

# REPORT ON BOILERS.

No. 5358.

Received at London Office

12 MAR 1946

11 MAR 1946

Date of writing Report

10

When handed in at Local Office

10

Port of

Hull

No. in Survey held at  
eg. Book.

Hull

Date, First Survey

18. 8. 45

Last Survey

18. 2. 19 46

(Number of Visits 28.)

Gross 361

Tons

Net 139

on the

JOSENA

Built at

Beverley

By whom built

Lockwell & Gemmell L.

Yard No. 761

When built 1946

Engines made at

Hull

By whom made

Chas D Holmes L.

Engine No. 1721

When made

Boilers made at

Hull

By whom made

Chas D Holmes L.

Boiler No. 1721

When made

Nominal Horse Power

Owners

The Trident Steam Fishing Co. Ltd.

Port belonging to

Hull

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley Frodingham Steel Co Ld.

(Letter for Record

5

Total Heating Surface of Boilers

1710 sq ft.

Is forced draught fitted

no

Coal or Oil fired

Coal

No. and Description of Boilers

One single end cylindrical multitubular boiler

Working Pressure

210 lbs

Tested by hydraulic pressure to

365 lbs

Date of test

12.12.45

No. of Certificate

4258

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

52 sq ft.

No. and Description of safety valves to each boiler

One 2 1/2" Donk Spring Ordinary

Area of each set of valves per boiler

per Rule 9.5 sq in.  
as fitted 9.8

Pressure to which they are adjusted

215 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 or uptakes and bunkers or woodwork

12"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

None

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

14' 3 1/2"

Length

10' 8"

Shell plates: Material

Steel

Tensile strength 31-35 tons/sq in.

Thickness

1 1/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R. Lap

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 5/16"  
long. seams 1 1/32"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate 65.3  
rivets 45.2

Percentage of strength of circ. intermediate seam

plate 85.1  
rivets 85.8

Percentage of strength of longitudinal joint

plate 85.1  
rivets 85.8  
combined 87.6

Thickness of butt straps

outer 3 1/32"  
inner 1 3/32"

No. and Description of Furnaces in each Boiler

Three Brighton Section Corrugated Furnaces

Material

Steel

Tensile strength 26-30 tons/sq in.

Smallest outside diameter

3' 5 3/4"

Length of plain part

top  
bottom

Thickness of plates

crown 5/8"  
bottom 5/8"

Description of longitudinal joint

welded

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

none

End plates in steam space: Material

Steel

Tensile strength 26-30 tons/in<sup>2</sup>

Thickness

1 3/16"

Pitch of stays 18 1/2" x 19"

How are stays secured

Double nuts & washers

Tube plates: Material

front Steel  
back

Tensile strength

26-30 tons/in<sup>2</sup>

Thickness

15/16" 7/8"

Mean pitch of stay tubes in nests

9 3/4" x 9 3/4"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength 29-33 tons/in<sup>2</sup>

Depth and thickness of girder

at centre 10" x 7 7/8"

Length as per Rule

2' - 8 29/32"

Distance apart

10 1/2"

No. and pitch of stays

in each Three at 8" centres

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons/in<sup>2</sup>

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

9 3/4" x 8 1/2"

Back

9 3/8" x 8 3/4"

Top

10 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons/sq in.

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons/in<sup>2</sup>

Thickness

7/8"

Pitch of stays at wide water space

14" x 9 5/8"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28/32 tons/sq in.

Diameter

At body of stay,  
or  
Over threads

3 1/8"

No. of threads per inch

8

Screw stays: Material

Steel

Tensile strength

26-30 tons

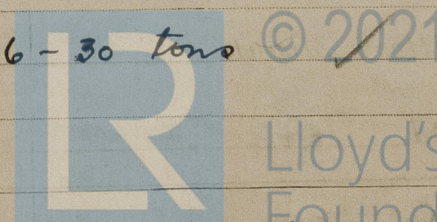
Diameter

At turned off part,  
or  
Over threads

1 3/4"

No. of threads per inch

10



009610-009620-0100



"JOSENA"

Are the stays drilled at the outer ends No ✓

Margin stays: Diameter { At turned off part, ✓  
or  
Over threads 2" & 2 1/8" ✓

No. of threads per inch 10 ✓

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

Pitch of tubes 4 7/8" x 4 7/8" ✓

Manhole compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 4' 9 1/2" Dia x 1 1/4" Tk. No. of rivets and diameter of rivet holes 122 - 1 1/32" ✓

Outer row rivet pitch at ends 10.35" ✓ Depth of flange if manhole flanged Top 3 1/4" Bot 3 3/8" ✓ Steam Dome: Material Steel ✓

Tensile strength 26-30 tons/in<sup>2</sup> Thickness of shell 3/4" ✓ Description of longitudinal joint S. R. LAP ✓

Diameter of rivet holes 1 1/32" ✓ Pitch of rivets 2 1/4" ✓ Percentage of strength of joint { Plate 54% ✓  
Rivets 43.8% ✓

Internal diameter 2' 9" ✓ Thickness of crown 7/8" ✓ No. and diameter of stays 2 at 2 1/4" dia. ✓ Inner radius of crown Flat ✓

How connected to shell Double row of rivets ✓ Size of doubling plate under dome 4' 9 1/2" D. x 1 1/4" Tk. ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/32" at 3 3/4" pitch ✓

Type of Superheater NONE ✓ 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 \_\_\_\_\_

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 \_\_\_\_\_

Pressure to which the safety valves are adjusted \_\_\_\_\_

Hydraulic test pressure: tubes \_\_\_\_\_ forgings and 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 CHARLES D. HAYES & CO., LTD.

W. R. Evans Manufacturer.

Manager

Dates of Survey { During progress of work in shops - - - Aug 18. 29. Sept 5. 14. 20. Oct 5. 22. 31.  
while building { During erection on board vessel - - - Nov. 6. 9. 19, Dec. 6. 12. 18. 1945 Jan 10.

Are the approved plans of boiler and superheater forwarded herewith 23.4.45. (If not state date of approval.)

See machinery log Total No. of visits 28.

Is this Boiler a duplicate of a previous case YES If so, state Vessel's name and Report No. "NAVENA" Hull RPT. NO. 53310 }

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

This boiler has been built and installed under Special Survey in accordance with the Society's Rules and Regulations and the Secretary's letters.

The workmanship and materials are good.

Boiler tested by 365 lb hydraulic pressure, examined under steam, safety valves adjusted as required, accumulation test held and boiler found satisfactory on completion of all tests.

Survey Fee ... .. £ : : } When applied for, 19

Travelling Expenses (if any) £ : : } When received, 19

W. S. Shields  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 22 MAR 1946

Assigned Su F.E. machy. rpt.



© 2021

Lloyd's Register Foundation