

# REPORT ON BOILERS.

No. 46439

24 APR 1936

Received at London Office

of writing Report

10

When handed in at Local Office

10

Port of

HULL

Survey held at

Hull

Date, First Survey

4th Feb 1936

Last Survey

23rd April 1936

on the

Steam Trawler "Admiral Drake"

(Number of Visits

V.)

Gross

418

Tons

Net

162

ster

Built at

Selly

By whom built

Cochrane & Sons Ltd

Yard No.

1154

When built

1936

ines made at

Hull

By whom made

Charles D. Holmes & Co Ltd

Engine No.

1489

When made

1936

ers made at

do

By whom made

do

Boiler No.

1489

When made

1936

inal Horse Power

105

Owners C. H. Smith & Co (Hull) Ltd

Port belonging to

Hull

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

Manufacturers of Steel

The Steel Company of Scotland Ltd

(Letter for Record "S" ✓)

total Heating Surface of Boilers

1940 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

and Description of Boilers

One Single Ended

Working Pressure

200 lbs

tested by hydraulic pressure to

350 lbs

Date of test

2/4/36

No. of Certificate

3935

Can each boiler be worked separately

✓

area of Firegrate in each Boiler

53.7 sq ft

No. and Description of safety valves to each boiler

Two 2 3/4" dia, Spring loaded

area of each set of valves per boiler

per Rule 11.3

as fitted 11.9

Pressure to which they are adjusted

200 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

9"

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

14'-6"

Length

10'-8"

Shell plates: Material

Steel

Tensile strength

29/33 Tons

Thickness

1 9/32

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

ing. seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams 1 1/32

long. seams

Pitch of rivets

3 3/4

Percentage of strength of circ. end seams

plate 64.3  
rivets 46.8

Percentage of strength of circ. intermediate seam

plate  
rivets

Percentage of strength of longitudinal joint

plate 88.5  
rivets 88.5  
combined 88.7

Working pressure of shell by Rules

202 lbs

Thickness of butt straps

outer 1"  
inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 Plain, with Goulley necks

Material

Steel

Tensile strength

26/30 Tons

Smallest outside diameter

3'-6 1/2"

Length of plain part

top 6'-3"  
bottom 5'-6"

Thickness of plates

crowns 13/16  
bottom

Description of longitudinal joint

Welded

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

✓

Working pressure of furnace by Rules

206 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30 Tons

Thickness

1 5/8"

Pitch of stays

19 3/4" x 18 3/4"

How are stays secured

Double Nuts and Washers

Working pressure by Rules

203 lbs

Tube plates: Material

front Steel  
back

Tensile strength

26/30 Tons

Thickness

15/16"  
7/8"

Mean pitch of stay tubes in nests

10.7"

Pitch across wide water spaces

14"

Working pressure

front 209 lbs  
back 242 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 Tons

Depth and thickness of girder

at centre

10" by 2 @ 7/8"

Length as per Rule

36 1/4"

Distance apart

9" wings, 9 1/2" centre

in each

3 @ 8"

Working pressure by Rules

233 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tons

Thickness: Sides

23/32"

Back

1 1/16"

Top

1 1/16"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

10" x 8 1/2"

Back

9" x 9"

Top

9 1/2" x 8"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

204 lbs

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 1/4"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

227 lbs

Main stays: Material

Steel

Tensile strength

28/32 Tons

Diameter

At body of stay, 3 1/4"

Over threads

No. of threads per inch

8

Area supported by each stay

361 sq ins

Working pressure by Rules

203 lbs

Screw stays: Material

Steel

Tensile strength

26/30 Tons

Diameter

At turned off part, 1 3/4"

Over threads

No. of threads per inch

10

Area supported by each stay

85.981 sq ins



Working pressure by Rules 225 lb<sup>sq</sup> Are the stays drilled at the outer ends No Margin stays: Diameter <sup>At turned off part,</sup> 1 7/8" x 2"  
No. of threads per inch 10 Area supported by each stay 104.6 sq ins Working pressure by Rules 203 lb<sup>sq</sup>  
Tubes: Material Iron External diameter <sup>Plain</sup> 3 1/2" Thickness <sup>Stay</sup> 8 W. 6 No. of threads per inch 9  
Pitch of tubes 4 3/4" x 4 3/4" Working pressure by Rules 215 lb<sup>sq</sup> Manhole compensation: Size of opening  
shell plate 16" x 12" Section of compensating ring 4'-9 1/2" x 1 9/32" No. of rivets and diameter of rivet holes 122 @ 1 1/2"  
Outer row rivet pitch at ends 10.45" Depth of flange if manhole flanged ✓ Steam Dome: Material Steel  
Tensile strength 26/30 Tons<sup>sq</sup> Thickness of shell 3/4" Description of longitudinal joint SR Lap  
Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/4" Percentage of strength of joint <sup>Plate</sup> 54.4  
Internal diameter 2'-9" Working pressure by Rules 231 lb<sup>sq</sup> Thickness of crown 7/8" No. and diameter  
stays 2 @ 2 1/4" Inner radius of crown ✓ Working pressure by Rules Ample  
How connected to shell D.R. Lap Joint Size of doubling plate under dome 4'-9 1/2" x 1 9/32" Diameter of rivet holes and  
of rivets in outer row in dome connection to shell 1 1/2" dia by 10.45"

Type of Superheater Smoke Tube Type Manufacturers of <sup>Tubes</sup> The Superheater Co Ltd. Manchester  
<sup>Steel castings</sup> do <sup>do</sup> do  
Number of elements 26 Material of tubes Steel Internal diameter and thickness of tubes 1 7/23 m.m.  
Material of headers Forged Steel Tensile strength 26/30 Tons<sup>sq</sup> Thickness 5/8" 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 1.77 sq ins. Are the safety valves fitted with easing gear Yes Working pressure as  
Rules 396 lb<sup>sq</sup> Pressure to which the safety valves are adjusted 200 lb<sup>sq</sup> Hydraulic test pressure  
tubes 1000 lb<sup>sq</sup>, castings 600 lb<sup>sq</sup> and after assembly in place Are drain cocks or 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

P. The foregoing is a correct description,  
Harold B. Shuard Manufacturer

Dates of Survey <sup>During progress of</sup> See Mch Report Are the approved plans of boiler and superheater forwarded herewith Yes  
<sup>work in shops - -</sup> Herewith. (If not state date of approval.)  
<sup>while building</sup> <sup>During erection on</sup> <sup>board vessel - -</sup> Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Cape Corrientes. Hul Rpt N<sup>o</sup> 46366

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

This boiler has been constructed under Special Survey in accordance with the approved plans. It has been satisfactorily fitted on board, tried under steam, and the safety valves adjusted as above.

Survey Fee charged on Mch Rpt Herewith: : : When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

A. W. B. Edwards  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See minute on  
J.E. Rpt.



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Foundation