

## REPORT ON BOILERS.

No. 53346

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Hull

No. in Survey held at 18.8.45. Last Survey 11.2.1946.  
 eg. Book. of the Steam Trawler "ST. BOTOLPH"

(Number of Visits 24) Gross 361  
 Tons Net 139.

Built at Beverley By whom built Cook, Weller & Gemmell Ltd. Yard No. 758 When built 1946

Engines made at Hull By whom made Chas. D. Holmes & Co. Ltd. Engine No. 1716 When made

Boilers made at Hull By whom made Chas. D. Holmes & Co. Ltd. Boiler No. 1716 When made

Nominal Horse Power Owners St. Andrews Steamer Fishing Co. Ltd. Port belonging to Hull

## 6 MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel Appleby Fordingham Steel Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 1710  $\text{ft}^2$  Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single end multitubular Working Pressure 210  $\text{lb}$

Tested by hydraulic pressure to 365  $\text{lb}$  Date of test 26.11.45 No. of Certificate 4256 Can each boiler be worked separately

Area of Firegrate in each Boiler 52  $\text{ft}^2$  No. and Description of safety valves to each boiler One 2 1/2" D.S. ordinary

Area of each set of valves per boiler { per Rule 9.5  $\text{ft}^2$  as fitted 9.8  $\text{ft}^2$  Pressure to which they are adjusted 216  $\text{lb}$  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 None

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

Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. LAP inter. }  
 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" 9 1/8" }

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 combined 87-6 }

Percentage of strength of longitudinal joint { plate 85-1 rivets 85-8 combined 87-6 }

Thickness of butt straps { outer 31/32" inner 1 3/32" No. and Description of Furnaces in each Boiler 3 C.F. Dighton Section

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3' 5 3/4"

Length of plain part { top 5/8" bottom 5/8" 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 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 Steel Tensile strength { 26-30 tons Thickness { 15/16" 7/8" }

Lean 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 Depth and thickness of girder

at centre 10" Two 7/8" Length as per Rule 2' 8 29/32" Distance apart 10 1/2" No. and pitch of stays

each 3 at 8" centres Combustion chamber plates: Material Steel

Tensile strength 26-30 tons 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 5/8" x 8 1/8" 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

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 tons 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

Diameter { At body of stay, 3 1/8" No. of threads per inch 8

crew stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part, 3 1/4" No. of threads per inch 10



ST. BOTOLPH

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 Seamless Steel ✓ External diameter { Plain 3 1/2" ✓  
Stay 3 1/2" ✓ Thickness { 8 W.G. ✓  
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 5 Rows 1 1/32 HOLES

shell plate 16" x 12" ✓ Section of compensating ring 4' 9 1/2" x 1 1/4" ✓ No. of rivets and diameter of rivet holes 122 RIVETS (TOTAL)

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 ton ✓ 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" dia x 1 1/4" thk. ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/32" at 3.75" ✓

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

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

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

The foregoing is a correct description,  
FOR CHARLES D. HOLMES & CO., LTD.

Manufactured

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

From AUG 18 1945 to

Are the approved plans of boiler and superheater forwarded herewith 23-4-46  
(If not state date of approval.)

Jan 24 1946, 11.2.46. Total No. of visits 24

Is this Boiler a duplicate of a previous case

Yes ✓

If so, state Vessel's name and Report No.

ABY ✓

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 Rule 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. Shiers

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 MAR 1946

Assigned

Sue F.E. machy. rpt.



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Foundation