

REPORT ON BOILERS.

No. 33799

11 OCT 1943

Received at London Office

Date of writing Report

19

When handed in at Local Office

8 OCT 1943

Port of

SUNDERLAND.

No. in Survey held at

Sunderland

Date, First Survey

Last Survey

Oct 4 1943

on the

WRENWOOD

(Number of Visits)

Gross

2847

Tons

Net 1588

Built at Sunderland

By whom built

S.P. Austin & Son, Ltd.

Yard No. 368

When built 1943

Engines made at

do.

By whom made

N. E. Mer. Eng. Co. (1938), Ltd

Engine No. 4027

When made 1943

Boilers made at

do.

By whom made

do.

Boiler No.

do.

When made do.

Nominal Horse Power

256

Owners

W. R. Francis & Co. Ltd.

Port belonging to

London

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

Manufacturers of Steel

Appleby Frodingham Steel Co. Ltd.

(Letter for Record)

S

Total Heating Surface of Boilers

3664 sq ft

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

2. Single Ended Cylindrical

Working Pressure

220 lb.

Tested by hydraulic pressure to

380 lb.

Date of test

26.6.43

No. of Certificate

4501

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

41.5 sq ft

No. and Description of safety valves to each boiler

2 direct Spring

Area of each set of valves per boiler

per Rule

9.94 sq in

Pressure to which they are adjusted

220 lb.

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

6'-6"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

3'-2 1/2"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

13'-3 1/16"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

1 9/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end P.R.L.

long, seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams } 1 1/32"

Pitch of rivets

4"

Percentage of strength of circ. end seams

plate

66.44

rivets

43.8

Percentage of strength of circ. intermediate seam

plate

—

rivets

—

Percentage of strength of longitudinal joint

plate

85.57

rivets

88.81

combined

88.91

Thickness of butt straps

outer

3 1/32"

inner

1 3/32"

No. and Description of Furnaces in each Boiler

3 Alighton - Stephen-gurley nicks

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-0 7/8"

Length of plain part

top

—

Thickness of plates

crown

9 1/16"

bottom

Description of longitudinal joint

weld

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

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 7/32"

Pitch of stays

18 1/2" x 16 7/8"

How are stays secured

double nuts

Tube plates: Material

front

back

Steel

Tensile strength

26/30

Thickness

3 1/32"

13 1/16"

Mean pitch of stay tubes in nests

10.33"

Pitch across wide water spaces

14 1/2" x 8 3/4"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

8" x 1 3/4"

Length as per Rule

31 1/32"

Distance apart

8 1/2"

No. and pitch of stays

in each

2 29 9 13/16"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

9 7/8" x 9 1/16"

Back

10 7/8" x 9"

Top

9 7/8" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts fitted

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

3 1/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

29/32"

Pitch of stays at wide water space

15" x 9"

Are stays fitted with nuts or riveted over

nuts fitted

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

or

2 7/8"

Over threads

3 1/4"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

or

1 7/8"

Over threads

No. of threads per inch

9

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Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2 1/8" or Over threads

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 3 1/4 Stay Thickness { 8. W. G. 7/16", 3/8", 5/16", 1/4" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/8" Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 22" x 1 5/16" No. of rivets and diameter of rivet holes 32 @ 1 3/32"

Outer row rivet pitch at ends 10" 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 — 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 — 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 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

North Eastern Marine Engineering Co., (1988) Ltd.
The foregoing is a correct description.
Resident Manager

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - - } Total No. of visits

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

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 and the requirements of the Rules. Workmanship & materials are good. In recommendation plan on Aft 4.

L.R. Home

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 J.E. machy rpt.



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