

REPORT ON BOILERS.

No. 79233

Received at London Office

Date of writing Report

192

When handed in at Local Office

14/5/1925

Port of Newcastle-on-Tyne

No. in Survey held at

Newcastle-on-Tyne

Date, First Survey

6th Aug 1924

Last Survey

1st May

1925

9297 on the

Steel Co.

INANDA

(Number of Visits)

Gross
Tons
Net

Master

Built at Newcastle

By whom built

Wm. Hunter & Co. Ltd. Yard No. 1259

When built 1925

Engines made at

Newcastle

By whom made

Wallsend Slipway & Eng. Co. Ltd.

Engine No.

856 When made 1925

Boilers made at

Newcastle

By whom made

Wallsend Slipway & Eng. Co. Ltd.

Boiler No.

856 When made 1925

Nominal Horse Power

606

Owners

T. J. Harrison

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Son Ltd.

(Letter for Record

✓

Total Heating Surface of Boilers

2194 sq. ft.

Is forced draught fitted

No.

Coal or Oil fired

Coal

No. and Description of Boilers

One Single-ended Cylindrical

Working Pressure

220 lbs.

Tested by hydraulic pressure to

380 lbs.

Date of test

16.1.25

No. of Certificate

9885

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

55 sq. ft.

No. and Description of safety valves to each boiler

Two Spring-loaded

Area of each set of valves per boiler

per Rule

11.67 sq. in.

Pressure to which they are adjusted

225 lbs.

Are they fitted with easing gear

Yes

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

None

Smallest distance between boilers or uptakes and bunkers or woodwork

Not under 12"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

24 1/2"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

189"

Length

10'6"

Shell plates: Material

Steel

Tensile strength

30-34 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

Double

Long. seams

Triple Riv. S.B.S.

Diameter of rivet holes in

circ. seams

1 5/8"

Pitch of rivets

4.64"

Percentage of strength of circ. end seams

plate

65

rivets

45.6

Percentage of strength of circ. intermediate seam

plate

84

Percentage of strength of longitudinal joint

plate

84

rivets

93

Working pressure of shell by Rules

223 lbs.

Thickness of butt straps

outer

1 5/8"

inner

1 5/8"

No. and Description of Furnaces in each Boiler

Three Marine

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

45 3/8"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/8"

bottom

Description of longitudinal joint

Welded

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

None

Working pressure of furnace by Rules

222 lbs.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/4"

Pitch of stays

18 x 16 3/4"

How are stays secured

Double Nut

Working pressure by Rules

229 lbs.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

1 3/8"

Lean pitch of stay tubes in nests

9 3/4"

Pitch across wide water spaces

14 1/4"

Working pressure

front

232 lbs.

back

222 lbs.

Orders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

centre

7 3/4-1 1/2"

Length as per Rule

30"

Distance apart

7 3/4"

No. and pitch of stays

each

Two

9 3/8"

Working pressure by Rules

223 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

1 1/8"

Back

1 1/8"

Top

1 1/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

7 3/4 x 9 3/8"

Back

8 3/4 x 8 1/2"

Top

7 3/4 x 9 3/8"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

222 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/8"

Pitch of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

224 lbs.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

Six

Area supported by each stay

301.5 sq. in.

Working pressure by Rules

222 lbs.

Screw stays: Material

Iron

Tensile strength

21 1/2 tons min.

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

Nine

Area supported by each stay

74.375 sq. in.

W32-0013

REPORT ON BOILERS

Working pressure by Rules 244 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 2" ✓
No. of threads per inch nine ✓ Area supported by each stay 100.625 sq" Working pressure by Rules 246 lb ✓
Tubes: Material low ✓ External diameter { Plain 3 1/2" ✓ Stay 3 1/2" ✓ Thickness { No. 7 W.G. ✓ 3/8" - 5/16" ✓ No. of threads per inch nine ✓
Pitch of tubes 4 3/8" ✓ Working pressure by Rules plain 26 lb stay 244 lb ✓ Manhole compensation: Size of opening in shell plate 19" x 15" ✓ Section of compensating ring 25 1/2" x 37 1/8" x 1 1/2" ✓ No. of rivets and diameter of rivet holes 36 - 1 5/8" ✓
Outer row rivet pitch at ends 10 5/8" 10 5/8" ✓ Depth of flange if manhole flanged 3 1/2" ✓ Steam Dome: Material low ✓
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 Nath. Easton Marine Eng. Co. Ltd. ✓ Manufacturers of { Tubes Wearless Steel Int. G. L.A. ✓ Steel castings _____
Number of elements 49 ✓ Material of tubes S. D. Steel ✓ Internal diameter and thickness of tubes 17 mm, 2 1/2 mm ✓
Material of headers Angled S.M. Steel ✓ Tensile strength 26-30 ton ✓ Thickness 1 1/4" ✓ Can the superheater be shut off and 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 3.14 sq" ✓ Are the safety valves fitted with easing gear Yes ✓ Working pressure as per Rules 220 lbs ✓ Pressure to which the safety valves are adjusted 230 lbs ✓ Hydraulic test pressure: tubes 1500 lb ✓ Headers 660 lbs ✓ and after assembly in place 440 lbs ✓ Are drain cocks or valves fitted to free the superheater from water where necessary Yes ✓
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes ✓

FOR THE WATTS & SLIPPER
The foregoing is a correct description,
A. Lamb Manufacturer.

Dates of Survey { During progress of work in shops - - } See Inchy Rpt. 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 _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This Boiler has been constructed under special survey and in accordance with the approved plans. The materials and workmanship are sound and good. The boiler was satisfactorily subjected to a hydraulic pressure test & efficiently fastened on board. The main and superheater safety valves were adjusted under steam. In my opinion the vessel is eligible for notation - I-L.M.C. 4.15 C.L.

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

R. Lee Anness
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 29 MAY 1925

Assigned _____