

## REPORT ON BOILERS.

No. 55133.

9 SEP 1948

Received at London Office

11 SEP 1948

Date of writing Report

19

When handed in at Local Office

10

Port of

HULL.

No. in Survey held at  
g. Book.

Hull.

Date, First Survey

24. 10. 47.

Last Survey

19. 8.

19 48

73656

on the

Steam Trawler "ST. CHAD".

(Number of Visits 23.)

Gross

689

Tons

Net 249

Master

Built at Beverley

By whom built Cook, Welton &  
Gemmell Ltd.

Yard No. 794

When built 1948

Engines made at

Hull

By whom made C. D. Holmes &amp; Co., Ltd.

Engine No. 1763

When made 1948

Boilers made at

-do-

By whom made

-do-

Boiler No. 1763

When made 1948

M.N. 230

Owners Saint Andrew's Steam Fishing Co.,  
Ltd.

Port belonging to

Hull

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

Manufacturers of Steel

Appleby-Frodingham Steel Co., Ltd.

Total Heating Surface of Boilers

 $2831 \frac{1}{2} + 1140 = 3971 \frac{1}{2}$  sq. ft.

Is forced draught fitted

Yes

(Letter for Record

S

and Description of Boilers

One S.E. multitubular

Coal or Oil fired

Oil

Tested by hydraulic pressure to

390 lb.

Date of test 21.7.48.

No. of Certificate 4307

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 D. Sp.  $3 \frac{1}{2}$ "

Area of each set of valves per boiler

per Rule

as fitted

approx. 19.2

Pressure to which they are adjusted

230 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

20"

Is oil fuel carried in the double bottom under boilers

none

Smallest distance between shell of boiler and tank top plating

open floor

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

16'0"

Length

11'0"

Shell plates: Material

S.M. Steel

Tensile strength  $31 \frac{1}{35}$  tons.

Thickness

 $1 \frac{1}{2}$ "

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end 2R.L.

No. of seams

3 R.D.B.S.

Diameter of rivet holes in

circ. seams

 $1.15/32$ "

long. seams

 $1.1/2$ "

Pitch of rivets

 $3.7/8$ " $9.9/16$ "

Percentage of strength of circ. end seams

plate

62.2%

rivets

43.3%

Percentage of strength of longitudinal joint

plate

84.31%

rivets

85.6%

combined

85.7%

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Working pressure of shell by Rules

Thickness of butt straps

outer

 $1.5/32$ "

inner

 $1.9/32$ "

No. and Description of Furnaces in each Boiler

3- Deighton Type Corrugation.

Material

Steel

Tensile strength

26/30 tons.

Smallest outside diameter

 $3'11.1/32$ "

Length of plain part

top

-

bottom

-

Thickness of plates

crown

47/

bottom

64"

Description of longitudinal joint

welded

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

Plates in steam space: Material

steel

Tensile strength

26/30 tons.

Thickness

 $1.17/64$ "

Pitch of stays

 $18 \frac{1}{8} \times 19 \frac{1}{4}$ "

Are stays secured

double nuts and washers.

Working pressure by Rules

Front plates: Material

front

steel

back

-do-

Tensile strength

26/30 tons.

-do-

Thickness

 $31/32$ " $29/32$ "

Pitch of stay tubes in nests

 $9 \frac{1}{2} \times 9 \frac{1}{2}$ "

Pitch across wide water spaces

 $14 \frac{1}{4}$ "

Working pressure

front

-

back

-

Boilers to combustion chamber tops: Material

steel

Tensile strength

29/33 tons.

Depth and thickness of girder.

Centre

 $9 \frac{1}{2} - 2 @ \frac{7}{8}$ "

tk

Length as per Rule

2-10  $\frac{1}{4}$ "

Distance apart

 $9 \frac{1}{4}$ "

No. and pitch of stays

Pitch

 $3-8 \frac{1}{4}$ "

Working pressure by Rules

Tensile strength

26/30 tons.

Thickness: Sides

 $3/4$ "

Back

 $23/32$ "

Top

 $23/32$ "

Bottom

 $15/16$ "

Pitch of stays to ditto: Sides

 $9 \frac{3}{4} \times 8 \frac{1}{4}$ "

Back

 $9 \frac{1}{8} \times 8 \frac{1}{8}$ "

Top

 $9 \frac{1}{4} \times 8 \frac{1}{4}$ "

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

Tensile strength

26/30 tons.

Thickness

 $26/30$  tons.

Thickness

 $29/32$ "

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

26/30 tons.

Thickness

 $29/32$ "

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

Tensile strength

26/30 tons.

Thickness

 $29/32$ "

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28/32 tons.

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

Tensile strength

26/30 tons.

Thickness

 $29/32$ "

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

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nuts

Working pressure by Rules

Tensile strength

26/30 tons.

Thickness

 $29/32$ "

Pitch of stays at wide water space

 $14 \frac{1}{4} \times 8 \frac{1}{8}$ "

Are stays fitted with nuts or riveted over

nuts

012678-012685-0116



Working pressure by Rules ☒ Are the stays drilled at the outer ends No ☒ Margin stays: Diameter ☒ Over threads  $1\frac{7}{8}"$  &  $2"$   
No. of threads per inch 10 ☒ Area supported by each stay ☒ Working pressure by Rules ☒  
Tubes: Material Seamless steel External diameter { Plain  $3\frac{1}{2}"$  ☒ Thickness { 7 W.G. ☒ No. of threads per inch ☒ 9  
Pitch of tubes  $4\frac{3}{4}" \times 4\frac{3}{4}"$  ☒ Working pressure by Rules ☒ Manhole compensation: Size of opening  
shell plate  $16" \times 12"$  ☒ Section of compensating ring  $4'11\frac{1}{4}"D \times 1\frac{1}{2}"$  Tk. No. of rivets and diameter of rivet holes ☒  $106 - 1\frac{1}{2}"$   
Outer row rivet pitch at ends  $10\frac{3}{4}"$  ☒ Depth of flange if manhole flanged ☒  $3\frac{1}{4}"$  in dome Steam Dome: Material Steel ☒  
Tensile strength 26/30 tons. Thickness of shell ☒  $3/4"$  Description of longitudinal joint ☒ S.R.L. ☒  
Diameter of rivet holes  $1.1/32"$  ☒ Pitch of rivets  $2\frac{1}{4}"$  ☒ Percentage of strength of joint { Plate 54 ☒  
Internal diameter  $2'9"$  ☒ Working pressure by Rules ☒ Thickness of crown ☒  $15/16"$  Rivets 43.8 ☒  
stays 2 -  $2.3/8"$  ☒ Inner radius of crown Flat ☒ Working pressure by Rules ☒  
How connected to shell D.R. ☒ Size of doubling plate under dome  $4'11\frac{1}{4}"D \times 1\frac{1}{2}"$  Tk. Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell  $1\frac{1}{2}" - 4"$  ☒

Type of Superheater ME LE SCO R.B. Type

Manufacturers of

Tubes  
Steel forgings  
Steel castings

See Manchester  
Certificates  
Nos. C.6122/3.

Number of elements 48 ☒ Material of tubes Steel ☒ Internal diameter and thickness of tubes ☒  
Material of headers Steel ☒ Tensile strength ☒ Thickness ☒ Can the superheater be shut off  
the boiler be worked separately Yes ☒ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes ☒  
Area of each safety valve 1.76 sq. in. ☒ Are the safety valves fitted with easing gear Yes ☒ Working pressure as  
Rules 2251bs. ☒ Pressure to which the safety valves are adjusted 230 lbs. ☒ Hydraulic test pressure  
tubes ☒ forgings and castings ☒ and after assembly in place 675 lbs. ☒ Are drain cocks  
valves fitted to free the superheater from water where necessary Yes ☒  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes ☒

The foregoing is a correct description,

OR CHARLES D. HOLMES & CO.,

Manufacturers

Dates of Survey { During progress of work in shops - - - 1947 Oct 24, 1948 Feb. 19, Apr. 19, 20, 23.  
while building { During erection on board vessel - - - May 5, 10, June 21, 26, July 6, 8, Aug. 4, 10, 12, see machinery report  
Are the approved plans of boiler and superheater forwarded herewith 16.10.  
(If not state date of approval.)  
Total No. of visits 23.

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.)

The boiler has been constructed and installed under Special Survey in accordance with the Secretary's letters, approved plans and the Rules. The materials and workmanship are good. The boiler was examined under hyd. test of 390 lbs. on completion and found sound and tight. The safety valves were adjusted under steam to 230 lb/sq.in. and an accumulation test held.

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

Committee's Minute

FRI, 1 OCT 1946

Assigned

See P.E. mch. rpt.

N. Chambers,  
Engineer Surveyor to Lloyd's Register of Shipping



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Foundation