

Rpt. 5a.

REPORT ON BOILERS.

No. 98187

Date of writing Report

19

When handed in at Local Office

19 JAN 1940

Received at London Office

JAN 22 1940

NEWCASTLE-ON-TYNE

Port of

No. in
Reg. Book.

Survey held at Wallsend on Tyne

Date, First Survey

15.5.39

Last Survey

10-1-

1940

38284 on the

S.S. BEECHWOOD

(Number of Visits)

Gross

Tons

Net

Master

Built at Sunderland

By whom built

Sir J. Laing & Sons Ltd

Yard No. 727

When built

Engines made at

Wallsend

By whom made

N.E. Marine Eng Co (1938) Ltd

Engine No. 2940

When made 1940

Boilers made at

By whom made

Boiler No. 2940

When made 1940

Nominal Horse Power

Owners

J. S. Jacobs & Co Ltd

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record 3)

Total Heating Surface of Boilers 1235

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

1 Aux Sto.

Working Pressure 220

Tested by hydraulic pressure to

380

Date of test 30.10.39

No. of Certificate 831

Can each boiler be worked separately

Area of Firegrate in each Boiler

34 1/2

No. and Description of safety valves to each boiler

1 Double

Area of each set of valves per boiler

per Rule 6.6

as fitted 7.96

Pressure to which they are adjusted

225

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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

11'-9 23/32

Length 10'-6"

Shell plates: Material

S

Tensile strength

29-33

Thickness

1 3/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end DR

inter.

long. seams TR. DBS (5 rivets)

Diameter of rivet holes in

circ. seams 1 1/8"

long. seams

Pitch of rivets

3 1/2

8 3/8"

Percentage of strength of circ. end seams

plate 66

rivets 44

Percentage of strength of circ. intermediate seam

plate 85.8

rivets 86.2

Percentage of strength of longitudinal joint

plate 85.8

rivets 86.2

combined 88.7

Working pressure of shell by Rules

220

Thickness of butt straps

outer 7/8"

inner 1"

No. and Description of Furnaces in each Boiler

2 cf.

Material

S

Tensile strength

26-30

Smallest outside diameter

3'-5 1/2"

Length of plain part

top

bottom

Thickness of plates

crown 1/4"

bottom 1/4"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

226

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 1/8"

Pitch of stays 14 1/2 x 15 7/8"

How are stays secured

N.A.

Working pressure by Rules

223

Tube plates: Material

front S

back S

Tensile strength

26-30

Thickness

1 1/8"

13/16"

Mean pitch of stay tubes in nests

10.35

Pitch across wide water spaces

14 1/2 x 9

Working pressure

front 240

back 229

Girders to combustion chamber tops: Material

S

Tensile strength

28-32

Depth and thickness of girder

at centre 9 1/2 x 1 1/2

Length as per Rule

31.9"

Distance apart

11 3/4"

No. and pitch of stays

in each

3 @ 7 1/2"

Working pressure by Rules

224

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

2 5/8"

Back

2 5/8"

Top

2 5/8"

Bottom

2 5/8"

Pitch of stays to ditto: Sides

10" x 9 7/8"

Back

9 3/4" x 9 7/8"

Top

11 3/4" x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

222

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

1 1/8"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

1 1/8"

Pitch of stays at wide water space

14 1/2" x 9 7/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

309

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay,

2 3/8"

Over threads

No. of threads per inch

6

Area supported by each stay

218"

Working pressure by Rules

220

Screw stays: Material

S

Tensile strength

26-30

Diameter

At turned off part,

1 7/8"

Over threads

No. of threads per inch

9

Area supported by each stay

96.25"

Lloyd's Register
Foundation

Working pressure by Rules 221 Are the stays drilled at the outer ends 100 Margin stays: Diameter { At turned off part, or Over threads 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 111 ✓ Working pressure by Rules 222 ✓
Tubes: Material S.D. Steel External diameter { Plain 3 1/4" ✓ Thickness { 8 W 4 3/8 7/16 x 1/4 No. of threads per inch 9 ✓
Pitch of tubes 4 1/4 x 4 1/2 ✓ Working pressure by Rules 227 ✓ Manhole compensation: Size of opening in shell plate ✓
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 3/8 ✓ 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 stays ✓
Inner radius of crown ✓ Working pressure by Rules ✓
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 Internal diameter and thickness of tubes ✓
Number of elements ✓ Material of tubes ✓ 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 ✓ Working pressure as per Rules ✓
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 ✓

THE NORTH EASTERN MARINE ENGINEERING CO. (1933) LTD.

The foregoing is a correct description,
John Nall Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }
See Machinery Report Are the approved plans of boiler and superheater forwarded herewith (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. *"Aryell" Rpt 98087*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This Auxiliary Boiler has been made & installed under Special Survey in accordance with the approved Plan & the Requirements of the Rules.

The materials & workmanship are good & the boiler was found satisfactory under hydraulic test & under working conditions

Survey Fee ... £ *see Mch report* When applied for, 19
Travelling Expenses (if any) £ : When received, 19

R. C. Claffitt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *See Sld. J.E. 32788*