

REPORT ON BOILERS.

No. 16193.

Received at London Office

TUE JUN 17 1924

to of writing Report

192

When handed in at Local Office

192

Port of

WEST HARTLEPOOL

No. in Survey held at West Hartlepool

Date, First Survey

23 July 1923

Last Survey

12 June 1924

Book.

(Number of Visits

76.)

Gross 2013.6

1003 on the

S S SØBORG

Tons

Net 1196.4

ster

Built at

West Hartlepool

By whom built

Wm Gray & Co Ltd

Yard No.

956

When built

1924

gines made at

West Hartlepool

By whom made

Central Marine Engine Works

Engine No.

956

When made

1924

ilers made at

ditto

By whom made

ditto

Boiler No.

956

When made

1924

iminal Horse Power

194

Owners

C. H. Hansen

Port belonging to

Copenhagen

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

John Spencer & Sons Ltd

(Letter for Record

S)

total Heating Surface of Boilers

3134 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

2, single ended 2SB

Working Pressure

180 lbs

tested by hydraulic pressure to

320 lbs

Date of test

23.1.24

No. of Certificate

3631

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

396 sq. ft.

No. and Description of safety valves to each boiler

2 direct spring

Area of each set of valves per boiler

per Rule 10"

as fitted 14.14"

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 or woodwork

1'-6"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

yes

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

13'-0"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

26.5/30

Thickness

1 1/8"

Are the shell plates welded or flanged

yes

Description of riveting: circ. seams

end DR Lap

inter.

yes

Long. seams

J.R. D.B.S.

Diameter of rivet holes in

circ. seams 1 1/8"

long. seams 1 1/8"

Pitch of rivets

3 3/4"

8 1/8"

Percentage of strength of circ. end seams

plate rivets

Shell flanged.

Percentage of strength of circ. intermediate seam

plate rivets

yes

Percentage of strength of longitudinal joint

plate rivets combined

86.1 88.5 90.0

Working pressure of shell by Rules

180 lbs

Thickness of butt straps

outer 5/8"

inner 1"

No. and Description of Furnaces in each Boiler

2 Deightons

Material

Steel

Tensile strength

26/30

Smallest outside diameter

43"

Length of plain part

top bottom

Thickness of plates

crown 9/16"

bottom 1/16"

Description of longitudinal joint

welded

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

yes

Working pressure of furnace by Rules

189 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 3/32"

Pitch of stays

17" x 17 1/2"

How are stays secured

Dr nuts

Working pressure by Rules

186 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

15/16"

16 3/16"

Mean pitch of stay tubes in nests

13 1/2" x 9"

Pitch across wide water spaces

14"

Working pressure

front 218 lbs

back 187 lbs

Orders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

Centre

7 1/2" x 1 3/4"

Length as per Rule

2'-5 1/2"

Distance apart

10"

No. and pitch of stays

each

2 9"

Working pressure by Rules

192 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

11/16"

Back

11/16"

Top

11/16"

Bottom

11/16"

Pitch of stays to ditto: Sides

9" x 9 3/4"

Back

9" x 9 3/4"

Top

9" x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

183 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

226 lbs

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, 2 3/4"

Over threads

No. of threads per inch

6

Area supported by each stay

17" x 18"

Working pressure by Rules

180 lbs

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, 1 5/8"

Over threads

No. of threads per inch

9

Area supported by each stay

9" x 9 1/4"

Working pressure by Rules 183 lb Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8" ✓
 No. of threads per inch 9 ✓ Area supported by each stay 11 1/8 x 9 ✓ Working pressure by Rules 211 lb ✓
 Tubes: Material Iron ✓ External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 9 SWG 5/16" No. of threads per inch 9 ✓
 Pitch of tubes 4 1/2" x 4 1/2" ✓ Working pressure by Rules 180 Manhole compensation: Size of opening in end ✓
 shell plate 12" x 16" ✓ 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 1/2" ✓ Steam Dome: Material None ✓
 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 None ✓ Manufacturers of { Tubes 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, 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 23 inclusive for boilers been complied with yes ✓ FOR THE CENTRAL MARINE ENGINE WORKS,
 The foregoing is a correct description, John H. Gorman Manufacturer.
See attached report on Machinery

Dates of Survey { During progress of work in shops - - - } See attached report on Machinery
 while building { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes ✓
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been built under Special Survey and satisfactorily withstood the hydraulic test. The materials and workmanship are good

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

R.D. Shilston
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 20 JUN 1924

Assigned



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 Foundation