

REPORT ON BOILERS.

No. 10509

Received at London Office 24 NOV 1930

Date of writing Report

When handed in at Local Office

19th Nov. 1930

Port of BELFAST

See 7.8. machy. report.

No. in Survey held at
Reg. Book.

BELFAST

Date, First Survey

Last Survey

19

(Number of Visits)

Gross

Tons

Net

on the STEEL TWIN SC.

FOYLEBANK

Master

Built at Belfast

By whom built Harland & Wolff Ltd.

Yard No. 878

When built 1930

Engines made at

Belfast

By whom made Harland & Wolff Ltd.

Engine No. 878

When made 1930

Boilers made at

Belfast

By whom made Harland & Wolff Ltd.

Boiler No. 878

When made 1930

Nominal Horse Power

830

Owners BANK LINE LTD. (A. WEIR & CO. LD. MGRS.)

Port belonging to

Belfast BELFAST

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Ed. Colville & Sons Ltd.

(Letter for Record 5)

Total Heating Surface of Boilers

1510 sq ft

Is forced draught fitted

No.

Coal or Oil fired Oil

No. and Description of Boilers

ONE SINGLE-ENDED CYLINDRICAL

Working Pressure 120 Lbs

Tested by hydraulic pressure to 230 Lbs

Date of test 22.1.30

No. of Certificate 943

Can each boiler be worked separately

Area of Firegrate in each Boiler

16.3 sq ft

No. and Description of safety valves to each boiler

Two SPRING-LOADED

Pressure 120 Lbs

Area of each set of valves per boiler

per Rule 16.3 sq ft

Pressure to which they are adjusted 120 Lbs

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

and bunkers on deckwork

24"

Is oil fuel carried in the double bottom under boilers YES

Smallest distance between shell of boiler and tank top plating

17"

Is the bottom of the boiler insulated YES

Largest internal dia. of boilers

13'-0" MEAN Length 11'-0"

Shell plates: Material STEEL

Tensile strength 28-32 T

Thickness

25"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DOUBLE

Long. seams

TREBLE

Diameter of rivet holes in

circ. seams 15"

long. seams 15"

Pitch of rivets

2.98"

6.3"

Percentage of strength of circ. end seams

plate 68.5

rivets 48.68

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84.63

rivets 111

combined 91.5

Working pressure of shell by Rules 127 1/2 Lbs

Thickness of butt straps

outer 5"

inner 3"

No. and Description of Furnaces in each Boiler

THREE MORISON

Material

STEEL

Tensile strength

26-30 T

Smallest outside diameter

39 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 7/16"

bottom 7/16"

Description of longitudinal joint

WELD

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

Working pressure of furnace by Rules 156 1/2 Lbs

End plates in steam space: Material

STEEL

Tensile strength

26-30 T

Thickness

7/8"

Pitch of stays 18"x18"

How are stays secured DOUBLE NUTS & WASHERS: SCREWED INTO END PLATES.

Working pressure by Rules 125 1/2 Lbs

Tube plates: Material

front STEEL

back STEEL

Tensile strength

26-30 T

Thickness

3/4"

3/4"

Lean pitch of stay tubes in nests

10-06"

Pitch across wide water spaces

14 1/4" x 9"

Working pressure

front 134 1/2 Lbs

back 128 1/2 Lbs

Girders to combustion chamber tops: Material

STEEL

Tensile strength

28-32 T

Depth and thickness of girder

At centre

7'-1 1/2"

Length as per Rule

30"

Distance apart

9"

No. and pitch of stays

At each THREE - 8 1/4"

Working pressure by Rules

149

Combustion chamber plates: Material

STEEL

Tensile strength

26-30 T

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 1/4" x 8 1/2"

Back

3" x 8 1/2"

Top 9 1/2" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

136 1/2

Front plate at bottom: Material

STEEL

Tensile strength

26-30 T

Thickness

3/4"

Lower back plate: Material

STEEL

Tensile strength

26-30 T

Thickness

3/4"

Pitch of stays at wide water space

12 3/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

139 1/2

Main stays: Material

STEEL

Tensile strength

28-32 T

At body of stay,

2 1/2"

No. of threads per inch

SIX

Area supported by each stay

285.75 sq in

Working pressure by Rules

155 1/2

Screw stays: Material

STEEL

Tensile strength

26-30 T

At turned off part,

1 3/8"

No. of threads per inch

TEN

Area supported by each stay

78 3/4 sq in

W37-0083

Working pressure by Rules 129 1/2. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads 1 5/8" ✓
No. of threads per inch TEN Area supported by each stay 116.90" Working pressure by Rules 130 1/20"
Tubes: Material W. IRON External diameter { Plain 3 1/4" Thickness { No. 8 S.W.G. No. of threads per inch TEN
Pitch of tubes 4 1/2" Working pressure by Rules PLAIN 230 1/2 STAY 120 1/2 Manhole compensation: Size of opening
shell plate 16" x 12" Section of compensating ring 36" x 32" x 3/4" double No. of rivets and diameter of rivet holes 28 - 5/16"
Outer row rivet pitch at ends 8" 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
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 NONE 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
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
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 22 inclusive for boilers been complied with YES

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED,
A. J. Marshall, Assistant Secretary

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.)
Total No. of visits

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No.

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

This boiler has been constructed to approved design under special survey. The materials and the workmanship are sound and good. It has been satisfactorily tested by hydraulic pressure. The boiler is efficiently fastened on a seat on the tank top at the forward end of the motor room and the safety valves were adjusted under steam.

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

See Machinery Report

R. Lee Ames.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 28 NOV 1936

Assigned

See other J.E. Rpt



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