

REPORT ON BOILERS.

No. 60930

Received at London Office

APR 13 1939

Date of writing Report 11th April 1939

When handed in at Local Office 11:4: 1939

Port of

Glasgow

No. in Reg. Book. Survey held at

Glasgow 842

Date, First Survey

3rd Aug 1937

Last Survey

11th April 1939

on the Single Screw Motor Vessel

TBHIMA

(Number of Visits

28)

Gross

5279.82

Tons

Net 3097

Master

Built at

Glasgow

By whom built

C. Connell & Co. Ltd

Yard No. 425

When built 1939-4th

Engines made at

Glasgow

By whom made

Barclay Currie & Co. Ltd

Engine No. EW113

When made 1939-4th

Boilers made at

Glasgow

By whom made

Barclay Currie & Co. Ltd

Boiler No. EW113

When made

Nominal Horse Power

62 (Br. only)

Owners

James Nourse Ltd

Port belonging to

London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colville Ltd

Total Heating Surface of Boilers

1183 sq ft

Is forced draught fitted

(Letter for Record

S

Coal or Oil fired

Oil fired

No. and Description of Boilers

One - Single ended Oil fired & Exhaust Heat Bls

Working Pressure

120 lb

Tested by hydraulic pressure to

230 lb

Date of test

5-8-38

No. of Certificate

20222

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One - 2 1/2" Improved High Lift, Double

Area of each set of valves per boiler

per Rule 10.95 sq ft

Pressure to which they are adjusted

120 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

will clear

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

23"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

9'-9"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29/33 lb

Thickness

9/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

long. seams

D.R.D.B.S.

Diameter of rivet holes in

circ. seams

13/16"

long. seams

Pitch of rivets

2.978"

Percentage of strength of circ. end seams

plate 72.41

rivets 49.05

Percentage of strength of circ. intermediate seam

plate 85.0

rivets 78.05

Percentage of strength of longitudinal joint

plate 85.0

rivets 78.05

combined 89.61

Working pressure of shell by Rules

122 lb

Thickness of butt straps

outer 7/16"

inner 9/16"

No. and Description of Furnaces in each Boiler

One Right section

Material

Steel

Tensile strength

26/30 lb

Smallest outside diameter

34 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 3/8"

bottom 3/8"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

141 lb

End plates in steam space: Material

Steel

Tensile strength

26/30 lb

Thickness

3/32"

Pitch of stays 16" x 14" (max)

How are stays secured

Double Nuts

Working pressure by Rules

122 lb

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30 lb

Thickness

3/32"

1/16"

Mean pitch of stay tubes in nests

10.4175

Pitch across wide water spaces

13 3/8"

Working pressure

front 165 lb

back 153 lb

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 lb

Depth and thickness of girder

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

Length as per Rule

30 2 1/2"

Distance apart

9 1/2"

No. and pitch of stays

in each 2 @ 10 1/2"

Working pressure by Rules

124 lb

Combustion chamber plates: Material

Steel

Tensile strength

26/30 lb

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

10 1/2" x 9 1/2"

Back

9 1/2" x 10 1/2"

Top

9 1/2" x 10 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

120 lb

Front plate at bottom: Material

Steel

Tensile strength

26/30 lb

Thickness

3/32"

Lower back plate: Material

Steel

Tensile strength

26/30 lb

Thickness

3/32"

Pitch of stays at wide water space

13 3/8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

141 lb

Main stays: Material

Steel

Tensile strength

28/32 lb

Diameter

At body of stay, or over threads

2 1/8"

No. of threads per inch

6

Area supported by each stay

200

Working pressure by Rules

151 lb

Screw stays: Material

Steel

Tensile strength

26/30 lb

Diameter

At turned off part, or over threads

1 1/2"

No. of threads per inch

9

Area supported by each stay

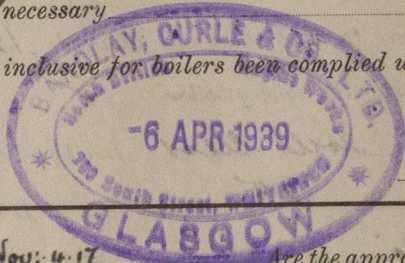
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Working pressure by Rules 125 lb Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 1 5/8" or Over threads 1 5/8"
No. of threads per inch 9 Area supported by each stay 120 sq in Working pressure by Rules 126 lb
Tubes: Material Welding External diameter { Plain 3" Stay 3" Thickness { 10 lb 7/8" 11 lb 1/2" No. of threads per inch 9
Pitch of tubes 4 1/8" x 4 1/4" 2 1/4" x 2 1/8" Working pressure by Rules 140 lb (3" tubes) Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 2 x 8 1/2" x 1 1/4" No. of rivets and diameter of rivet holes 44 @ 1 1/8"
Outer row rivet pitch at ends 5 1/2" Depth of flange if manhole flanged 8 1/2" x 9 1/6" 4 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
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 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 foregoing is a correct description,
FOR BARCLAY, CURLE & CO., LTD.
Alvander Macnault Manufacturer.

Dates of Survey { During progress of 1937 Aug 3 Oct: 29 Nov: 11 Are the approved plans of boiler and superheater forwarded herewith yes
work in shops - Dec: 9 29 30 (1938) Jan: 10 Feb: 23 Mar 31
while building { During erection on Apr: 15 26 May 3 18 25 June: 6 17 24 Total No. of visits 28
board vessel - July: 11 29 Aug: 25 15 16 23 Sep: 7 20 Apr: 11
(If not state date of approval.)

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.) This boiler has been built under Special Survey in accordance with the Society's Rules and approved plan
The materials and workmanship are good
The boiler has been satisfactorily fitted on board and the safety valves have been adjusted under steam to 120 lb/sq in

Survey Fee ... £ 6 : 4 :
Travelling Expenses (if any) £ : :
11/4/39

When applied for, 12 APR 1939
When received, 31 5 19 39

G. Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 APR 1939

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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