

REPORT ON BOILERS.

No. 30467

Date of writing Report

192

When handed in at Local Office

27 SEP. 1930

Port of SUNDERLAND.

Received at London Office

29 SEP 1930

No. in
Reg. Book

Survey held at

SUNDERLAND.

Date First Survey

Last Survey

Sep. 25 1930

on the

S.S. "SEA VENTURE".

(Number of Visits

Gross

2327

Net

1375

Master

Built at SUNDERLAND.

By whom built SWAN HUNTER, W.R. & CO. LD.

Yard No. 1451

When built 1930

Engines made at

SUNDERLAND

By whom made

N.E. MARINE ENG. CO. LD.

Engine No. 2763

When made 1930

Boilers made at

SUNDERLAND.

By whom made

N.E. MARINE ENG. CO. LD.

Boiler No. 2763

When made 1930

Nominal Horse Power

206

Owners

DOVER NAVIGATION CO. LD.

Port belonging to

DOVER.

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

Manufacturers of Steel STEEL CO. OF SCOTLAND.

(Letter for Record (S).)

Total Heating Surface of Boilers

3410 sq. ft.

Is forced draught fitted

No.

Coal or Oil fired

COAL

No. and Description of Boilers

2 S.B.

Working Pressure 180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

20-8-30

No. of Certificate

4116

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

38 $\frac{3}{4}$ sq. ft.

No. and Description of safety valves to each boiler

2 Spring loaded.

Area of each set of valves per boiler

per Rule

10.93 sq. ft.

as fitted

11.88 sq. ft.

Pressure to which they are adjusted

185 lbs.

Are they fitted with easing gear

Yes.

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

Yes.

Smallest distance between boilers or uptakes and bunkers

16"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

24"

Is the bottom of the boiler insulated

No.

Largest internal dia. of boilers

13'-0 $\frac{29}{32}$ "

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/33 Tms.

Thickness

1 $\frac{3}{4}$ "

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

D. R. LAP.

long. seams

T.R.D.B. STRAP.

Diameter of rivet holes in

circ. seams

1 $\frac{1}{8}$ "

long. seams

1 $\frac{1}{8}$ "

Pitch of rivets

3 $\frac{1}{2}$ "

Percentage of strength of circ. end seams

plate

68

rivets

43

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Percentage of strength of longitudinal joint

plate

85.7

rivets

89.8

combined

89.4

Working pressure of shell by Rules

181.3 lbs.

Thickness of butt straps

outer

13 $\frac{1}{16}$ "

inner

13 $\frac{1}{16}$ "

No. and Description of Furnaces in each Boiler

2 CORRUGATED, DAUGHTON SECTION.

Material

Steel

Tensile strength

26/30 Tms.

Smallest outside diameter

3'-8 $\frac{3}{8}$ "

Length of plain part

top

-

bottom

-

Thickness of plates

crown

9 $\frac{1}{16}$ "

bottom

-

Description of longitudinal joint

WELD.

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

Working pressure of furnace by Rules

183.6 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tms.

Thickness

1 $\frac{1}{4}$ "

Pitch of stays

22 $\frac{1}{2}$ " x 17 $\frac{3}{4}$ "

How are stays secured

Double Nut.

Working pressure by Rules

180.2 lbs.

Tube plates: Material

front

Steel

back

-

Tensile strength

26/30 Tms.

Thickness

25 $\frac{3}{32}$ "

Mean pitch of stay tubes in nests

10.9

Pitch across wide water spaces

14 $\frac{1}{2}$ " x 9"

Working pressure

front

192 lbs.

back

183 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

26/30 Tms.

Depth and thickness of girder

at centre

8" x 1 $\frac{7}{8}$ "

Length as per Rule

31 $\frac{1}{2}$ "

Distance apart

11"

No. and pitch of stays

in each

2 at 9 $\frac{3}{4}$ "

Working pressure by Rules

188 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tms.

Thickness: Sides

25 $\frac{3}{32}$ "

Back

23 $\frac{3}{32}$ "

Top

25 $\frac{3}{32}$ "

Bottom

25 $\frac{3}{32}$ "

Pitch of stays to ditto: Sides

12" x 9 $\frac{3}{4}$ "

Back

10 $\frac{3}{16}$ " x 9 $\frac{3}{16}$ "

Top

11" x 9 $\frac{3}{4}$ "

Are stays fitted with nuts or riveted over

Nut.

Working pressure by Rules

180 lbs. (last)

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tms.

Thickness

7 $\frac{1}{8}$ "

Lower back plate: Material

Steel

Tensile strength

26/30 Tms.

Thickness

29 $\frac{3}{32}$ "

Pitch of stays at wide water space

14 $\frac{1}{2}$ " x 10 $\frac{3}{16}$ "

Are stays fitted with nuts or riveted over

Nut.

Working Pressure

216 lbs.

Main stays: Material

Steel

Tensile strength

25/32 Tms.

Diameter

At body of stay,

2 $\frac{3}{4}$ "

or

3 $\frac{1}{4}$ "

No. of threads per inch

6.

Area supported by each stay

395 sq. in.

Working pressure by Rules

181.8 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tms.

Diameter

At turned off part,

1 $\frac{3}{4}$ "

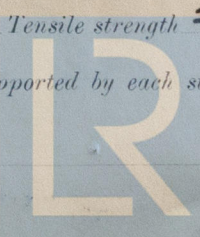
or

1 $\frac{1}{4}$ "

No. of threads per inch

9

Area supported by each stay

99 sq. in. 117 sq. in. Lloyd's Register
Foundation

Working pressure by Rules 182 1/2, 180 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 2" or Over threads 2"

No. of threads per inch 9 Area supported by each stay 129.75 sq" Working pressure by Rules 190 lbs.

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

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 230, 205, 202 lbs. Manhole compensation: Size of opening in end plate 2.2"

Section of compensating ring ✓ No. of rivets and diameter of rivet holes 2.2"

Outer row rivet pitch at ends ✓ 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 ✓ 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 N.E.M. Smoke tube Type (approved). Manufacturers of Tubes Weldless S. Tube Co. Steel Frodingham Iron Co.

Number of elements 64 Material of tubes S.D. Steel Internal diameter and thickness of tubes 17 1/4" x 2.5 1/4"

Material of headers Mild Steel Tensile strength 26/30 Tm. Thickness 3/4" 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 188 lbs. Hydraulic test pressure: tubes ✓ castings ✓ and after assembly in place 400 lbs. Are drain cocks or 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.

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.
The foregoing is a correct description,
John Neill Manufacturer.

Dates of Survey { During progress of work in shops - - } Please see Mech. 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.) The Boilers of this Vessel have been built under Special Survey. The materials & workmanship are good. On completion they were fitted in the vessel and examined under steam. The Safety Valves were adjusted under steam and accumulation test carried out.

For notation see Machinery Report.

Survey Fee 192 When applied for, 192

Travelling Expenses (if any) 192 When received, 192

Engineer S. Scott
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 3 OCT 1930

Assigned See F.E. Rpt.

© 2020 Lloyd's Register Foundation