

## REPORT ON BOILERS.

No. 8766.

MON. JUL. 10 1922

Received at London Office

Date of writing Report 7th July 1922 When handed in at Local Office

Port of Belfast

No. in Survey held at  
Reg. Book.

Date, First Survey

Last Survey

19

on the

T.S.S. *Diogenes*

(Number of Visits)

Gross

Tons } Net

Master ✓

Built at

Belfast

By whom built

Harland &amp; Wolff Ltd

When built 1922

Engines made at

Belfast

By whom made

When made

Boilers made at

By whom made

When made

Registered Horse Power ✓

Owner *Geo. Thompson & Co Ltd*Port belonging to  *Aberdeen*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel *J. Colville & Sons Ltd*Letter for record *S*Total Heating Surface of Boilers *2788 sq ft*Is forced draft fitted *No*

No. and Description of

Boilers *One Cylindrical Single End*Working Pressure *215 lbs*Tested by hydraulic pressure to *430 lbs* Date of test *8-12-21*No. of Certificate *808*Can each boiler be worked separately *Yes*Area of fire grate in each boiler *65 sq ft*

No. and Description of

Safety valves to each boiler *2 - Direct Spring*Area of each valve *9.62 sq in*Pressure to which they are adjusted *215 lbs. 0"*Are they fitted with easing gear *Yes*

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

Smallest distance between boilers or uptakes and bunkers or woodwork *About 20"*Mean dia. of boilers *15'-9"*Length *11'-9"*Material of shell plates *Steel*Thickness *1 1/2"*Range of tensile strength *29-33 tons*Are the shell plates welded or flanged *No*Descrip. of riveting: cir. seams *Lap Jts*long. seams *Butt Jts*Diameter of rivet holes in long. seams *1 1/32"*Pitch of rivets *10"*Gap of plates or width of butt straps *23 1/2"*Per centages of strength of longitudinal joint rivets *98.8*

Working pressure of shell by

Rules *221 lbs*Size of manhole in shell *16" x 18"*Size of compensating ring *McVicker*

No. and Description of Furnaces in each

Boiler *3 Monium*Material *Steel*Outside diameter *49 1/2"*Length of plain part *2'-9"*Thickness of plates crown *3/4"*Description of longitudinal joint *Weld*

No. of strengthening rings ✓

Working pressure of furnace by the rules *228 lbs*

Combustion chamber

Plates: Material *Steel*Thickness: Sides *2 1/2"*Back *4"*Top *3 1/2"*Bottom *4 1/2"*Pitch of stays to ditto: Sides *8 1/2" x 7 1/2"*Back *7 1/2" x 9 1/2"*Top *9 1/2" x 7 1/2"*If stays are fitted with nuts or riveted heads *Into inside*Working pressure by rules *219 lbs*Material of stays *Steel*

Area at

Smallest part *176 sq in*Supported by each stay *785 lbs*Working pressure by rules *224 lbs*plates in steam space: Material *Steel*Thickness *1 1/2"*Pitch of stays *18 1/2" x 15 1/2"*How are stays secured *Into nuts*Working pressure by rules *220 lbs*Material of stays *Steel*Area at smallest part *5'9 1/2" x 7'6 1/2"*Area supported by each stay *291 sq in*Working pressure by rules *251 lbs*Material of Front plates at bottom *Steel*Thickness *3"*

Material of

Lower back plate *Steel*Thickness *3"*Greatest pitch of stays *13 1/2" x 7 1/2"*Working pressure of plate by rules *231 lbs*Diameter of tubes *2 1/4"*Pitch of tubes *4" x 4"*Material of tube plate *Steel*Thickness: Front *3"*Back *4"*Mean pitch of stays *8" x 8"*

Pitch across wide

Water spaces *14"*Working pressures by rules *321 lbs with 1/2" diameter*Girders to Chamber tops: Material *Steel*

Depth and thickness of

Rider at centre *10" (8" + 2)*Length as per rule *36"*Distance apart *9"*Number and pitch of Stays in each *4-7 1/2"*Working pressure by rules *224 lbs*

Steam dome: description of joint to shell ✓

% of strength of joint ✓

Diameter ✓

Thickness of shell plates ✓

Material ✓

Description of longitudinal joint ✓

Diam. of rivet holes ✓

Pitch of rivets ✓

Working pressure of shell by rules ✓

Crown plates ✓

Thickness ✓

How stayed ✓

SUPERHEATER. Type *Schmidt*

Date of Approval of Plan ✓

Tested by Hydraulic Pressure to *430 lbs*Date of Test *29-1-22*Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *Yes*Diameter of Safety Valve *2"*Pressure to which each is adjusted *220 lbs. 0"*Is Easing Gear fitted *Yes*

## VERTICAL DONKEY BOILER

No. *None*

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

Description 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

Pitch of plating

Per centage of strength of joint

Rivets

Working pressure of shell by rules

Thickness of shell crown plates

Use 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

Radius of do.

Stayed by

Diameter of uptake

Thickness of uptake plates

Pitch of water tubes

The foregoing is a correct description,

For HARLAND &amp; WOLFF Ltd.

Manufacturer.

*A. J. Macdonald*  
Assistant Secretary.*See other sheet*Is the approved plan of main boiler forwarded herewith *Yes (2 plans)*" " " donkey " " *Yes*

002269-002278-0134 1/2

Registered  
Foundation



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

See other sheet

Rpt. 9a.

Port of

Belfast

Continuation of Report No. 8766 dated 7th July 1922, on the

T.S.S. *Diogenes*

List of Principal items of Spare Gear

- 1 Propeller shaft, 6 blades, studs & nuts ✓
- Let's coupling bolts & nuts for each size used ✓
- 50 Condenser tubes & 100 ferrules ✓
- 1 Safety Valve Spring for every four of each size ✓
- 2 Boiler feed check valves, 15 plain & 5 stay tubes ✓
- Let's of escape valve springs ✓
- Let's spare gear for all pumps, oil & feed filters ✓
- Turbine Gear
- Escape valve spring of each size ✓
- 2 Bolts & nuts each size rotor bearing ✓
- - - Main gear wheel bearing ✓
- - - each size Pinion bearing ✓
- 5% Blading material ✓
- 5% Total number bolts & nuts each gear case joint ✓
- Complete set thermometers oil circulating system ✓
- Let bearing bushes one gear wheel shaft ✓
- - - H.P. rotor & for L.P. rotor ✓
- - - H.P. 1st reduction pinion shaft ✓
- - - L.P. - - - ✓
- 1 Bearing bush for fore & aft 1st Reduction pinion shaft ✓
- Set - - - 2 - - - ✓
- 1 set packing rings & springs rotor gland ✓
- Set pads for abutting block & liners ✓
- - - main thrust block ✓

Pumps

2 Main Feed pumps	10 1/2" x 11 1/2" x 24"
2 - - - - -	13 1/2" x 22" x 15"
1 - - - - -	10" x 10" x 21"
1 Fresh Water	5 1/2" x 5" x 5"
1 - - - - -	12" x 18" x 10"
1 - - - - -	7 1/2" x 5 1/2" x 12"
3 Oil Lubricating	8" x 9" x 18"
1 Ballast	9" x 10" x 22"
2 Bilge	8" x 9" x 9"
1 General	10 1/2" x 7" x 12"
1 Sanitary	10 1/2" x 10 1/2" x 15"
2 Main Circulating	16" bore
1 Emergency Bilge	9" -

R. Beveridge

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

Committee's Minute

Assigned

See other Rpt. Bel. 8766

A.P. Southwell & R. Beveridge

Engineer Surveyors to Lloyd's Register of Shipping

FRI JUL 14 1922

FRI JUL 21 1922