

REPORT ON BOILERS.

No. 46829

21 MAY 1936

Received at London Office

22 MAY 1936

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

24th Feb. 1936

Last Survey

12th May 1936

on the

Steam Trawler "Cape Comorin"

(Number of Visits)

Tons

Gross

Net

Master

✓

Built at

Beverley

By whom built

Cook, Welton & Gemmell

Hull No.

611

When built 1936

Engines made at

Hull

By whom made

C.D. Holmes & Co. Ltd.

Engine No.

1491

When made 1936

Boilers made at

do

By whom made

do

Boiler No.

do

When made 1936

Nominal Horse Power

132

Owners

Hudson Bros Trawlers Ltd.
(Hudson Steam Fishing Co. 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

2415 sq. ft. ✓

Is forced draught fitted

No ✓

Coal or Oil fired

Coal ✓

No. and Description of Boilers

One Single Ended. ✓

Working Pressure

220 lbs. ✓

Tested by hydraulic pressure to

380 lbs. ✓

Date of test

23/4/36

No. of Certificate

3938

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

64 sq. ft. ✓

No. and Description of safety valves to each boiler

Two 3" dia Spring loaded. ✓

Area of each set of valves per boiler

per Rule 12.8 sq. ins. ✓

as fitted

14.14 sq. ins. ✓

Pressure to which they are adjusted

220 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

11" ✓

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

yes ✓

Largest internal dia. of boilers

15'-6" ✓

Length

11'-0" ✓

Shell plates: Material

Steel ✓

Tensile strength

31/35 Tons ✓

Thickness

1 1/32" ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end D.R. ✓

long. seams

T.R. D.B.S. ✓

Diameter of rivet holes in

circ. seams 1 1/32" ✓

long. seams

1 5/32" ✓

Pitch of rivets

3 3/4" ✓

9 9/16" ✓

Percentage of strength of circ. end seams

plate 62.6 ✓

rivets

43.9 ✓

Percentage of strength of circ. intermediate seam

plate 84.63 ✓

rivets

✓

Percentage of strength of longitudinal joint

plate 87.5 ✓

rivets

86.8 ✓

Working pressure of shell by Rules

220 lbs. ✓

✓

Thickness of butt straps

outer 1 3/32" ✓

inner 1 7/32" ✓

No. and Description of Furnaces in each Boiler

3 Deighton Corrugated. ✓

Material

Steel ✓

Tensile strength

26/30 Tons ✓

Smallest outside diameter

3'-9 1/8" ✓

Length of plain part

top ✓

bottom ✓

Thickness of plates

crown 11/16" ✓

Description of longitudinal joint

Welded. ✓

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

✓

Working pressure of furnace by Rules

223 lbs. ✓

End plates in steam space: Material

Steel ✓

Tensile strength

26/30 Tons ✓

Thickness

1 7/32" ✓

Pitch of stays

18 1/2" x 18 3/4" ✓

How are stays secured

Double Nuts & Washers. ✓

Working pressure by Rules

230 lbs. ✓

✓

Tube plates: Material

front Steel ✓

back Steel ✓

Tensile strength

26/30 Tons ✓

Thickness

15/16" ✓

29/32" ✓

Mean pitch of stay tubes in nests

11.5" ✓

Pitch across wide water spaces

14 1/2" ✓

Working pressure

front 226 lbs. ✓

back 225 lbs. ✓

Girders to combustion chamber tops: Material

Steel ✓

Tensile strength

29/33 Tons ✓

Depth and thickness of girder

at centre 9 1/2" x 2 @ 7/8" ✓

Length as per Rule

2'-9 7/32" ✓

Distance apart

9 1/4" (wings) ✓

8" (centre) No. and pitch of stays

3 @ 7 3/4" ✓

Working pressure by Rules

248 lbs. ✓

Combustion chamber plates: Material

Steel ✓

Tensile strength

26/30 Tons ✓

Thickness: Sides

23/32" ✓

Back 23/32" ✓

Top 11/16" ✓

Bottom 7/8" ✓

Pitch of stays to ditto: Sides

9 1/2" x 8 1/4" ✓

Back 9 1/4" x 8 1/4" ✓

Top 7 1/4" x 9 1/4" ✓

Are stays fitted with nuts or riveted over

Nuts. ✓

✓

Working pressure by Rules

226 lbs. ✓

Front plate at bottom: Material

Steel ✓

Tensile strength

26/30 Tons ✓

Thickness

29/32" ✓

Pitch of stays at wide water space

14 1/2" x 8 1/4" ✓

Working Pressure

248 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 ✓

Working pressure by Rules

236 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

342 sq. ins. ✓

Area supported by each stay

80.5 sq. ins. (Back) ✓

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Working pressure by Rules $226 \frac{1}{2} \text{ lbs } ^\circ$ Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, $1 \frac{7}{8} \text{ " } + 2 \text{ " }$ Over threads }
No. of threads per inch $10 \checkmark$ Area supported by each stay 99 sq ins. Working pressure by Rules $251 \frac{1}{2} \text{ lbs } ^\circ$
Tubes: Material *Iron* External diameter { Plain } $3 \frac{1}{2} \text{ "}$ Thickness { 7 W. 6 } No. of threads per inch $9 \checkmark$
Pitch of tubes $4 \frac{3}{4} \text{ " } \times 4 \frac{7}{8} \text{ "}$ Working pressure by Rules $260 \frac{1}{2} \text{ lbs } ^\circ$ Manhole compensation: Size of opening in shell plate $16 \text{ " } \times 12 \text{ "}$ Section of compensating ring $4 \text{ ' } - 11 \frac{1}{2} \text{ " dia } \times 1 \frac{13}{32} \text{ "}$ No. of rivets and diameter of rivet holes $86 @ 1 \frac{5}{32}$
Outer row rivet pitch at ends $10 \frac{3}{4} \text{ "}$ Depth of flange if manhole flanged \checkmark Steam Dome: Material *Steel*
Tensile strength $26/30 \text{ Tons } ^\circ$ Thickness of shell $\frac{3}{4} \text{ "}$ Description of longitudinal joint *S.R. Lap.*
Diameter of rivet holes $1 \frac{1}{32} \text{ "}$ Pitch of rivets $2 \frac{1}{4} \text{ "}$ Percentage of strength of joint { Plate 54.4 Rivets 44 }
Internal diameter $2 \text{ ' } - 9 \text{ "}$ Working pressure by Rules $231 \frac{1}{2} \text{ lbs } ^\circ$ Thickness of crown $\frac{7}{8} \text{ "}$ No. and diameter of stays $2 @ 2 \frac{3}{8} \text{ " dia.}$ Inner radius of crown \checkmark Working pressure by Rules *Ample*
How connected to shell *D.R. Lap.* Size of doubling plate under dome $4 \text{ ' } - 11 \frac{1}{4} \text{ " } \times 1 \frac{13}{32} \text{ "}$ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell $1 \frac{5}{32} \text{ " } \times 10 \frac{3}{4} \text{ "}$

Type of Superheater *Smoke Tube Type* Manufacturers of { Tubes *The Superheater Co. Ltd. Manchester* Steel castings *Blackett, Hutton & Co. Ltd. Guisborough* }
Number of elements $54 \checkmark$ Material of tubes *SD. Steel* Internal diameter and thickness of tubes $17 \text{ mm dia } \times 3 \text{ mm}$
Material of headers *Forged steel* Tensile strength $26/30 \text{ Tons } ^\circ$ Thickness $\frac{5}{8} \text{ "}$ Can the superheater be shut off and 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 per Rules $396 \frac{1}{2} \text{ lbs } ^\circ$ Pressure to which the safety valves are adjusted $220 \frac{1}{2} \text{ lbs } ^\circ$ Hydraulic test pressure: tubes $1000 \frac{1}{2} \text{ lbs } ^\circ$, castings $660 \frac{1}{2} \text{ lbs } ^\circ$ and after assembly in place $660 \frac{1}{2} \text{ lbs } ^\circ$ 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*

The foregoing is a correct description,
For *CHARLES D. HOLMES & CO., LTD.* Manufacturer.
J. Cooper

Dates { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith *Yes*
of Survey { while building } { During erection on board vessel - - } (If not state date of approval.)
See mch report. Total No. of visits \checkmark

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *"Cape Chelyuskin". Hul Rpt N^o 46665*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under Special Survey and in accordance with the approved plans, the materials and workmanship being sound and good. It has been satisfactorily fitted on board, examined under steam, and safety valves adjusted as above.*

Survey Fee ... \pounds *Charged on Mch Rpt* When applied for, 19
Travelling Expenses (if any) \pounds : : When received, 19

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

Committee's Minute *TUE. 26 MAY 1936*

Assigned *See minute on J.E. Mch Rpt.*



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