

REPORT ON BOILERS.

No. 9683.

Received at London Office

17 AUG 1935

Date of writing Report 7th August 1935 When handed in at Local Office 16/8

1935 Port of Copenhagen

No. in
Reg. Book.

Survey held at Copenhagen & Skarshov

Date, First Survey 21st JanuaryLast Survey 1st August 1935.

37501 on the Single Screw Vessel "CANADA"

(Number of Visits 10.)

Gross 1107.90

Net 6586.46

Built at Skarshov

By whom built L. Skarshov Skibsværft

Yard No. 62

When built 1935

Engines made at Copenhagen

By whom made Asst. Bunneister & Hainis

Engine No. 2298

When made 1935

Boilers made at Copenhagen

By whom made F. Smith, Mygind & Skillemeier

Boiler No. 671

When made 1935

Owners F. S. Del. Østasiatisk Kompagni

Port belonging to Copenhagen.

VERTICAL DONKEY BOILER.

Made at Copenhagen By whom made F. Smith, Mygind & Skillemeier

Boiler No. 671

When made 1935

Where fixed Skarshov

Manufacturers of Steel Plates: Applegate, Frothingham Steel Co. Ltd., Messrs. Colville & Co. Limited, Lane Bros Copenhagen

Total Heating Surface of Boiler Oil fired: 31.2 m², gas fired 102.2 m² Is forced draught fitted yes

Coal or Oil fired oil & exhaust gas

No. and Description of Boilers 1 of cross tube multitubular

Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs./sq. in.

Date of test 3.4.35

No. of Certificate 566

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler 2 of direct spring loaded, 2 1/2" diam

Area of each set of valves per boiler

approx 9.8 sq. ft.

as fitted 9.8 sq. ft.

Pressure to which they are adjusted 100 lbs

Are they fitted with easing gear yes

State whether steam from main boilers can enter the donkey boiler no main boiler

Smallest distance between boiler or uptake and bunkers

or woodwork no woodwork Is oil fuel carried in the double bottom under boiler no

Smallest distance between base of boiler and tank top plating

the base of the boiler insulated yes

Largest internal dia. of boiler 2500 mm Height 5586 mm

Shell plates: Material S. M. Steel

Tensile strength 28.1-28.7 tons/sq. in.

Thickness 14 mm - 17 mm

Are the shell plates welded or flanged no

Description of riveting: circ. seams

upper and lower lap single riveted

lower end lap double riveted

long. seams - single riveted

Dia. of rivet holes in

circ. seams 23 mm

Pitch of rivets

single 50 mm

double 98-102 mm

Percentage of strength of circ. seams

plate 59%

rivets 39%

of Longitudinal joint

plate 78%

rivets 93%

combined 89.3%

Working pressure of shell by rules 126 lbs

Thickness of butt straps

outer 15 mm

inner 15 mm

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat spherical

Material S. M. Steel

Tensile strength 29.1 tons/sq. in.

Thickness 20 mm

Radius 2286 mm

Working pressure by rules 116 lbs.

Description of Furnace: Plain, spherical, or dished crown spherical

Material S. M. Steel

Tensile strength 29.4 tons/sq. in.

Thickness 18 mm

External diameter

top 1860 mm

bottom 2340 mm

Length as per rule 700 mm

Working pressure by rules 114 lbs.

Pitch of support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Radius of spherical or dished furnace crown 1001 mm

Working pressure by rule 153 lbs

Thickness of Stay Ring

51 mm

Diameter as per rule

D 2500 mm

d 2398 mm

Working pressure by rule 100 lbs

Combustion Chamber: Material

Tensile strength

Thickness of top plate

Radius if dished

Working pressure by rule

Thickness of back plate

Diameter if circular

Length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Tube Plates: Material

front Solid steel

back

Tensile strength

28.8 tons/sq. in.

Thickness

20 mm

Mean pitch of stay tubes in nests 284.5 mm

If comprising shell, Dia. as per rule

front 2460 mm

Pitch in outer vertical rows

230 mm

Dia. of tube holes

FRONT

stay 89 mm

plain 89 mm

BACK

stay 92 mm

plain 95 mm

Is each alternate tube in outer vertical rows a stay tube all stay tubes

Working pressure by rules

front 138 lbs

back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Distance apart

No. and pitch of stays in each

Working pressure by rule

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Lloyd's Register
Foundation

W420-0048

Crown stays: Material - Tensile strength - Diameter { at body of stay, - or over threads -

No. of threads per inch - Area supported by each stay - Working pressure by rules -

Screw stays: Material - Tensile strength - Diameter { at turned off part, - or over threads - No. of threads per inch -

Area supported by each stay - Working pressure by rules - Are the stays drilled at the outer ends -

Tubes: Material S. Ct. Steel External diameter { plain 89 mm stay 89 mm Thickness { 3 1/4 mm 6 mm

No. of threads per inch 11 Pitch of tubes 230 x 118 Working pressure by rules 120 lbs

Manhole Compensation: Size of opening in shell plate 320 mm x 420 mm Section of compensating ring 150 mm x 18 mm x 2 flat No. of rivets and diameter of rivet holes 40 of 20.5 mm Outer row rivet pitch at ends 100 mm Depth of flange if manhole flanged -

Uptake: External diameter - Thickness of uptake plate -

Cross Tubes: No. - External diameters { - Thickness of plates -

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

The foregoing is a correct description,
 13/8-35 **SMITH, MYBIND & HÖTTEMEIER** Manufacturer.
Phumckin

Dates of Survey { During progress of work in shops - 2/1 - 1/2 - 27/2 - 13/3 - 19/3 - 3/4 Is the approved plan of boiler forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - 2/7 - 13/7 - 31/7 - 1/8 1935 Total No. of visits 10

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The above donkey boiler has been constructed and fitted onboard the vessel under special survey in accordance with the Rules, the approved plans, and the requirements contained in the Secretary's letter E dated 2nd January 1935.*

The material used in construction has been tested as required by the Rules, either by us or as per certificates produced and the workmanship is of good description throughout.

A "Golia" feed pump, duplex, 135 x 90 x 125 mm and a steam injector has been fitted for the boiler.

Recommend the vessel's machinery to have notation in the Register Book of DB-100 lbs.

Survey Fee ...	<u>£ 150.00</u> :	When applied for, <u>1/4</u> -	19 <u>35</u>
Travelling Expenses (if any) <u>£ 8.00</u> :		When received, <u>13/6</u>	19 <u>35</u>

Committee's Minute
 Assigned See minute on F.B. by Rpt.

FRI. 23 AUG 1935

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

