

REPORT ON BOILERS.

No. 50966

Received at London Office

DEC -5 1940

Date of writing Report

19

When handed in at Local Office

DEC 1940

Port of

HULL

No. in Reg. Book

Survey held at Hull & Selby.

Date, First Survey 9.12.39

Last Survey 22.11.1940

on the Single Screw Tug "PRUDENT"

(Number of Visits)

Gross 597
Net 5

Built at Selby

By whom built

Cochrane & Sons Ltd

Yard No. 1218 When built 1940-

Engines made at Hull

By whom made

Charles D Holmes Ltd

Engine No. 1563 When made 1940-

Boilers made at

do

By whom made

do

Boiler No. do When made do

Nominal Horse Power

222

Owners

The Admiralty

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(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 30-7-40

No. of Certificate 4034

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

16.14

No. and Description of safety valves to each boiler

2-Spring loaded - High lift

Area of each set of valves per boiler

per Rule 16.14
as fitted 16.39

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

Yes

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

Yes

Largest internal dia. of boilers

17'-0"

Length 11'-6"

Shell plates: Material

Steel

Tensile strength 31/35 ton/sq. in.

Thickness 1 15/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R. lap
inter.

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

Diameter of rivet holes in

circ. seams 17/16"
long. seams 17/32"

Pitch of rivets

3 13/16"
10 1/16"

Percentage of strength of circ. end seams

plate 62.4%
rivets 43.1%

Percentage of strength of circ. intermediate seam

plate
rivets

Percentage of strength of longitudinal joint

plate 85.0%
rivets 86.7%
combined 87.3%

Thickness of butt straps

outer 1/8"
inner 1/4"

No. and Description of Furnaces in each Boiler

3. Cf. Diagram Section

Material

Steel

Tensile strength

26/30 ton/sq. in.

Smallest outside diameter

4'-3 1/2"

Length of plain part

top
bottom

Thickness of plates

3/4"

Description of longitudinal joint

leleld

Dimensions of stiffening rings on furnace or c.c. bottom

c none.

End plates in steam space: Material

Steel

Tensile strength 26/30 ton/sq. in.

Thickness

1 3/16"

Pitch of stays 16 x 20 3/4"

How are stays secured

Double nuts & washers.

Tube plates: Material

front Steel
back Steel

Tensile strength

26/30 ton/sq. in.

Thickness

15/16"
29/32"

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 29/38 ton/sq. in.

Depth and thickness of girder

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

Length as per Rule

2 - 8 3/32"

Distance apart

9 3/4"

No. and pitch of stays

in each

3 in No. - 7 3/4"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 ton/sq. in.

Thickness: Sides

23/32"

Back

23/32"

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

c Yuts.

Front plate at bottom: Material

Steel

Tensile strength

26/30 ton/sq. in.

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength 26/30 ton/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

c Yuts.

Main stays: Material

Steel

Tensile strength

28/32 ton/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 ton/sq. in.

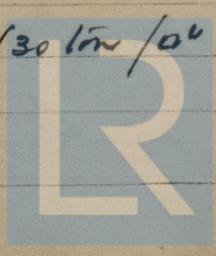
Diameter

At turned off part, or Over threads

1 3/4"

No. of threads per inch

9.



© 2021 Lloyd's Register Foundation 011536-011543-0163

Are the stays drilled at the outer ends CY0 ✓ Margin stays: Diameter { At turned off part or Over threads 1 1/8" x 2 1/8" ✓

No. of threads per inch 9

Tubes: Material L.W. Iron External diameter { Plain 3" Stay 3" Thickness { 8 N.S. 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 7/16" x 1 13/32" No. of rivets and diameter of rivet holes 15 - 1 17/32"

Outer row rivet pitch at ends 10 1/16" Depth of flange if ^{bottom} manhole flanged 3 3/8" Steam Dome: Material CYone

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 CYone 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 casing gear _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks or 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.
Manufacturer.

Dates of Survey { During progress of work in shops - - } See Ind. ref. herewith Are the approved plans of boiler and superheater forwarded herewith 20/10/39
(If not state date of approval.)
{ During erection on board vessel - - - } Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. ASSURANCE. Hull Rpt No. SALVONIA " " "

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler has been constructed under Special Survey & in accordance with the Rules & the approved plans. The workmanship & materials are good & when tested by hydraulic pressure it was found tight & satisfactory in every respect.

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

Lily M. J. Thomson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute DEC 1940
Assigned See Ind. No. 50966

