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REPORT ON BOILERS.

No. 46829

21 MAY 1936

Received at London Office

22 MAY 1936

Date of writing Report

19

When handed in at Local Office

19

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)

Gross Tons
Net

Master

Built at Beverley

By whom built Cook, Welton & Gemmell

Yard 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 T.R.
inter. DB.S.

long. seams T.R. DB.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
rivets

Percentage of strength of longitudinal joint { plate 84.63
rivets 87.5
combined 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 Bughton 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 1/16"
bottom 1/16"

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

in each 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 1/16"

Bottom 7/8"

Pitch of stays to ditto: Sides 9 1/2" x 8 1/4" Back 9 3/4" x 8 1/4" Top 7 3/4" 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 15/16"

Lower back plate: Material Steel

Tensile strength 26/30 Tons

Thickness 29/32"

Pitch of stays at wide water space 14 1/2" x 8 1/4"

Are stays fitted with nuts or riveted over Nuts.

Working Pressure 248 lbs

Main stays: Material Steel

Tensile strength 28/32 Tons

Diameter { At body of stay, 3 1/4"
or Over threads

No. of threads per inch 8

Area supported by each stay 342 sq. ins

Working pressure by Rules 236 lbs

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

Area supported by each stay 80.5" (Back)

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, $1 \frac{7}{8} + 2$ Over threads }
 No. of threads per inch 10 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 } $3 \frac{1}{2}$ Thickness { 7 W.G. } No. of threads per inch 9
 Pitch of tubes $4 \frac{3}{4} \times 4 \frac{7}{8}$ Working pressure by Rules $260 \frac{1}{2} \text{ lbs } ^\circ$ Manhole compensation: Size of opening in shell 16×12 Section of compensating ring $4 \frac{1}{2} \text{ dia} \times 1 \frac{13}{32}$ No. of rivets and diameter of rivet holes $86 @ 1 \frac{15}{32}$
 Outer row rivet pitch at ends $10 \frac{3}{4}$ Depth of flange if manhole flanged Steam Dome: Material *Steel*
 Tensile strength $26/30 \text{ Tons } ^\circ$ Thickness of shell $\frac{3}{4}$ Description of longitudinal joint *SR. Lap.*
 Diameter of rivet holes $1 \frac{1}{2}$ Pitch of rivets $2 \frac{1}{4}$ Percentage of strength of joint { Plate 54.4 Rivets 44 }
 Internal diameter $2 \text{ - } 9$ Working pressure by Rules $231 \frac{1}{2} \text{ lbs } ^\circ$ Thickness of crown $\frac{7}{8}$ No. and diameter of stays $2 @ 2 \frac{3}{8} \text{ dia.}$ Inner radius of crown Working pressure by Rules *Ample.*
 How connected to shell *DR. Lap.* Size of doubling plate under dome $4 \frac{1}{4} \times 1 \frac{13}{32}$ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell $1 \frac{15}{32} \times 10 \frac{3}{4}$

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 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 $\frac{5}{8}$ 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 of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith *Yes* (If not state date of approval.)
 while building { During erection on board vessel - - } *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 No 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 ... *Charged on Mch Rpt* ... £ *Herewith* When applied for, 10
 Travelling Expenses (if any) £ : : When received, 10

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

Committee's Minute **TUE. 26 MAY 1936**

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

