

Rpt. 5a.

REPORT ON BOILERS.

No. 51541.

Received at London Office

19 MAR 1942

Date of writing Report

19

When handed in at Local Office

8 FEB 1942

Port of HULL.

No. in Survey held at HULL.

Date, First Survey

24. 3. 41.

Last Survey

1. 3. 1942.

Reg. Book.

on the S.M. Tug.

ADEPT.

(Number of Visits

57.)

Gross

601.40.

Tons

Net

3.21.

Built at SELBY.

By whom built

Cochrane & Co Ltd

Yard No. 1237.

When built 1942-3

Engines made at HULL.

By whom made

Chas. D. Holmes Ltd.

Engine No. 1596

When made 1942-3

Boilers made at HULL.

By whom made

Chas. D. Holmes Ltd.

Boiler No. 1596

When made 1942-3

Nominal Horse Power 222.

Owners

The Admiralty.

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd.

(Letter for Record

5

Total Heating Surface of Boilers 3550. sq. ft. Is forced draught fitted ☒ Yes.

Coal or Oil fired Oil

No. and Description of Boilers One S.B.

Working Pressure 210 lb./sq. in. Tested by hydraulic pressure to 365 lb./sq. in. Date of test 24. 12. 41 No. of Certificate 4124. Can each boiler be worked separately ☒ Yes.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2. Spring loaded

Area of each set of valves per boiler

per Rule

16.14. 197

as fitted

16.59.

Pressure to which they are adjusted 210 lb./sq. in. Are they fitted with easing gear ☒ Yes.In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ☒ No.

Smallest distance between boilers or uptakes and bunkers or woodwork 2 feet.

Is oil fuel carried in the double bottom under boilers ☒ No.Smallest distance between shell of boiler and tank top plating ☒ Yes.

Is the bottom of the boiler insulated

Largest internal dia. of boilers 17'-0".

Length 11'-6".

Shell plates: Material Steel

Tensile strength 31-35 tons/sq. in.

Thickness 1 7/32".

Are the shell plates welded or flanged ☒ No.

Description of riveting: circ. seams

end D.R. Cap.

long. seams T.R., D.B.S.

Diameter of rivet holes in

circ. seams

1 7/16"

Pitch of rivets

3 13/16"

Percentage of strength of circ. end seams

plate 62.4%

rivets 43.1%

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate 85.0%

rivets 86.7%

combined 87.3%

Thickness of butt straps

outer 1 1/8"

inner 1 1/4"

No. and Description of Furnaces in each Boiler

3. C.f. Deighan Section.

Material Steel

Tensile strength 26/30 tons/sq. in.

Smallest outside diameter 4'-3 1/2".

Length of plain part

Thickness of plates

crown 3 3/8"

bottom 3 3/8"

Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom None.

End plates in steam space: Material Steel.

Tensile strength 26-30 tons/sq. in.

Thickness 1 3/16".

Pitch of stays 16" x 20 3/4"

How are stays secured Nuts & washers inside & out.

Tube plates: Material

front Steel

back Steel.

Tensile strength 26/30 tons/sq. in.

Thickness 1 5/16".

2 1/32".

Mean pitch of stay tubes in nests 9 9/16".

Pitch across wide water spaces 13 1/2" x 8 1/2".

Girders to combustion chamber tops: Material Steel.

Tensile strength 29-33 tons/sq. in.

Depth and thickness of girder

at centre 9" x 7 1/8" I-beam

Length as per Rule 2'-8 3/32".

Distance apart 9 3/4".

No. and pitch of stays

in each 3 @ 7 3/4".

Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/sq. in.

Thickness: Sides 2 3/32".

Back 2 3/32"

Top 1 1/16"

Bottom 7/8".

Pitch of stays to ditto: Sides 8 1/2" x 10"

Back 9 1/2" x 8 7/8"

Top 7 3/4" x 9 3/4"

Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength 26/30 tons/sq. in.

Thickness 1 5/16".

Lower back plate: Material Steel

Tensile strength 26/30 tons/sq. in.

Thickness 2 7/32".

Pitch of stays at wide water space 13 3/4" x 8 7/8".

Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel

Tensile strength 28/32 tons/sq. in.

Diameter

At body of stay

3 1/8".

No. of threads per inch 8.

Screw stays: Material Steel

Tensile strength 26/30 tons/sq. in.

Diameter

At turned off part

1 3/4".

No. of threads per inch 9.

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads 1 7/8" - 2" - 2 1/8"

No. of threads per inch 9.

Tubes: Material L/W. IRON. External diameter { Plain 3" Stay 3" Thickness { 8 W.G. 5/16" 3/8" 7/16" No. of threads per inch 10

Pitch of tubes 4 1/4" x 4 1/4" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 13 1/16" x 1 1/32" No. of rivets and diameter of rivet holes 16 @ 1 1/2"

Outer row rivet pitch at ends 10 1/16" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material None.

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint { Plate Rivets _____

Internal diameter _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell _____

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 and the boiler be worked separately _____

Area of each safety valve _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Pressure to which the safety valves are adjusted _____ Are the safety valves fitted with easing gear _____

tubes _____ forgings and castings _____ and after assembly in place _____ Hydraulic test pressure: _____

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 Yes.

The foregoing is a correct description.
 FOR CHARLES D. HOLMES & CO., LTD.
W.R. Evans Manufacturer.

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

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.R.T. FRISKY.

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 and the Rules.
The Workmanship and materials are good and when subjected to a hydraulic test of 365 lbs / sq in it was found satisfactory in every respect.

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

J. Philina
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 24 MAR 1942
 Assigned See Incl 26 51541