

REPORT ON BOILERS.

No. 6016

Port of

Belfast

Received at London Office

FRI. 15 JAN 1906

No. in Survey held at
Reg. Book.

Belfast

Date, first Survey 27th Feb. 1905Last Survey Jan. 13th 1906

(Number of Visits 60)

Gross 7654

Net 4928

on the

S.S. Manipur

Master

Built at

Belfast

By whom built

Harland Wolff & Co. Ltd.

When built 1906

Engines made at

Belfast

By whom made

when made

Boilers made at

By whom made

when made

Registered Horse Power

685

Owners

J. Brocklebank

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel A. G. & Co. Ltd.

(Letter for record)

Total Heating Surface of Boilers

4212 sq ft

Is forced draft fitted

No

No. and Description of

Boilers 2- Single End Cylindrical

Working Pressure

215 lbs

Tested by hydraulic pressure to

430 lbs

Date of test 10-11-05

No. of Certificate

366

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

57 1/2 sq ft

and Description of

safety valves to each boiler 2- Direct Spring

Area of each valve

7.07 sq in

Pressure to which they are adjusted

215 lbs

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

About 40 in

Mean dia. of boilers

14'-5 1/2"

Length 10'-6"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

29-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap & Plug

Long. seams

Butt & Plug

Diameter of rivet holes in long. seams

1 1/8"

Pitch of rivets

10"

Lap of plates or width of butt straps

22 1/4"

Per centages of strength of longitudinal joint

rivets 93.2

plate 84.3

Working pressure of shell by

rules

246 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

McNeil's

No. and Description of Furnaces in each

boiler 2- Lighten

Material

Steel

Outside diameter

46 1/4"

Length of plain part

top 4"

bottom 11"

Thickness of plates

crown 3 1/8"

bottom 3 1/8"

Description of longitudinal joint

Weld

No. of strengthening rings

270

Working pressure of furnace by the rules

244 lbs

Combustion chamber

plates: Material

Steel

Thickness: Sides

1 1/2"

Back

5"

Top

1 1/2"

Bottom

7/8"

Pitch of stays to ditto: Sides

7 1/2" x 7"

Back 6 1/2" x 7 1/2"

Top 7 1/2" x 7 1/2"

If stays are fitted with nuts or riveted heads

None inside

Working pressure by rules

240 lbs

Material of stays

Steel

Diameter at

smallest part

1 1/2" x 1 1/2"

Area supported by each stay

57 1/2"

Working pressure by rules

218 lbs

plates in steam space: Material

Steel

Thickness

1 1/8"

Pitch of stays

16" x 14 1/2"

How are stays secured

Plates & Nuts

Working pressure by rules

200 lbs

Material of stays

Steel

Diameter at smallest part

2 1/2" x 2 1/2"

Area supported by each stay

232 sq in

Working pressure by rules

240 lbs

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of

Back plates

Steel

Thickness

1 1/2"

Lower back plate

Steel

Thickness

1 1/2"

Greatest pitch of stays

22 1/2" x 8 1/2"

Working pressure of plate by rules

604 lbs

Diameter of tubes

2 1/4"

Pitch of tubes

4" x 4"

Material of tube plates

Steel

Thickness: Front

1 1/2"

Back

3/4"

Mean pitch of stays

8" x 8"

Pitch across wide

water spaces

14"

Working pressures by rules

338 lbs with 5 donkey

Girders to Chamber tops: Material

Iron

Depth and thickness of

girder at centre

8" x (5" x 2)

Length as per rule

27 1/2"

Distance apart

7 1/2"

Number and pitch of Stays in each

1-7 1/2"

Working pressure by rules

253 lbs

Superheater or Steam chest: how connected to boiler

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

Area of safety valves to superheater

Are they fitted with easing gear

Yes

No

No

No

No

No

No

No

No

No

No

VERTICAL DONKEY BOILER—

No.

Description

Manufacturers of steel

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

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

The foregoing is a correct description,

Harland & Wolff & Co. Ltd. Manufacturer.

Dates

of Survey

while

building

During progress of

work in shops - -

During erection on

board vessel - -

Total No. of visits

See other sheet

Is the approved plan of main boiler forwarded herewith

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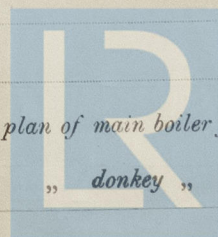
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W1525-0240

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

Donkey Pumps & Spare Gear

Meirs 12 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 26" Feed
 Wootsons 7" x 5" x 12" Auxiliary Feed.
 Watsons 12" x 10" x 14" Ballast
 Flax & Wolffs 9" x 6" x 10" General
Trap? Pump set?

Propeller blade
 Pair crank pin brasses
 Cross head
 For pump bucket & rod, complete
 head valve
 Leto piston rings H.P. & I.P.
 H.P. valve spindle neck bush
 L.P.
 Impeller & spindle for Circulating Pump.
 Eccentric strap complete.
 4 Cyfr. escape valve springs
 50 Condenser tubes
 Leto studs & nuts for cylinder flanges
 Feed pump escape valve spring.
 Boiler tubes set^t. and all gear to Lloyd's Rules extra

Certificate (if required) to be sent to

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

The amount of Entry Fee...	£	:	:	When applied for.
Special	£	:	:	19
Donkey Boiler Fee ...	£	:	:	When received.
Travelling Expenses (if any) £	:	:	:	19

See other sheet

R. J. Bennett
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

TUES. 23 JAN 1906

Assigned



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