

REPORT ON BOILERS.

No. 34989

Date of writing Report

19

When handed in at Local Office 18th October 1948

Received at London Office

27 OCT 1948

Port of

Sunderland.

No. in Survey held at

Sunderland.

Date, First Survey

see Rpt 4

Last Survey

19

on the

"OTTO BANCK"

(Number of Visits)

Gross 2325
Tons Net 1168

Built at

Sunderland

By whom built

Shurt Bros Ld

Yard No. 501

When built

1948.

Engines made at

Sunderland

By whom made

G. Clark (1938) Ld

Engine No. 1451

When made

1948.

Boilers made at

Sunderland

By whom made

G. Clark (1938) Ld

Boiler No. 1451

When made

1948.

nominal Horse Power

MN. 413.

Owner

Otto Bancks Red. A/S.

Port belonging to

Helsingborg.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Leafrilles Ld

Total Heating Surface of Boilers

5304 sq ft + 994 sq ft (2nd)

Is forced draught fitted

Yes.

(Letter for Record

S.

No. and Description of Boilers

Two Single Ended multitubular return turn marine

Coal or Oil fired

Oil

Tested by hydraulic pressure to

380 lb/sq

Date of test

19/8/48

No. of Certificate

4406

Working Pressure

220 lb/sq

Area of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler

4.0550

Pressure to which they are adjusted

220 lb/sq

Can each boiler be worked separately

Yes.

Area of each set of valves per boiler

per Rule

4.940

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

1'-6"

Is oil fuel carried in the double bottom under boilers

Yes.

Smallest distance between shell of boiler and tank top plating

2'-1"

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

15'-6"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/33 tons/sq

Thickness

1 1/2"

Are the shell plates welded or flanged

No.

T. 17/16

Description of riveting: circ. seams

and

D.R. Lap.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

F. 3 5/16

E. 4 1/4"

Percentage of strength of circ. end seams

plate

F. 63.6

B. 64.8

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.36

85.2

combined

84.6.

Thickness of butt straps

outer 1 5/32

inner 1 9/32

No. and Description of Furnaces in each Boiler

Three Corrugated (height)

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-8 5/8"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/16"

Description of longitudinal joint

Welded.

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

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 1/2"

Pitch of stays

24" x 19 1/2"

How are stays secured

Double nuts.

End plates: Material

front

back

Steel

Tensile strength

26/30

Thickness

15/16"

1/8"

Can pitch of stay tubes in nests

10 1/2" x 6 3/4"

Pitch across wide water spaces

13 1/4"

Orders to combustion chamber tops: Material

Steel

Tensile strength

29/32

Depth and thickness of girder

Centre

11 5/8" x 1" (2)

Length as per Rule

3'-10 1/2"

Distance apart

8 3/4"

No. and pitch of stays

Each

3 @ 11 1/8"

Combustion chamber plates: Material

Steel

Thickness: Sides

13/16"

Back

25/32"

Top

13/16"

Bottom

1/8"

Check of stays to ditto: Sides

9 3/8" x 11 1/8"

Back

10 1/8" x 9 5/8"

Top

11 1/8" x 9"

Are stays fitted with nuts or riveted over

End plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

1"

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

1"

Check of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

Welded both ends.

Shipping stays: Material

Steel

Tensile strength

29/32

At body of stay,

3 1/4"

3 3/8"

Over threads

3 5/8"

3 3/4"

No. of threads per inch

6

At turned off part,

1 3/4"

Tensile strength

26/30.

No. of threads per inch

-



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Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 2" or 2 1/4" Over threads 2" 2 1/4"

No. of threads per inch Between Chambers 9. ✓ Back stays lugged bars. ✓

Tubes: Material S.D. Steel External diameter { Plain 2 1/4" Stay 2 1/4" Thickness { 8 LB. 5/16 3/8 1/2 5/8 3/4 No. of threads per inch 9.

Pitch of tubes 3 1/2" x 3 3/8" Manhole compensation: Size of opening in No. of rivets and diameter of rivet holes -

shell plate (In End 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 4 1/4" ✓ 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 - Thickness of crown - No. and diameter of rivets -

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 N.E.M. Chambers. Manufacturers of { Tubes Tubes L. 2 Steel forgings headers Tubes L. 2 Steel castings -

Number of elements 24. Material of tubes S.D. Steel Internal diameter and thickness of tubes 1.148" x 4 LB.

Material of headers S.D. Steel Tensile strength 26/30 Thickness 1" Can the superheater be shut off Yes.

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. in. ✓ Are the safety valves fitted with easing gear Yes. ✓

Pressure to which the safety valves are adjusted 220 lbs/sq. in. ✓ Hydraulic test pressure 440 lbs/sq. in. ✓

tubes 1500 lbs/sq. in. ✓ forgings and castings 660 lbs/sq. in. ✓ and after assembly in place 440 lbs/sq. in. ✓ Are drain cocks Yes. ✓

valves fitted 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,
George Henry Jones Ltd. R. J. Sawyer Manufacturer

Dates of Survey { During progress of work in shops - - - See Rpt 4 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Retained for Side Vessel.

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 & the rules of the Society. The materials & workmanship are good. On Completion they have been tested by hydraulic pressure of 380 lbs/sq. in. & found tight & sound at that pressure. They have been securely fixed on board the vessel, fitted to burn oil fuel (F.P. above 150°F), Safety valves of boilers & Superheaters adjusted under steam to working pressure as above stated. Section 20 of the rules has been complied with.

In recommendation please see Mech. Rpt.

Survey Fee ... £ See Mech. Rpt. When applied for, 19

Travelling Expenses (if any) £ Rpt. When received, 19

J. H. Hasw.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute 191. 19 NOV 1948

Assigned See minute on

J. H. Hasw.



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