

REPORT ON BOILERS.

No. 10438.

Received at London Office

JAN 18 1938

Date of writing Report 13th January 1938 When handed in at Local Office

192

Port of Copenhagen

No. in
Reg. Book.

Survey held at

Copenhagen

Date, First Survey

6th July

Last Survey

29th December 1937

(Number of Visits

18

Gross

5415

Tons

Net

3260

38482 on the Single Sc. Motor Vessel "HÖEGH SILVERSTAR."

Master

Built at

Copenhagen

By whom built

Apt. Burmeister & Wain

Harden No. 631

When built

1938

Engines made at

Copenhagen

By whom made

Apt. Burmeister & Wain

Engine No.

2694

When made

1938

DONKEY

Boilers made at

Copenhagen

By whom made

Apt. Burmeister & Wain

DONKEY

1942

Boiler No.

1943

When made

1938

Nominal Horse Power

Owners

Skibs A/S NORUEGA, Skibs A/S ABACO

Port belonging to

Oslo

MULTITUBULAR BOILERS MAIN, AUXILIARY OR DONKEY

Plates: The Steel Co of Scotland Ltd. Tubes: Dightons Patent Tubes & Tubes Co Ltd, Leeds
Stays: The Scottish Iron & Steel Co Ltd. Tubes: The Newport & South Wales Tube Co Ltd
Manufacturers of Steel Rivets: Dundee Iron Works

(Letter for Record)

Total Heating Surface of Boilers

80.92 m²

Is forced draught fitted

yes

Coal or Oil fired

oil fired

No. and Description of Boilers

one cylindrical horizontal

Working Pressure

6.32 kg/cm²

Tested by hydraulic pressure to

264 kg/cm²

Date of test

31.8.37

No. of Certificate

614

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 off direct spring loaded & 76 mm diam

Area of each set of valves per boiler

per Rule

6700 m²

as fitted

9000 m²

Pressure to which they are adjusted

90 lbs

Are they fitted with easing gear

yes

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

no main boiler

Smallest distance between boilers or uptakes and

DEEPTANKS

650 mm

Is oil fuel carried in the

DEEPTANK

double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

550 mm

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

2900 mm

Length

2986 mm

Shell plates: Material

S. Ct. Steel

Tensile strength

32.1 t/0"

Thickness

15 mm

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

single

long. seams

double riveted lap joint

Diameter of rivet holes in

circ. seams

23 mm

long. seams

23 mm

Pitch of rivets

55 mm

Percentage of strength of circ. end seams

plate

58.2

rivets

Percentage of strength of circ. intermediate seam

plate

55

rivets

Percentage of strength of longitudinal joint

plate

66.4

rivets

combined

Working pressure of shell by Rules

6.65 kg/cm²

Thickness of butt straps

outer

inner

No. and Description of Furnaces in each Boiler

2 off corrugated, Dightons section

Material

S. Ct. Steel

Tensile strength

27.8 t/0"

Smallest outside diameter

820 mm

Length of plain part

top

bottom

Thickness of plates

crown

10 mm

Description of longitudinal joint

welded

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

yes

Working pressure of furnace by Rules

12.1 kg/cm²

End plates in steam space: Material

S. Ct. Steel

Tensile strength

29.1-29.6 t/0"

Thickness

19 mm

Pitch of stays

D=584 mm

How are stays secured

Secured in both plates, nuts inside & outside

Working pressure by Rules

7.05 kg/cm²

Tube plates: Material

front

S. Ct. Steel

Tensile strength

29.1 t/0"

Thickness

19 mm

back

19 mm

Mean pitch of stay tubes in nests

282 mm

Pitch across wide water spaces

350 mm & 180 mm

Working pressure

front

8 kg/cm²

back

Girders to combustion chamber tops: Material

S. Ct. Steel

Tensile strength

30.6 t/0"

Depth and thickness of girder

at centre

2 x 150 x 15 mm

Length as per Rule

630 mm

Distance apart

220 mm

No. and pitch of stays

in each

2 of 200 mm

Working pressure by Rules

10.4 kg/cm²

Combustion chamber plates: Material

S. Ct. Steel

Tensile strength

28.5 t/0"

Thickness: Sides

15 mm

Back

15 mm

Top

15 mm

Bottom

15 mm

Pitch of stays to ditto: Sides

200 x 190 mm

Back

207 x 198 mm

Top

200 x 220 mm

Are stays fitted with nuts or riveted over

Working pressure by Rules

8.86 kg/cm²

Front plate at bottom: Material

S. Ct. Steel

Tensile strength

29.6 t/0"

Thickness

19 mm

Lower back plate: Material

S. Ct. Steel

Tensile strength

29.6 t/0"

Thickness

19 mm

Pitch of stays at wide water space

D=468 mm

Are stays fitted with nuts or riveted over

nuts inside & outside

Working Pressure

9.5 kg/cm²

Main stays: Material

S. Ct. Steel

Tensile strength

28.5 t/0"

Diameter

At body of stay,

2"

or

Over threads

No. of threads per inch

11

Area supported by each stay

abt. 175,000 m²

Working pressure by Rules

6.8 kg/cm²

Screw stays: Material

S. Ct. Steel

Tensile strength

27.3 & 28.9 t/0"

Diameter

At turned off part,

1 1/8"

or

Over threads

No. of threads per inch

11

Area supported by each stay

abt. 41,000 m²

Working pressure by Rules 6.7 kg/cm^2 Are the stays drilled at the outer ends no Margin stays: Diameter $\frac{1}{8}$ "
 No. of threads per inch 11 Area supported by each stay abt. 5/500 cm^2 Working pressure by Rules 8.95 kg/cm^2
 Tubes: Material S. A. Steel External diameter $\frac{2\frac{1}{2}}{4}$ " Thickness $\frac{5}{16}$ " No. of threads per inch 11
 Pitch of tubes 90 x 92 mm Working pressure by Rules 12.5 kg/cm^2 Manhole compensation: Size of opening in
 shell plate 405 x 305 mm Section of compensating ring flanged No. of rivets and diameter of rivet holes 44 of 22 mm dia.
 Outer row rivet pitch at ends 114 mm Depth of flange if manhole flanged 85 mm Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 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
 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

The foregoing is a description,
 BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI
 Manufacturer.

Dates of Survey { During progress of work in shops - - } 6/7-7/7-9/7-14/7-16/7-31/7-11/8-23/8-27/8-31/8-37 Are the approved plans of boiler and superheater forwarded herewith yes
 while building { During erection on board vessel - - } 4/2-13/2-14/2-18/2-29/2-24/2-28/2-29/2-37 Total No. of visits 18
 (If not state date of approval.)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above described boiler has been constructed and fitted under special survey in accordance with the Rules the approved plan and the requirements contained in the Secretary's letter E dated 9/2-37
The material used in construction has been tested as required by the Rules and the workmanship is good.

Survey Fee ... £ 130.02
 Travelling Expenses (if any) £ -

When applied for, 17.1.1938
 When received, 9/3.1938

P. Langhild Jensen
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 11 FEB 1938

Assigned

See Cpn 78. 10438



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 Foundation