

REPORT ON BOILERS.

No. 11408

16 NOV 1934

Received at London Office

Date of writing Report

10

When handed in at Local Office

15

11

19

Port of Belfast.

No. in Reg. Book

75139

Survey held at

Belfast

Date, First Survey

Last Survey

19

Visits included in F.E. machinery

(Number of Visits)

Gross 10500

Tons Net 6000

Built at

Belfast.

By whom built

Workman Clark (1918) L^d

Yard No. 534

When built 1934.

Engines made at

Winterthur

By whom made

Sulzer Bros L^d

Engine No. 6442

When made 1934

Boilers made at

Belfast

By whom made

Workman Clark (1918) L^d

Boiler No. 534

When made 1934

Owners

Federal Steam Navigation Co. L^d

Port belonging to

RTICAL DONKEY BOILER.

Built at

Belfast

By whom made

Workman Clark (1918) L^d

Boiler No.

534

When made

1934

Where fixed

Shelter Dk

Engine Room

Manufacturers of Steel

Colvilles L^d Glasgow.

Total Heating Surface of Boiler

2400

Is forced draught fitted

Yes

Coal or Oil fired or Exh. gases

and Description of Boilers

Two Clarkson Shibley Type Waste heat

Working pressure 120 lbs.

Tested by hydraulic pressure to

230 lbs./sq. in.

Date of test

29-8-34.

No. of Certificate 981.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two spring loaded high lift

Area of each set of valves per boiler

per rule 2 @ 3.55 sq. in.

as fitted 2 @ 3.9 sq. in.

Pressure to which they are adjusted

120 lbs.

Are they fitted with easing gear

Yes

State whether steam from main boilers can enter the donkey boiler

Yes

Smallest distance between boiler or uptake and bunkers

Woodwork

Yes

Is oil fuel carried in the double bottom under boiler

Yes

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

Yes

Largest internal dia. of boiler

8'-4 1/2"

Height 24'-3"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

9/16"

Are the shell plates welded or flanged at butt ends

Description of riveting: circ. seams

Top Single

End Bot Double

inter. Single

Long. seams

Double

Dia. of rivet holes in

circ. seams 63/64"

long. seams 25/32"

Pitch of rivets

2 1/4" x 3"

3 1/4"

Percentage of strength of circ. seams

plate 56%

rivets 48.4%

of Longitudinal joint

plate 76.2%

rivets 74.6%

combined

Working pressure of shell by rules

121 lbs.

Thickness of butt straps

outer 1/2"

inner 1/2"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat

Dished part spherical

Material

Steel

Tensile strength

26-30.

Thickness

15/16"

Radius

7'-6"

Working pressure by rules

126 lbs.

Description of Furnace: Plain, spherical, or dished crown

Dished

Material

Steel

Tensile strength 26-30 tons

Thickness

1 3/16"

External diameter

top

bottom

Length as per rule

Working pressure by rules

Pitch of support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Radius of spherical or dished furnace crown

7'-6"

Working pressure by rule 160 lbs.

Thickness of Ogee Ring

Diameter as per rule

D

d

Working pressure by rule

Combustion Chamber: Material

Steel

Tensile strength

26-30

Thickness of top plate

1 1/8"

Radius if dished

5'-0"

Working pressure by rule

162 lbs.

Thickness of back plate

1 3/8"

Diameter if circular

5'-6"

Length as per rule

12'-9 1/4"

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Tube Plates: Material

front

back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule

front

back

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay

plain

BACK

stay

plain

Is each alternate tube in outer vertical rows a stay tube

Working pressure by rules

front

back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Distance apart

No. and pitch of stays in each

Working pressure by rule

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Foundation

W1143-0026

Crown stays: Material _____ Tensile strength _____ Diameter { at body of stay, _____ or _____ over threads. _____

No. of threads per inch _____ Area supported by each stay _____ Working pressure by rules _____

Screw stays: Material _____ Tensile strength _____ Diameter { at turned off part, _____ or _____ over threads. _____ No. of threads per inch _____

Area supported by each stay _____ Working pressure by rules _____ Are the stays drilled at the outer ends _____

Tubes: Material Steel External diameter { plain 4" _____ stay _____ Thickness { 5 B.W.G. _____

No. of threads per inch ✓ Pitch of tubes 4 3/8" vertical 6.3" 6.5" 6.9" } circumferentially Working pressure by rules ✓

Manhole Compensation: Size of opening in shell plate 16 x 12 ✓ Section of compensating ring 4 3/4 x 1 1/2" ✓ No. of rivets and diameter of rivet holes 40 - 15/16" ✓ Outer row rivet pitch at ends 3.28" ✓ Depth of flange if manhole flanged ✓

Uptake: External diameter 3' 5 1/2" ✓ Thickness of uptake plate 3/4" ✓

Cross Tubes: No. ✓ External diameters { _____ Thickness of plates _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,
pro WORKMAN CLARK (1928) LIMITED.

Bunningham aka Secretary. Manufacturer.

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

Is the approved plan of boiler forwarded herewith yes
(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. Deerham N°

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers were constructed under Special Survey and in accordance with the approved plan. They were tested by hydraulic pressure in accordance with the Rules, and efficiently installed and fastened on an upper deck in the Main engine room. The safety valves were adjusted under steam, no appreciable accumulation was noted during the test under oil firing and exhaust gas firing conditions. The workmanship and materials are good and the boilers in my opinion are eligible for use on a classed vessel.

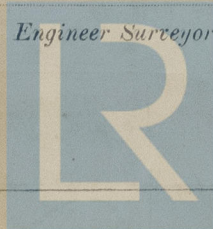
Survey Fee See Rpt 46# 16.10 : When applied for, 15-11-1934
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute
Assigned

TUE. 20 NOV 1934

See other Bel. JE 11408

Charles J. Hunter
Engineer-Surveyor to Lloyd's Register of Shipping.



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