

REPORT ON BOILERS.

No. 12644

Date of writing Report

19

When handed in at Local Office

27. 5.

1940

Port of

Received at London Office

MAY 29 1940

No. in
Reg. Book.

Survey held at

Belfast

Date, First Survey

Visits included in F.E. machinery

Last Survey

19

on the

STEEL S.S.

"HIBISCUS"

(Number of Visits)

723.89

Tons

Net 269.41

Built at

Belfast

By whom built

Messrs. Haland, Wolff Ltd

Yard No.

1062

When built 1940

Engines made at

Belfast

By whom made

Haland, Wolff Ltd

Engine No.

1062

When made 1940

Boilers made at

Belfast

By whom made

Haland, Wolff Ltd

Boiler No.

1062

When made 1940

Nominal Horse Power

409

Owners

The Admiralty

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Caldwell's Ltd.

Total Heating Surface of Boilers

7080 sq. ft.

Is forced draught fitted

Yes

(Letter for Record)

S

No. and Description of Boilers

Two Single Ended.

Coal or Oil fired

Oil

Tested by hydraulic pressure to

387 lb.

Date of test

28.3.40

No. of Certificate

1074

Working Pressure

225 lb./sq. in.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

9.21 sq. in.

Can each boiler be worked separately

Yes

Area of each set of valves per boiler

per Rule

as fitted

11.88

Pressure to which they are adjusted

Two Improved High Lift

2 1/2" dia.

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

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-6"

Length

12'-6"

Shell plates: Material

Steel

Tensile strength

30/34 Yms

Thickness

1 1/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

long. seams

TR DBS

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/8"

Pitch of rivets

4"

11"

Percentage of strength of circ. end seams

plate

62.5

rivets

43.45

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.2

rivets

86.5

combined

87.8

Working Pressure of shell by Rules 225.2 lb.

Thickness of butt straps

outer

1 1/8"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

Three Corrugated Brighton Section.

Material

Steel

Tensile strength

26/30 Yms

Smallest outside diameter

48 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

3/4"

Description of longitudinal joint

Fillet weld

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material

Steel

Tensile strength

26/30 Yms

Thickness

1 1/8"

Pitch of stays

18 1/2" x 22 1/2"

How are stays secured

Nuts washers inside & outside.

Tube plates: Material

front

back

Steel

Tensile strength

26/30 Yms

Thickness

5/8"

1 1/8"

Mean pitch of stay tubes in nests

8.69"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 Yms

Depth and thickness of girder

at centre

Length as per Rule

36 5/16"

Distance apart

10 1/4"

No. and pitch of stays

in each

3

2

8 5/8"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Yms

Thickness: Sides

3/32"

Back

1 1/8"

Top

3/32"

Bottom

1"

Pitch of stays to ditto: Sides

10 1/4" x 8 5/8"

Back

8 1/4" x 8"

Top

10 1/4" x 8 5/8"

Are stays fitted with nuts or riveted over

Fitted with nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 Yms

Thickness

1 1/8"

Lower back plate: Material

Steel

Tensile strength

26/30 Yms

Thickness

1"

Pitch of stays at wide water space

15"

Are stays fitted with nuts or riveted over

Fitted with nuts

Main stays: Material

Steel

Tensile strength

28/32 Yms

Diameter

At body of stay,

or

Over threads

3 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30 Yms

Diameter

At turned off part,

or

Over threads

1 1/4", 1 1/8", 2", 2 1/8"

No. of threads per inch

9

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Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { PLATE 5/16", 3/8", 7/16" No. of threads per inch 9

Pitch of tubes 3 1/2" x 3 1/2" Manhole compensation: Size of opening in shell plate 16 1/2" x 20 1/2" Section of compensating ring 2 (9" x 1 9/16") No. of rivets and diameter of rivet holes 36 @ 1 1/2" dia steel

Outer row rivet pitch at ends 11" Depth of flange if manhole flanged 3 3/8" in end plate Steam Dome: Material None fitted

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 _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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 forgings 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 _____

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

Pressure to which the safety valves are adjusted _____ Are the safety valves fitted with easing gear _____

tubes _____ forgings and castings _____ and after assembly in place _____ Hydraulic test pressure: _____

valves fitted to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
JAT HARRISON AND WOLFE, LIMITED

Manufacturers.

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

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

Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "ARABIS" Bel No 2. 12598

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

These boilers have been constructed under Special Survey in accordance with the Rules and approved plan.

The materials and workmanship are good

The boilers have been efficiently installed onboard the vessel.
Safety valves adjusted under steam and accumulation tests
Carried out with satisfactory results

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Genl. S. Thomas

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 31 MAY 1940

Assigned

See Bel. 7.E 12644



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