

REPORT ON BOILERS.

No. 9915

-2 SEP 1927

Received at London Office

Date of writing Report

192

When handed in at Local Office

1st Sept 1927

Port of

Belfast

No. in Survey held at

Belfast

Date, First Survey

See first entry

Last Survey

1927

on the

STEEL TWIN SCREW BRIGIDA

(Number of Visits)

Gross
Tons
Net

Built at Belfast

By whom built Harland & Wolff Ltd.

Yard No. 799

When built 1927

Engines made at

Belfast

By whom made Harland & Wolff Ltd.

Engine No. 799

When made 1927

Boilers made at

Belfast

By whom made Harland & Wolff Ltd.

Boiler No. 799

When made 1927

Nominal Horse Power

238

Owners Curacaoische Scheepvaart Maats.

Port belonging to Willemstad Curacao

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Son Ltd.

(Letter for Record S.)

Heating Surface of Boilers

3358 ft²

Is forced draught fitted

Yes

Coal or Oil fired

Oil

Description of Boilers

Two single-ended cylindrical

Working Pressure

180 lb.

by hydraulic pressure to

360 lb.

Date of test 4th July 1927

No. of Certificate 903 & 904

Can each boiler be worked separately

Yes

Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two High Lift Spring loaded

of each set of valves per boiler

per Rule 37.13.80 = 9.20"

as fitted 16.580"

Pressure to which they are adjusted

180 lb.

Are they fitted with easing gear

Yes

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

Least distance between boiler uptakes and bunkers or woodwork

78"

Is oil fuel carried in the double bottom under boilers

No

Least distance between shell of boiler and tank top plating

13"

Is the bottom of the boiler insulated

Yes

Internal dia. of boilers

13'-0"

Length

12'-3"

Shell plates: Material

Steel

Tensile strength

29 3/4 lb 33 1/2 lb

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

double

Diameter of rivet holes in

circ. seams 18"

long. seams 18"

Pitch of rivets

2.988"

Percentage of strength of circ. end seams

plate 62.3

rivets 49.6

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 90.5

rivets 85.3

combined 88.8

Working pressure of shell by Rules

180 lb.

Material

Steel

No. and Description of Furnaces in each Boiler

Two Main 20 ft

Tensile strength

26-30 tons

Smallest outside diameter

44 1/8"

Thickness of plates

crown 9 1/16"

bottom 9 1/16"

Description of longitudinal joint

welded

Working pressure of furnace by Rules

184.9 lb

Material

Steel

Tensile strength

26-30 tons

Thickness

13/16"

Pitch of stays 18"x18"

Working pressure by Rules

184 lb

Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

3/8"

Pitch of stay tubes in nests

8"

Pitch across wide water spaces

14"

Working pressure

front 202 lb

back 197 lb

Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

Length as per Rule

36"

Distance apart

9"

No. and pitch of stays

Working pressure by Rules

192 lb

Combustion chamber plates: Material

Steel

Strength

26-30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Stays to ditto: Sides

8 3/4" x 7 3/4"

Back

8 1/2" x 7 3/4"

Top

9" x 9"

Are stays fitted with nuts or riveted over

riveted over

Working pressure by Rules

193 lb

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Material

Steel

Tensile strength

26-30 tons

Thickness

3/8"

Stays at wide water space

13" x 7 3/4"

Are stays fitted with nuts or riveted over margin stays riveted

Working pressure

274 lb

Main stays: Material

Steel

Tensile strength

28-32 tons

At body of stay,

3"

No. of threads per inch

fine

Area supported by each stay

324 ft²

Working pressure by Rules

200 lb

Screw stays: Material

Steel

Tensile strength

26-30 tons

At turned off part,

1 1/2"

No. of threads per inch

20

Area supported by each stay

67.80"

W1644 - 0149

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Foundation

Working pressure by Rules *185 lb* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter *At turned off part, 1 1/4" or 1 3/8"* Rpt.

No. of threads per inch *2 1/2* Area supported by each stay *90.3 sq"* Working pressure by Rules *200 lb* R

Tubes: Material *low* External diameter *Plain 2 3/4" Stay 2 3/4"* Thickness *No. 8. W.G. 5/16" 3/16"* No. of threads per inch *2 1/2*

Pitch of tubes *4"* Working pressure by Rules *Stay 345 lb plain 275 lb* Manhole compensation: Size of open shell plate *16" x 12"* Section of compensating ring *36 x 32 3/8" double* No. of rivets and diameter of rivet holes *28 - 1 1/8"* Date

Outer row rivet pitch at ends *9"* Depth of flange if manhole flanged *✓* Steam Dome: Material *low* No.

Tensile strength Thickness of shell Description of longitudinal joint R

Diameter of rivet holes Pitch of rivets Percentage of strength of joint *Plate Rivets* Bui

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

How connected to shell Size of doubling plate under dome Diameter of rivet holes and Ele

of rivets in outer row in dome connection to shell

Type of Superheater *✓ None* Manufacturers of *Tubes Steel castings* Syst

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

Material of headers Tensile strength Thickness Can the superheater be shut off Dir

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

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

Rules Pressure to which the safety valves are adjusted Hydraulic test press Gen

tubes, castings and after assembly in place Are drain cocks or valves f are

to free the superheater from water where necessary

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

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.

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

while building *During progress of work in shops - - -* Total No. of visits

During erection on board vessel - - -

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 satisfactorily tested by hydraulic pressure in accordance with the rule efficiently installed & fastened on the vessel. The safety valves have been adjusted under steam. In my opinion the vessel is eligible for notation +L.M.C.S. 27.

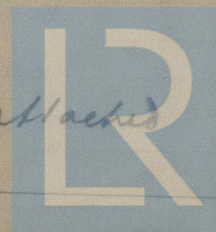
Survey Fee ... £ *See Machinery Report* When applied for, 192

Travelling Expenses (if any) £ When received, 192

R. Lee Ames
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 6 SEP 1927*

Assigned *See minute on Bel Rm 9815 attached*



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