

REPORT ON BOILERS.

No. 53538

Date of writing Report

31.5.46

When handed in at Local Office

19

Port of

Received at London Office

1 JUL 1946

No. in
Reg. Book.

Surrey held at

Selly

Date, First Survey

14.11.45

Last Survey

P. S.

1946

on the

Single Screw tug DANUBE VII

(Number of Visits)

Gross

237

Tons

Net

NIL

Built at

Selly

By whom built

Leochrane & Sons Ltd.

Yard No.

1312

When built

1946

Engines made at

Hull

By whom made

C. D. Holmes & Co. Ltd.

Engine No.

1817

When made

1946

Boilers made at

Hull

By whom made

C. D. Holmes & Co. Ltd.

Boiler No.

1711

When made

1946

Nominal Horse Power

Owners

The Tillery Dredging & Contracting Co. Ltd.

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley Frodingham

(Letter for Record)

S

Total Heating Surface of Boilers

2490 ft²

Is forced draught fitted

No

Coal or Oil fired

Oil

No. and Description of Boilers

Single end cylindrical multitubular

Working Pressure

200 lbs/sq. in.

Tested by hydraulic pressure to

350 lbs/sq. in.

Date of test

1.3.46

No. of Certificate

4263

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two D.S. ordinary 3 1/4"

Area of each set of valves per boiler

per Rule

14.5

as fitted

15.3

Pressure to which they are adjusted

205 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

9"

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

15'-6"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

31-35 tons/sq. in.

Thickness

15/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DE lap

long. seams

T. R. D.B.S.

Diameter of rivet holes in

circ. seams

13/8"

long. seams

13/8"

Pitch of rivets

33/4"

9/8"

Percentage of strength of circ. end seams

plate

63.3

rivets

44.7

Percentage of strength of circ. intermediate seam

plate

84.9

rivets

86.2

Percentage of strength of longitudinal joint

plate

84.9

rivets

86.2

combined

87

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Dighton Type

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

45.86"

Length of plain part

top

bottom

Thickness of plates

crown

2 1/32"

bottom

2 1/32"

Description of longitudinal joint

Welded

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 7/32"

Pitch of stays

19 x 18.5"

How are stays secured

D. nuts & washers

Tube plates: Material

front

steel

back

steel

Tensile strength

26-30 tons/sq. in.

Thickness

1 5/16"

Mean pitch of stay tubes in nests

11.1"

Pitch across wide water spaces

14 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

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

Length as per Rule

35 5/16"

Distance apart

9"

No. and pitch of stays

in each

3 at 8 1/2"

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

1 1/16"

Bottom

1"

Pitch of stays to ditto: Sides

9 3/4" x 8 1/2"

Back

9 3/4" x 8 1/2"

Top

8 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

3 1/32"

Pitch of stays at wide water space

14 1/2" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

3 1/8"

or

Over threads

No. of threads per inch

8

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part,

1 3/4"

or

Over threads

to 2 1/8"

No. of threads per inch

10



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

No. of threads per inch 10

Tubes: Material Seamless steel External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8 SWG 5/16" 3/8" No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 3/4" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 34" x 27" x 1 5/16" No. of rivets and diameter of rivet holes 32 - 1 3/8" dia.

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged Bot. only 3/4" Steam Dome: Material 10A - NO FLANGE

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.

Manager

Dates of Survey { During progress of work in shops - - 1945 Sept. 14, has 9, 10, 17, Dec. 4, 19, Are the approved plans of boiler and superheater forwarded herewith 30.5.45. (If not state date of approval.)
while building { During erection on board vessel - - - Jan. 10. 23, Feb. 7, 23, Mar. 1, 20, 21. 29. 11
see machinery report. Total No. of visits in shops - 14

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. DANUBE VI

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed and installed under Special Survey in accordance with the Secretary's letter, the approved plans & the Rules. The materials and workmanship are good. Boiler tested by hydraulic pressure of 350 lb, examined and tested under steam and found satisfactory on completion of all tests.

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

W. S. Shields

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 JUL 1945

Assigned See F.E. machy. rpt.



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