

Port of

Belfast

Received at London Office

JUES. 6 DEC. 1904

No. in Survey held at
Reg. Book.

Date, first Survey 12 March

Last Survey 12 Dec 1904

(Number of Visits 51)

on the

Master

Built at

By whom built

Gross 6689

Net 4286

When built 1904

Engines made at

By whom made

when made 1904

Boilers made at

By whom made

when made

Registered Horse Power

Owner

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Twin Screw Quadruple Expⁿ. of Cylinders

No. of Cranks 8

Dia. of Cylinders 21"-30"-43½"-62"

Length of Stroke 48"

Revs. per minute 76

Dia. of Screw shaft

as per rule 18½"

as fitted 18½"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss

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

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 54"

Dia. of Tunnel shaft

as per rule 11"

Dia. of Crank shaft journals

as per rule 13½"

Dia. of Crank pin 18½"

Size of Crank webs 18½" x 9½"

Dia. of thrust shaft under

collars 18½"

Dia. of screw 15"-10"

Pitch of screw 19"-6"

No. of blades 3

State whether moveable

Total surface 61½ sq ft.

No. of Feed pumps 2

Diameter of ditto 4½"

Stroke 28"

Can one be overhauled while the other is at work

No. of Bilge pumps 2

Diameter of ditto 5"

Stroke 28"

Can one be overhauled while the other is at work

No. of Donkey Engines 2

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

In Engine Room 4-8½" x 2-2½"

In Holds, &c. 12-3½" x 2-2½"

No. of bilge injections 2

sizes 8"

Connected to condenser, or to circulating pump

Pump

a separate donkey suction fitted in Engine room & size 1½"-8½" x 8"

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Before launching screw shaft tunnel watertight

Is it fitted with a watertight door

worked from

Top Deck fine Room Platform

BOILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

14580 sq ft.

Is forced draft fitted

No. and Description of Boilers

2 Double End Cylinders

Working Pressure

215 lbs

tested by hydraulic pressure to 430 lbs

Date of test 8-9-04

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

64½ sq ft.

No. and Description of safety valves to

each boiler 2

Area of each valve

15.9 sq ft.

Pressure to which they are adjusted

215 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

About 3 ft.

Mean dia. of boilers 15.6"

Length 19.9"

Material of shell plates

Thickness 1½"

Range of tensile strength 29-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Lap & T. long. seams

Butt & Triple

Diameter of rivet holes in long. seams 1½"

Pitch of rivets 10"

Length of plates or width of butt straps 23½"

Per centages of strength of longitudinal joint

rivets 96.5%

plate 83.4%

Working pressure of shell by rules 247 lbs

Size of manhole in shell 16" x 12"

Material

Size of compensating ring 11.9"

No. and Description of Furnaces in each boiler

6 - Horizontal

Material

Steel

Outside diameter 49½"

Length of plain part top 4"

Thickness of plates crown 3½"

Description of longitudinal joint

Welded

No. of strengthening rings 4

Material

Working pressure of furnace by the rules 242 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides 3½"

Back 3½"

Top 3½"

Bottom 3½"

Working pressure by rules 217 lbs

Pitch of stays to ditto: Sides 15x7½"

Back 8x7½"

Top 15x8½"

If stays are fitted with nuts or riveted heads

Nuts inside

Working pressure by rules 217 lbs

End plates in steam space: 230 lbs

Material of stays Steel

Diameter at smallest part 1½"

Area supported by each stay 53.5 sq ft.

Working pressure by rules 217 lbs

Material of stays Steel

Thickness 1½"

Pitch of stays 16x16"

How are stays secured

Diameter at smallest part 2½"

Area supported by each stay 260 sq ft.

Working pressure by rules 230 lbs

Material of Front plates at bottom Steel

Thickness 1½"

Material of Lower back plate Steel

Thickness 1½"

Greatest pitch of stays 18x2"

Thickness 1½"

Material of tube plate Steel

Thickness 7"

Front 15x7"

Back 4"

Mean pitch of stays 8x8"

Pitch across wide water spaces 14"

Working pressures by rules 387 lbs

Thickness of girder at centre 9x4x(3x2)

Length as per rule 51"

Distance apart 8½"

Number and pitch of Stays in each 6-7½"

Can the superheater be shut off and the boiler worked

Working pressure by rules 223 lbs

Superheater or Steam chest; how connected to boiler

separately

Diameter 27½"

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

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

W1098-0060 1/2

DONKEY BOILER— *No. 12* Description

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *See other sheet*

The foregoing is a correct description,
for *Hodgson & Wolff* Manufacturer.

Dates of Survey while building

During progress of work in shops— *March 12-16-18-24-31. April 7-14-18-22-28. May 2-4-9-11-14-20-23-27.*

During erection on board vessel— *June 3-7-9-13-23-27. July 31-27. Aug 11-17-23 up to Dec 1. 1904.*

Total No. of visits *51*

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

" " " donkey " " " *Yes*

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

The machinery of this vessel has been constructed under Special License, and in accordance with the Rules. The materials and the workmanship used in its construction, are good throughout, and on trial in Belfast Lough, it worked satisfactorily.

In my opinion it is eligible for record *+ L.M.C. 12-04.*

Reports on the Electric Light Installation, and on the Refrigerating Machinery, will be forwarded later.

It is submitted that
this vessel is eligible for
THE RECORD *+ L.M.C. 12-04. Elec. Light.*
REF. MCHY.

Ans.
6.12.04.

6.12.04

The amount of Entry Fee.. £ *3 : 0* : When applied for, *2-12-04*

Special .. £ *60 : 8* : When received, *8/12/04*

Donkey Boiler Fee .. £ : : *8/12/04*

Travelling Expenses (if any) £ : : *8/12/04*

Committee's Minute

Assigned

FRI. 9 DEC 1904

+ L.M.C. 12-04

MACHINERY CERTIFICATE
WRITTEN.

Rpt. 9a.

Port of *Belfast* Continuation of Report No. *5823* dated *5 Dec 1904* on the *H.S.S. Mamari*

Donkey Pumps:

Main Feed 11" x 8" x 24" Double
General 9 1/2" x 4" x 18" Woodsons Single
Auxiliary Feed - - - - -
Ballast 10" x 10" x 10" Duplex
Fires 4 x 4 x 5
F. Water 4 1/2 x 3 x 6

Spare Gear

5" Crank Shaft
Propeller Shaft & 2 Main. Bronze Propeller Blades
Pair Crank pin braces.
Crosshead
Air Pump bucket rod complete
Head & foot valves
Set of piston rings for H.P. M.P. M.P. cylinders
1 H.P. valve & spindle with neck bush.
1 L.P.
Main pump rod, bucket, valves set
Impeller & spindle for Main Cent. Circulating Pump
Eccentric Strap complete.
Escape valve springs; Condenser Tubes, journals set
Spare gear for auxiliary pumps set
and all gear to Lloyd's Rules additional.

R. J. Beveridge