₂"

Working pressure of plate by rules

195 lbs

Diameter of tubes

3¹/₂"

Pitch of tubes

4¹/₂" x 5"

Material of tube plates

Steel

Thickness: Front

14¹/₂"

Back

13¹/₂"

Mean pitch of stays

9¹/₈"

Pitch across wide water spaces

14¹/₂"

Working pressures by rules

181 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10" x 1¹/₄"

Length as per rule

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 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		Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set feed and bilge pump valves and a quantity of assorted bolts, nuts etc

The foregoing is a correct description,
 F. J. Palethorpe Manufacturer.

Dates of Survey while building: During progress of work in shops - SECRETARY 1907 - Mar 21, 27, Apr 6, 9, 12, 15, 23, May 2, 7, 9, 10, 13, 27, 28, 29, Jun 5, 7, 12, 14
 During erection on board vessel - Jan 17, 19, 22, 26, 29, Jul 1, 2, 3, 4
 Total No. of visits 28

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts: Cylinders 29.5.07 Slides 19.6.07 Covers 19.6.07 Pistons 7.6.07 Rods 7.6.07
 Connecting rods 7.6.07 Crank shaft 13.5.07 Thrust shaft 28.6.07 Tunnel shafts — Screw shaft 27.5.07 Propeller 27.5.07
 Stern tube 13.5.07 Steam pipes tested 29.6.07 Engine and boiler seatings 14.6.07 Engines holding down bolts 1.7.07
 Completion of pumping arrangements 4.7.07 Boilers fixed 1.7.07 Engines tried under steam 4.7.07
 Main boiler safety valves adjusted 1.7.07 Thickness of adjusting washers 1/8" 5/16"

Material of Crank shaft Steel Identification Mark on Do. 1873 A.T.G. Material of Thrust shaft Steel Identification Mark on Do. 1873 A.T.G.
 Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts Iron Identification Marks on Do. 1873 A.T.G.
 Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs per sq inch.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey, in accordance with the Rules, the materials and workmanship are good. The boilers tested by hydraulic pressure and with the engines placed on board and tested under steam, they are now in good order, and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of — L.M.C. 7.07 in the Register Books.

These engines and boilers are very similar to those fitted on the Thrush, Crown, Gladys. Hull Rpts 17571, 17558, 17708 respectively.

The engines and pumping arrangement were examined at Grimsby as per letter attached.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 7.07

The amount of Entry Fee.. £ 1 : : : When applied for, 9/7/1907
 Special .. £ 12 : : : When received, 11.9.07
 Donkey Boiler Fee .. £ - : :
 Travelling Expenses (if any) £ - : :
 Committee's Minute

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

Assigned FRI. 12 JUL 1907

MACHINERY CERTIFICATE WRITTEN.