

## REPORT ON MACHINERY.

No. 39291.

WED. 12 NOV. 1919

Received at London Office

Date of writing Report

19

When handed in at Local Office

1-11-1919 Port of Glasgow

Date, First Survey 15<sup>th</sup> Oct. 1918. Last Survey 25<sup>th</sup> Oct. 1919

(Number of Visits 29)

No. in Survey held at

Reg. Book.

on the

Penryn

H. M. S. Wexford

Master

Built at

Penryn

By whom built

Tom Simons &amp; Co. (622)

Tons

Gross

Net

When built

Engines made at

By whom made

W. A. Allen &amp; Co. (B.C. Survey)

when made

1919

Boilers made at

By whom made

Babcock &amp; Wilcox Ltd (392)

when made

1919

Registered Horse Power

Owners

British Admiralty

Port belonging to

Nom. Horse Power as per Section 28

378

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &amp;c.—Description of Engines

Triple expansion

No. of Cylinders

6

No. of Cranks

6

Dia. of Cylinders

13 $\frac{1}{4}$ " 21 $\frac{1}{4}$ " 34"

Length of Stroke

21"

Revs. per minute

268

Dia. of Screw shaft

as per rule 7 $\frac{1}{4}$ "

Material of

screw shaft

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

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

1 length

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

If 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 $\frac{3}{4}$ "

Dia. of Crank shaft journals

as per rule 7 $\frac{1}{4}$ "

Dia. of Crank pin

7 $\frac{1}{4}$ "

Size of Crank webs

8 $\frac{1}{2}$  x 4

Dia. of thrust shaft under

collars

Dia. of screw

6" 6"

Pitch of Screw

8' 3"

No. of Blades

4"

State whether moveable

yes

Total surface

18 ft each

No. of Feed pumps

3

Diameter of ditto

7 $\frac{3}{4}$  x 5 $\frac{1}{2}$ 

Stroke

12"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

6 $\frac{1}{2}$  x 8

Stroke

15"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

5

Sizes of Pumps

5 x 5 x 6

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

In Engine Room

(2) 2 $\frac{1}{2}$ 

in each boiler room

(2) 2 $\frac{1}{2}$ 

(1) 3"

In Holds, &amp;c.

(13) 2 $\frac{1}{2}$ 

No. of Bilge Injections

2

sizes

6

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room &amp; 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

below

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

jacking

What pipes are carried through the bunkers

fast bilge &amp; suction discharge

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

15/9/19

of Stern Tube

15/9/19

Screw shaft and Propeller

15/9/19

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

worked from

worked from

BOILERS, &amp;c.—(Letter for record

(S)

Manufacturers of Steel

See Separate Report

Total Heating Surface of Boilers

6990 ft<sup>2</sup>

Is Forced Draft fitted

yes

No. and Description of Boilers

2

Galloway Water Tube

Working Pressure

235

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

yes

Area of fire grate in each boiler

60 ft<sup>2</sup>

each boiler

2

Area of each valve

2.76

Pressure to which they are adjusted

24.2 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Back

Top

Bottom

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Working pressure by rules

End plates in steam space:

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Working pressure of plate by rules

Diameter at smallest part

Area supported by each stay

Thickness

Greatest pitch of stays

Working pressure by rules

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Diameter of tubes

Pitch of tubes

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Pitch across wide water spaces

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diam. of rivet

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Material of flue plates

Thickness

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

End plates: Thickness

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

Are they fitted with easing gear

Working pressure of end plates

Area of safety valves to superheater



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description *Iron*

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 Spig. Book.

Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment

If fitted with casing 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 top end bolts & nuts 2 bottom end bolts & nuts  
2 main bearing bolts & nuts, set of coupling bolts & nuts, fuel & oil  
pump valves, iron, bolts & nuts of various sizes and all other articles  
specified.

The foregoing is a correct description,

FOR WM. SIMONS & CO., LTD.

Manufacturer.

Dates of Survey while building

During progress of work in shops ---

During erection on board vessel ---

Total No. of visits 29

1918 Oct. 15. Dec. 24. 1919 Jan. 16. Feb. 19. Mar. 6. 21. 29. Apr. 15. May 6. June 17. 20. 23. 24. 27.

July 30. 31. Aug. 6. 13. Sept. 2. 12. 15. Oct. 1. 6. 13. 15. 20. 23. 24. 27.

Is the approved plan of main boiler forwarded herewith 220

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts 6/3/19 Screw shaft 13/8/19 Propeller 13/8/19

Stern tube 13/8/19 Steam pipes tested 1/10/19 Engine and boiler seatings 30/7/19 Engines holding down bolts 12/9/19

Completion of pumping arrangements 20/10/19 Boilers fixed 6/10/19 Engines tried under steam 23/10/19

Main boiler safety valves adjusted 15/10/19 Thickness of adjusting washers 3/8" 5/8" 3/4" 1" 1 1/4" 1 3/4" 2" 2 1/4" 2 3/4" 3" 3 1/4" 3 1/2" 4" 4 1/4" 4 1/2" 5" 5 1/4" 5 1/2" 6" 6 1/4" 6 1/2" 7" 7 1/4" 7 1/2" 8" 8 1/4" 8 1/2" 9" 9 1/4" 9 1/2" 10" 10 1/4" 10 1/2" 11" 11 1/4" 11 1/2" 12" 12 1/4" 12 1/2" 13" 13 1/4" 13 1/2" 14" 14 1/4" 14 1/2" 15" 15 1/4" 15 1/2" 16" 16 1/4" 16 1/2" 17" 17 1/4" 17 1/2" 18" 18 1/4" 18 1/2" 19" 19 1/4" 19 1/2" 20" 20 1/4" 20 1/2" 21" 21 1/4" 21 1/2" 22" 22 1/4" 22 1/2" 23" 23 1/4" 23 1/2" 24" 24 1/4" 24 1/2" 25" 25 1/4" 25 1/2" 26" 26 1/4" 26 1/2" 27" 27 1/4" 27 1/2" 28" 28 1/4" 28 1/2" 29" 29 1/4" 29 1/2" 30" 30 1/4" 30 1/2" 31" 31 1/4" 31 1/2" 32" 32 1/4" 32 1/2" 33" 33 1/4" 33 1/2" 34" 34 1/4" 34 1/2" 35" 35 1/4" 35 1/2" 36" 36 1/4" 36 1/2" 37" 37 1/4" 37 1/2" 38" 38 1/4" 38 1/2" 39" 39 1/4" 39 1/2" 40" 40 1/4" 40 1/2" 41" 41 1/4" 41 1/2" 42" 42 1/4" 42 1/2" 43" 43 1/4" 43 1/2" 44" 44 1/4" 44 1/2" 45" 45 1/4" 45 1/2" 46" 46 1/4" 46 1/2" 47" 47 1/4" 47 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