

REPORT ON BOILERS.

No. 51868.

19 JAN 1943

Received at London Office

Date of writing Report 3-12-1942 When handed in at Local Office 15/1/1943 Port of HULL.

No. in Survey held at HULL.
Reg. Book.

Date, First Survey 22. 6. 42.

Last Survey 26. 12. 1942.

on the STEAM TUG.

RESCUE HORSA

(Number of Visits 62.)

Gross 597
Net 1

Built at SELBY By whom built Cochran & Sons Ltd Yard No. 1252. When built

Engines made at HULL By whom made Chas D. Holmes Ltd Engine No. 1627 When made

Boilers made at HULL By whom made Chas D. Holmes Ltd Boiler No. 1627 When made

Nominal Horse Power 222.

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland

(Letter for Record)

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 11-11-42 No. of Certificate 4168. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler — (or) No. and Description of safety valves to each boiler 2. Spring loaded

Area of each set of valves per boiler {per Rule 16.14. 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 —

Smallest distance between boilers or uptakes and bunkers or woodwork Two feet. Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating — Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 17'-0". Length 11'-6". Shell plates: Material Steel. Tensile strength 31-35 tons/sq. in.

Thickness 1 5/32". Are the shell plates welded or flanged No. Description of riveting: circ. seams 1 7/16". end D.R. Lap.

long. seams T.R., D.B.S. Diameter of rivet holes in {circ. seams 1 7/32". 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 85.0%. rivets 86.7%.

Percentage of strength of longitudinal joint {plate 85.0%. rivets 86.7%.

Thickness of butt straps {outer 1 1/8". inner 1 1/4". No. and Description of Furnaces in each Boiler 3 of Deighka Section.

Material Steel Tensile strength 26-30 tons/sq. in. Smallest outside diameter 4'-3 1/2".

Length of plain part {top 3 3/4". Thickness of plates {crown 3 3/4". 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 and washers inside and out.

Tube plates: Material {front Steel Tensile strength 26-30 tons/sq. in. Thickness 1 5/16".

{back Steel Tensile strength 26-30 tons/sq. in. Thickness 2 9/32".

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" Double 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 1/8". 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".

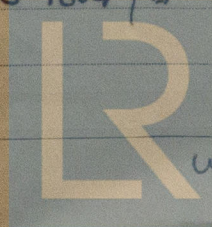
Pitch of stays at wide water space 13 3/4" x 8 1/8". Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel Tensile strength

Diameter {At body of stay, or Over threads 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, or Over threads 1 3/4". No. of threads per inch 9.



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Foundation

Are the stays drilled at the outer ends No.

Margin stays: Diameter { At turned off part. 1 7/8", 2", 2 1/8"
or
Over threads

No. of threads per inch 9.

Tubes: Material L.W. 1ra. External diameter { Plain 3"
Stay 3" Thickness { 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 1 1/2"

shell plate 12" (x16") Section of compensating ring 13 7/16" x 1 1/32" No. of rivets and diameter of rivet holes 16 @ 1 1/32"

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 2251 Pitch of rivets 20 x 20 Percentage of strength of joint { Plate 2855
Rivets

Internal diameter 7501 Thickness of crown 2251 No. and diameter of Oil Engine

stays 7501 Inner radius of crown 2251 Generators

How connected to shell Size of doubling plate under dome. Diameter of rivet holes and pitch 2251 No. of Sets

of rivets in outer row in dome connection to shell

Type of Superheater NONE 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 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with easing gear

Pressure to which the safety valves are adjusted 8012 Hydraulic test pressure: 2000

tubes forgings and castings 2000 and after assembly in place Are drain cocks or

valves fitted to free the superheater from water where necessary 2000

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 of Survey { During progress of work in shops - -
while building { During erection on board vessel - -

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits 2000

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. FRISKY. Hul. Rpt. 51413.

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 material are good and, when subjected to a hydraulic test of 265 lb/sq in it was found satisfactory in every respect.

[Handwritten notes and signatures in the General Remarks section]

Survey Fee £ 19 When applied for, 19

Travelling Expenses (if any) £ 19 When received, 19

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 26 JAN 1943

Assigned See Hul. Rpt. 51868