

# REPORT ON BOILERS.

No. 51768.

Received at London Office 15 OCT 1942

When handed in at Local Office 14 OCT 1942 Port of HULL.

Survey held at HULL Date, First Survey 5-2-42 Last Survey 14-9-1942

on the STEAM TUG DEXTEROUS.

(Number of Visits 58) Gross 601 Tons Net 3.

At SELBY By whom built Cochrane & Co Ltd Yard No. 1247. When built 1942

Lines made at HULL By whom made Chas. J. Holmes & Co Engine No. 1619. When made 1

Boilers made at HULL By whom made Chas. J. Holmes & Co Boiler No. 1619. When made 4

Original Horse Power 222 Owners The Admiralty Port belonging to ✓

## ULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record S

Heating Surface of Boilers 3550 sq. ft. Is forced draught fitted Yes. Coal or Oil fired Oil

Description of Boilers One S.B. Working Pressure 210 lb./sq. in.

Tested by hydraulic pressure to 365 lb./sq. in. Date of test 5-8-42 No. of Certificate 4157. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler - (O.F.) No. and Description of safety valves to each boiler 2. Spring loaded

Area of each set of valves per boiler {per Rule 16-4 19-72 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 shell of boiler and tank top plating 2 ft. Is oil fuel carried in the double bottom under boilers No.

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

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

Seams T.R., D.B.S. Diameter of rivet holes in {circ. seams 1 7/16" Pitch of rivets 3 13/16" {inter.

Percentage of strength of circ. end seams {plate 62-4% Percentage of strength of circ. intermediate seam {plate

Percentage of strength of longitudinal joint {rivets 43-1% {rivets 85-0% {combined 87-3%

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

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

Length of plain part {top 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 & washers inside and out.

End plates: Material {front Steel Tensile strength 26-30 tons/sq. in. Thickness 1 5/16" {back Steel 29/32"

Pitch of stay tubes in nests 9 9/16" Pitch across wide water spaces 13 1/2" x 8 1/2"

Orders to combustion chamber tops: Material Steel Tensile strength 29-33 tons/sq. in. Depth and thickness of girder

centre 9" x 7 7/8" double Length as per Rule 2'-8 3/32" Distance apart 9 3/4" No. and pitch of stays

each 3 @ 7 3/4" Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq. in. Thickness: Sides 23/32" Back 23/32" Top 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.

End 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 27/32"

Pitch of stays at wide water space 13 3/4" x 8 7/8" Are stays fitted with nuts or riveted over Nuts.

Supporting stays: Material Steel Tensile strength 28-32 tons/sq. in.

meter {At body of stay, 3 1/8" No. of threads per inch 8

New stays: Material Steel Tensile strength 26-30 tons/sq. in.

meter {At turned off part, 1 3/4" No. of threads per inch 9.



Dexterous

Are the stays drilled at the outer ends No.

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

No. of threads per inch 9

Tubes: Material L.W. Iron 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

shell plate 16" x 12" Section of compensating ring 13 7/16 x 1 15/32

No. of rivets and diameter of rivet holes 16 @ 1 7/32"

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

Pitch of rivets

Percentage of strength of joint { Plate Rivets

Internal diameter

Thickness of crown

No. and diameter

stays

Inner radius of crown

How connected to shell

Size of doubling plate under dome

Diameter of rivet holes and

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

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

Hydraulic test pressure

tubes

forgings and castings

and after assembly in place

Are drain cocks

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

Manufacture

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

See machinery report attached herewith

Are the approved plans of boiler and superheater forwarded herewith (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. 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 36 5/8 lbs / sq it was found satisfactory in every respect.

Safety valves adjusted to 210 lb.

Survey Fee ... .. £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Committee's Minute

FRL 6 NOV 1942

Assigned

See Hul. Rpt. 51768

Engineer Surveyor to Lloyd's Register of Shipping



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