

REPORT ON BOILERS.

No. 32715

Received at London Office

30 SEP 1939

Port of SUNDERLAND.

Survey held at

SUNDERLAND.

Date, First Survey

Last Survey

Sep 28 1939

on the

CORMARSH

(Number of Visits

Gross
Tons
Net

Built at Burnt Island

By whom built Burnt Island S.B.C.

Yard No. 231

When built 1939

Made at Sunderland

By whom made N. E. Marine Eng. Co. (1938) Ltd

Engine No. 2943

When made 1939

Made at do.

By whom made do.

Boiler No. do.

When made do.

Horse Power

244

Owners

Garry Collier Ltd

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel

Appleby Frodingham Steel Co. Ltd.

(Letter for Record S)

Heating Surface of Boilers

3396 ft²

Is forced draught fitted

yes

Coal or Oil fired coal

Description of Boilers

2 Multitubular Cylindrical

Working Pressure 220 lb.

Tested by hydraulic pressure to

380 lb.

Date of test 1935/8/30

No. of Certificate 4297/8

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

30.75 ft²

No. and Description of safety valves to each boiler

2 Direct Spring

Area of each set of valves per boiler

per Rule 9.18 in²as fitted 9.8 in²

Pressure to which they are adjusted

Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Is oil fuel carried in the double bottom under boilers no

Least distance between boilers or uptakes and bunkers or woodwork

19"

Least distance between shell of boiler and tank top plating

2'-11 1/2"

Is the bottom of the boiler insulated

yes

Least internal dia. of boilers

12'-9 7/32"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength 29/33 tons/in²

Thickness

1 5/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.L.

Seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 9/32"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate 65.8

rivets 43.8

Percentage of strength of circ. intermediate seam

plate —

rivets —

Percentage of strength of longitudinal joint

plate 85.76

rivets 86.36

Working pressure of shell by Rules

220.9 lb.

Thickness of butt straps

outer 15/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

3 Saighton, Stephen J. & Co. Ltd

Material

Steel

Tensile strength 26/30 tons/in²

Smallest outside diameter 2'-11 7/32"

Thickness of plain part

top —

bottom —

Thickness of plates

crown

3 5/16"

bottom

Description of longitudinal joint

weld

Reinforcements of stiffening rings on furnace or c.e. bottom

Working pressure of furnace by Rules

224 lb.

Plates in steam space: Material

Steel

Tensile strength 26/30 tons/in²

Thickness

1 7/32"

Pitch of stays 18 3/8" x 17"

Are stays secured

Double nuts

Working pressure by Rules

221 lb.

Plates: Material

front

back

Steel

Tensile strength

{

26/30 tons/in²

Thickness

{

3 1/32"

13/16"

Pitch of stay tubes in nests

10.2"

Pitch across wide water spaces 14 1/2" x 8 7/8"

Working pressure

front 223 lb.

back 227 lb.

Plates to combustion chamber tops: Material

Steel

Tensile strength 28/32 tons/in²

Depth and thickness of girder

Size

8 1/8" x 1 1/2"

Length as per Rule

30.4"

Distance apart

8 1/4"

No. and pitch of stays

Thickness

2, 9 1/2"

Working pressure by Rules

224 lb.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/in²

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

Pitch of stays to ditto: Sides

10 3/16" x 9 1/2"

Back

10" x 9 5/8"

Top

8 1/4" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts fitted

Working pressure by Rules

222 lb.

Front plate at bottom: Material

Steel

Tensile strength 26/30 tons/in²

Thickness

3 1/32"

Lower back plate: Material

Steel

Tensile strength 26/30 tons/in²

Thickness

15/16"

Pitch of stays at wide water space

14 1/2" x 9 5/8"

Are stays fitted with nuts or riveted over

nuts fitted

Working Pressure

238 lb.

Main stays: Material

Steel

Tensile strength 28/32 tons/in²

Pitch of stays

At body of stay, 2 7/8"

or

Over threads 3 1/4"

No. of threads per inch

6

Area supported by each stay 18 3/8" x 17"

Working pressure by Rules

230 lb.

Screw stays: Material

Steel

Tensile strength 26/30 tons/in²

Pitch of stays

At turned off part, 1 7/8"

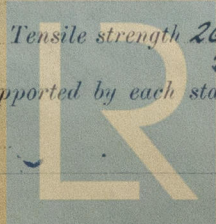
or

Over threads

No. of threads per inch

9

Area supported by each stay 10 3/16" x 9 5/8"

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Foundation
W21-0272

Working pressure by Rules 220 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2" ^{or} Over threads 2" ✓
No. of threads per inch 9 Area supported by each stay 11 1/16" x 9 5/8" Working pressure by Rules 220 lbs.
Tubes: Material S.D. Steel External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" Thickness 84.6 ^{1/2, 7/16, 3/8, 5/16, 1/4} No. of threads per inch 9
Pitch of tubes 4 7/16" x 4 3/8" Working pressure by Rules 220 lbs. Manhole compensation: Size of opening 16" x 12"
END Section of compensating ring — No. of rivets and diameter of rivet holes —
Outer row rivet pitch at ends — Depth of flange if manhole flanged 3 7/8" Steam Dome: Material —
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 — Working pressure by Rules — Thickness of crown — No. and diameter of rivets —
Internal radius of crown — Working pressure by Rules —
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 Smoke tube Manufacturers of Tubes Stewart & Lloyd, Ltd. Steel castings Fordingham Steel Co.
Number of elements 84 Material of tubes S.D. Steel Internal diameter and thickness of tubes 15 1/4", 2 1/2"
Material of headers Forged steel Tensile strength 26/30 tons/sq. in. Thickness 1 1/8" Can the superheater be shut the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
Area of each safety valve 141 sq. in. Are the safety valves fitted with easing gear yes Working pressure 220 lbs.
Rules 220 lbs. Pressure to which the safety valves are adjusted 225 lbs. Hydraulic test pressure 1500 lbs.
tubes 1500 lbs., castings 660 lbs. and after assembly in place 500 lbs. Are drain cocks or valves to free the superheater from water where necessary yes

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

THE FOREGOING IS A CORRECT DESCRIPTION,

J. H. Hulst
RESIDENT MANAGER.

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) —

Total No. of visits —

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

These boilers have been constructed under Special Survey in accordance with the approved plans, Secretary's letters & the requirements of the Rules. Workmanship and materials are good. In recommendation please see Rpt 4.

Survey Fee £ : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUE. 7. NOV 1939

Assigned

See Lth. J.E. 19960



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