

REPORT ON BOILERS.

No. 51952.

Received at London Office

to of writing Report 10-2-1943. When handed in at Local Office

Port of HULL.

No. in Survey held at HULL.

Date, First Survey 24. 9. 42.

Last Survey 1. 3. 19 43.

(Number of Visits 45) Gross 597 Tons Net

on the STEAM TUG. SAUCY.

built at DELBY.

By whom built Cochrane & Sons. Ltd

Yard No. 1257. When built 1943

engines made at HULL.

By whom made Chas. D. Holmes & Co. Ltd

Engine No. 1636. When made

boilers made at HULL

By whom made Chas. D. Holmes Ltd

Boiler No. 1646. When made

nominal Horse Power 222.

Owners The Admiralty

Port belonging to

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Corporation of Scotland

(Letter for Record S

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 3.2.43. No. of Certificate 4178.

Can each boiler be worked separately

Area of Firegrate in each Boiler

6.5

No. and Description of safety valves to each boiler

2. Spring loaded.

Area of each set of valves per boiler

per Rule 16.14. 19.72
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

Smallest distance between boilers or uptakes and bunkers or woodwork

2 ft.

Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating

None.

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. D.R. Rep.

Thickness

1 1/2".

Are the shell plates welded or flanged No

Description of riveting: circ. seams

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

Diameter of rivet holes in

circ. seams 1 7/16"
long. seams 1 7/32"

Pitch of rivets 3 3/16" 10 1/16"

Percentage of strength of circ. end seams

plate 62.4%
rivets 43.1%

Percentage of strength of circ. intermediate seam

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 cf. Deigha Section.

Material Steel

Tensile strength 26-30 tons/sq. in.

Smallest outside diameter 4'-3 1/2"

Length of plain part

top
bottom

Thickness of plates

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 outside

Tube plates:

Material { front Steel
back Steel

Tensile strength { 26-30 tons/sq. in.
26-30 tons/sq. in.

Thickness { 1 5/16"
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 7/8" 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 3/8"

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 3/8"

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,
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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Saucy

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 1/2" x 4 1/2"

Manhole compensation: Size of opening

shell plate 12" (x 16")

Section of compensating ring 13 7/16" x 1 5/32"

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 pit

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

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

The foregoing is a correct description,

FOR CHARLES D. HOLMES & CO., LTD.

W.P. Evans

Manufacture

Dates of Survey { During progress of work in shops -- 1942. Dec. 10-16, 1943. Jan. 14, 23, 29. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) while building { During erection on board vessel -- as on machinery report. Total No. of visits 45

Is this Boiler a duplicate of a previous case Ya.

If so, state Vessel's name and Report No. "Frisky". Hul Ppl. 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 Rule.

The Workmanship and Materials are good and, when subjected to a hydraulic test of 365 @ 10". it was found satisfactory in every respect.

The above boiler examined under steam, safety valves adjusted as above, accumulation test held and boiler examined after all trials. H.S.

Survey Fee ... £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Hul. Ppl. 51952



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