

REPORT ON BOILERS.

No. 10409

Date of writing Report

Received at London Office

1 JUL 1930

192

When handed in at Local Office

30-6-1930

Port of

Belfast

No. in Reg. Book.

Survey held at

Belfast

Date, First Survey

Last Survey

192

16189 on the

STEEL TWIN SC.

"BRITANNIC"

(Number of Visits

Gross
Tons
Net

Master

Built at

Belfast

By whom built

Harland & Wolff Ltd.

Yard No. 807

When built 1930

Engines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No. 807

When made 1930

Boilers made at

Belfast

By whom made

Harland & Wolff Ltd.

Boiler No. 807

When made 1930

Nominal Horse Power

Owners Oceanic S.S. Nav. Co. Ltd. (White Star Line)

Port belonging to Liverpool

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Ed. Colville & Sons Ltd.

Total Heating Surface of Boilers

Square feet 1782

Is forced draught fitted

(Letter for Record 5.)

Coal or Oil fired Oil

No. and Description of Boilers

Two Single-Ended Cylindrical

Tested by hydraulic pressure to

275 lbs

Date of test 25.2.29.

No. of Certificate 928

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler (sq. ft.)

26.6

Area of each set of valves per boiler

per Rule 27

8.2 sq. ft.

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

Pressure to which they are adjusted 150 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers

13 1/2"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

11"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

10' 6"

Length

9' 6"

Thickness

3/4"

Shell plates: Material

Steel

Are the shell plates welded or flanged

no

Tensile strength

29-38 Tons

Description of riveting: circ. seams

end double

inter. Yes

Percentage of strength of circ. end seams

plate 64.6

rivets 55.0

Percentage of strength of longitudinal joint

plate 84.2

rivets 115.2

Working pressure of shell by Rules

155 lbs

No. and Description of Furnaces in each Boiler

Two MORISON

Tensile strength

26-30 TONS

Smallest outside diameter

34 3/8"

Thickness of plates

crown 1"

bottom 1/16"

Description of longitudinal joint

weld

Working pressure of furnace by Rules

178.9 lbs

Thickness

1 3/2"

Pitch of stays

21" x 15 1/2"

Working pressure by Rules

160 lbs

Thickness

1 1/2"

Pitch across wide water spaces

14" x 8"

Working pressure

front 283 lbs

back 290 lbs

Material

Steel

Tensile strength

26-30 TONS

Thickness

1 1/2"

Pitch of stay tubes in nests

8"

Pitch across wide water spaces

14" x 8"

Working pressure

front 283 lbs

back 290 lbs

Material

Steel

Tensile strength

28-32 TONS

Thickness

1 1/2"

Pitch of stays

21" x 15 1/2"

Working pressure by Rules

160 lbs

Thickness

1 1/2"

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160 lbs

Thickness

Working pressure by Rules 1644 1884 Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 7/8" or 1 7/8" Over threads 1 7/8" 1 7/8"

No. of threads per inch TEN Area supported by each stay 92 8/10" 123 7/10" Working pressure by Rules 1654 1734

Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 20.7. S.W.G. 1/4" - 1/8" No. of threads per inch TEN

Pitch of tubes 4" Working pressure by Rules Plain over 300 lbs stay 267 1/2 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 36" x 32" x 1/2" double No. of rivets and diameter of rivet holes 28 - 15"

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged ✓ Steam Dome: Material none

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays Inner radius of crown Working pressure by Rules

How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater

Manufacturers of { Tubes Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description.
For **HARLAND AND WOLFF, LIMITED.**
W. E. Rebeck Manufacturer.

Dates { During progress of work in shops - - }
of Survey { During erection on board vessel - - - }

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

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

These boilers have been constructed under special survey. The materials and workmanship are sound and good. They have been tested by hydraulic pressure with satisfactory results. They are fitted in a special boiler room between the main and auxiliary motor rooms and efficiently fastened. The safety valves have been adjusted under steam to 150 lbs.

Survey Fee See Rpt. 47 £ 18 : 18 : - When applied for, 26 - 6 1930

Travelling Expenses (if any) £ : : When received, ✓ 192

R. Lee Annes

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 11 JUL 1930

Assigned

See Rpt. attached

Assigned



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Foundation