

REPORT ON BOILERS.

No.

44282.

21 OCT 1936

20 OCT 1936

Received at London Office

Date of writing Report

10

When handed in at Local Office

10

Port of

HULL

No. in Survey held at
Reg. Book

Hull

Date, First Survey

19th June 1936

Last Survey

14th October 1936

(Number of Visits)

Tons

Gross 494.72

Net 190.28

Master

Built at

Selly

By whom built

Bochraue & Son Ltd Yard No. 1169 When built 1936.10

Engines made at

Hull

By whom made

Charles D. Holmes & Co. Ltd. Engine No. 1497 When made 1936

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ltd. Boiler No. 1497 When made 1936

Nominal Horse Power

132

Owners

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

17/9/36

No. of Certificate

3952

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 14.1 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

Largest internal dia. of boilers

15'-6" Length 11'-0"

Shell plates: Material

Steel

Tensile strength

31/35 tons

Thickness

1 3/32"

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 3/32"

long. seams 1 5/32"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate 62.6

rivets 43.9

Percentage of strength of circ. intermediate seam

plate 84.63

rivets 87.5

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 3/32"

No. and Description of Furnaces in each Boiler

3 Deighton corrugated

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

3'-9 3/8"

Length of plain part

top 1 3/32"

bottom 1 3/32"

Thickness of plates

crown 1 1/16"

bottom 1 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 1/4" 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"

Mean pitch of stay tubes in nests

11.5"

Pitch across wide water spaces

14 1/4"

Working pressure

front 220 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" (diag) 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 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 1/4"

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, or Over threads 3 1/4"

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 sq. ins (Back)

Working pressure by Rules 226 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads 1 7/8" x 2"
No. of threads per inch 10 Area supported by each stay 99 sq. ins Working pressure by Rules 251 lb.
Tubes: Material Iron External diameter { Plain } 3 1/2" Thickness { 7/16" } No. of threads per inch 9
Pitch of tubes 4 3/4" x 4 7/8" Working pressure by Rules 260 lb. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 4" x 1 1/4" dia x 1 3/32" No. of rivets and diameter of rivet holes 860 1 3/32"
Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged No Steam Dome: Material Steel
Tensile strength 26/30 tons Thickness of shell 3/4" Description of longitudinal joint S. R. Lap.
Diameter of rivet holes 1 3/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54.4 Rivets 44 }
Internal diameter 2'-9" Working pressure by Rules 231 lb. Thickness of crown 7/8" No. and diameter of stays 2 @ 2 3/8" dia Inner radius of crown No Working pressure by Rules Ample
How connected to shell D. R. Lap. Size of doubling plate under dome 4' 1 1/4" dia x 1 3/32" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/32" x 10 3/4"

Type of Superheater Smoke tube Manufacturers of { Tubes Please see M/C Steel forgings certificates F 782-3. Steel castings }
Number of elements 41 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 1/4" 3 mm.
Material of headers Steel forgings Tensile strength 26-30 tons Thickness 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 1.46 sq. in. Are the safety valves fitted with easing gear Yes Working pressure as per Rules Approved for 220 lb. Pressure to which the safety valves are adjusted 222 lb. Hydraulic test pressure: tubes 1000 lb. forgings and castings 660 lb. and after assembly in place 660 lb. 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.

Dates { During progress of work in shops - - }
of Survey { During erection on board vessel - - }
while building { Please see memo. Rpt. }
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) No
Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Cape Chelyuskin"

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 plan. It has been satisfactorily fitted on board, examined under steam and safety valves adjusted.

The approved plan is retained for guidance in dealing with repeat boilers Nos 1506, 9, 10.

Charged on engine report sent herewith

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

C. Knoffat.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 23 OCT 1936
Assigned See Hnl JE 47282