

## REPORT ON BOILERS.

No. 10,359

Received at London Office

29 APR 1930

Date of writing Report

192

When handed in at Local Office

28<sup>th</sup> Apr 1930

Port of

Belfast.

No. in  
Reg. Book.

Survey held at

Belfast.

Date, First Survey

See Y. &amp; L. report.

Last Survey

192

on the

Steel S. "CEFALU."

(Number of Visits)

Gross  
Tons  
Net

Master

Built at

Belfast.

By whom built

Workman, Black (1928) Ltd.

Yard No. 514.

When built 1930.

Engines made at

Belfast.

By whom made

Workman, Black (1928) Ltd.

Engine No. 514.

When made 1930.

Boilers made at

Belfast.

By whom made

Workman, Black (1928) Ltd.

Boiler No. 514.

When made 1930.

Nominal Horse Power

867.

Owners

Standard Fruit &amp; SS. Corp.

Port belonging to

Griba.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville &amp; Sons Ltd. Baldwins Ltd. Scottish Iron &amp; Steel Co. Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

13,300 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

oil

No. and Description of Boilers

Four, single ended multi

Working Pressure

260 lb/sq. in.

Tested by hydraulic pressure to

440.

Date of test

11/2/30.

No. of Certificate

945.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two

Lockburn

Area of each set of valves per boiler

50% of 15.11.

Pressure to which they are adjusted

260 lb/sq. in.

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

22"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-3"

Length

12'-6"

Shell plates: Material

Steel

Tensile strength

31/35

Thickness

1 3/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

Double

long. seams

Tubular

Diameter of rivet holes in

circ. seams

1 3/4"

Pitch of rivets

4-1207

Percentage of strength of circ. end seams

plate

57.5.

rivets

49.3.

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

84.09.

rivets

86.9.

combined

85.48.

Working pressure of shell by Rules

262.5.

Thickness of butt straps

outer

1 3/8"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

Four, Deighton section. 4 ft.

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

41 15/32"

Length of plain part

top

47"

bottom

64"

Thickness of plates

crown

47"

bottom

64"

Description of longitudinal joint

Welded.

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

Yes

Working pressure of furnace by Rules

260.4.

End plates in steam space: Material

Steel

Tensile strength

26/30.

Thickness

1 3/8"

Pitch of stays

20"x16"

How are stays secured

Double nuts

Working pressure by Rules

270.6.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30.

Thickness

1 3/8"

Mean pitch of stay tubes in nests

9 1/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front 274 lb/sq. in.

back 265 "

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32.

Depth and thickness of girder

at centre

11 3/8" x 1 5/8"

Length as per Rule

38 27/64"

Distance apart

8 5/8"

No. and pitch of stays

in each

4 - 7"

Working pressure by Rules

266.3 lb/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

32"

Back

45"

Top

32"

Bottom

32"

Pitch of stays to ditto: Sides

9x6 1/4"

7 1/4 x 8 1/2"

Back

8 5/8" x 7 5/8"

Top

8 5/8" x 7"

Are stays fitted with nuts or riveted over

Yes

Working pressure by Rules

261.6

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

1 3/2"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

1 5/16"

Pitch of stays at wide water space

13 3/4" - 15"

Are stays fitted with nuts or riveted over

Yes

Working Pressure

282.6

Main stays: Material

Steel

Tensile strength

28/32.

Diameter

At body of stay,

or

Over threads

3 3/4"

No. of threads per inch

6

Area supported by each stay

320.0"

Working pressure by Rules

273.4.

Screw stays: Material

Steel

Tensile strength

26/30.

Diameter

At turned off part,

or

Over threads

1 1/4" - 1 1/2"

No. of threads per inch

9

Area supported by each stay

67.5



Working pressure by Rules *268.8* Are the stays drilled at the outer ends *yes* Margin stays: Diameter { At turned off part, or Over threads *2"-1 7/8"*  
 No. of threads per inch *9* Area supported by each stay *90.10"* Working pressure by Rules *275*  
 Tubes: Material *Iron* External diameter { Plain *2 1/2"* Stay *2 1/2 - 2 3/8"* Thickness { *8 WG* *3/16 - 3/8"* No. of threads per inch *9*  
 Pitch of tubes *3 1/4" x 3 1/2"* Working pressure by Rules *300 lbs sq"* Manhole compensation: Size of opening in shell plate *19 1/4" x 15 1/4"* Section of compensating ring *38 1/4" x 36" x 1 5/8"* No. of rivets and diameter of rivet holes *36 - 1 1/4"*  
 Outer row rivet pitch at ends *11"* Depth of flange if manhole flanged *3 1/4"* 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 *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 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 WORKMAN CLARK (1923) LIMITED.

Manufacturer.

Dates { During progress of work in shops - - }  
 of Survey 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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers were constructed under Special Survey to an approved design. The materials and workmanship are good. They were subjected to hydraulic test in accordance with the Rules and were efficiently fastened on board the vessel. The safety valves were adjusted to 200 lbs sq" under steam.*

Survey Fee ... £ *See machinery Report* When applied for, 192  
 Travelling Expenses (if any) £ : When received, 192

*John K. Williams.*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

File. 9 MAY 1930

Assigned

*See F. E. Rpt.*



© 2020

Lloyd's Register Foundation