

REPORT ON BOILERS.

No. 16800

Received at London Office

26 APR 1926

Date of writing Report 20th April 1926

When handed in at Local Office

19

Port of

HAMBURG

No. in
Reg. Book.

Survey held at

TIEL

Date, First Survey 10th March 1925Last Survey 14th April 1926

38524

on the

Steel Twin S.C. Motor V. "CANADOLITE"

(Number of Visits 9)

Gross 11309
Tons Net 6668

Built at

TIEL

By whom built

FRIED. KRUPP-GERMANIA WERFT. Yard No. 481

When built 1926

Engines made at

TIEL

By whom made

FRIED. KRUPP-GERMANIA WERFT. Engine No. 1987

When made 1926

Boilers made at

TIEL

By whom made

FRIED. KRUPP-GERMANIA WERFT. Boiler No. 3652

When made 1926

Owners

IMPERIAL OIL LD.

Port belonging to

TORONTO

VERTICAL DONKEY BOILER.

Made at

Tiel

By whom made

Fried. Krupp Germania Werft. Boiler No. 3652

When made 1926

Where fixed ^{closed compartment} Eng. room. Ho. forward.

Manufacturers of Steel

Hammann, Kohnen & Co. Düsseldorf

Total Heating Surface of Boiler

26 sq. m.

Is forced draught fitted

yes

Coal or Oil fired

oil fired

No. and Description of Boilers

Vertical Donkey Boiler for Heating Purposes.

Working pressure

71 lb.

Tested by hydraulic pressure to

142 lb.

Date of test

15.6.25.

No. of Certificate 386.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 spring loaded

Area of each set of valves per boiler

per rule 2690 sq. in.

as fitted 3770 sq. in.

Pressure to which they are adjusted

71 lb.

Are they fitted with easing gear

yes

State whether steam from

W.T.D.

boilers can enter the donkey boiler

no, non return valve fitted

Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler

no

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

yes

Largest internal dia. of boiler

1350 mm.

Height 3573 mm.

Shell plates: Material

Steel

Tensile strength 44-50 kg/cm²

Thickness

11 mm.

Are the shell plates welded or flanged

flanged

Description of riveting: circ. seams

top: lap single

bottom: lap double

long. seams lap double riveted

Dia. of rivet holes in

circ. seams

top: 24 mm.

bottom: 23 mm.

Pitch of rivets

56 mm.

78 mm.

70 mm.

Percentage of strength of circ. seams

plate 60.6 %

rivets 55 %

72.6 %

of Longitudinal joint

plate 68.8 %

rivets 81 %

combined

Working pressure of shell by rules

8.3 kg/cm²

Thickness of butt straps

outer

inner

Shell Crown:

Whether complete hemisphere, dished partial spherical, or flat dished partial spherical

Material Steel

Tensile strength

41 kg/cm²

Thickness

14 mm.

Radius 1350 mm.

Working pressure by rules

8.58 kg/cm²

Description of Furnace:

Plain, spherical, or dished crown Plain with dished crown

Material Steel

Thickness

13 mm. crown

14 mm.

External diameter

top 1170 mm.

bottom 1190 mm.

Length as per rule

745 mm.

Tensile strength

41 kg/cm²

Working pressure by rules

2.62 kg/cm²

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

1100 mm.

Working pressure by rule

7.44 kg/cm²

Thickness of Ogee Ring

13 mm.

Diameter as per rule

D 1350 mm.

Working pressure by rule

6.96 kg/cm²

Combustion Chamber: Material

Steel

Tensile strength

41 kg/cm²

Thickness of top plate

14 mm.

Radius if dished

1100 mm.

Working pressure by rule

10.6 kg/cm²

Thickness of back plate

13 mm.

Diameter if circular

1074 mm.

Length as per rule

1240 mm.

Pitch of stays

182 x 320 mm.

Are stays fitted with nuts or riveted over

riveted over

Diameter of stays over thread

37.9 mm.

Working pressure of back plate by rules

7.66 kg/cm²

Tube Plates: Material

front Steel

back Steel

Tensile strength

41-47 kg/cm²

Thickness

18 mm.

Mean pitch of stay tubes in nests

270 mm.

If comprising shell, Dia. as per rule

front 1260 mm.

back

Pitch in outer vertical rows

270 mm.

Dia. of tube holes FRONT

stay 65.75 mm.

plain 65 mm.

BACK

stay 59.6 mm.

plain 63.5 mm.

Is each alternate tube in outer vertical rows a stay tube

no

Working pressure by rules

front 10.1 kg/cm²back 10.7 kg/cm²

Girders to combustion chamber tops: Material

Depth and thickness of girder at centre

Tensile strength

Length as per rule

Distance apart

No. and pitch of stays in each

Working pressure by rule

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Foundation

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 Seamless Mild Steel External diameter { plain 63.5 mm stay 60 mm Thickness { 3 mm 2 mm
No. of threads per inch 9 Pitch of tubes 90 mm Working pressure by rules 9 kg/cm²
Manhole Compensation: Size of opening in shell plate 300 x 400 mm Section of compensating ring No. of rivets and diameter
of rivet holes Outer row rivet pitch at ends Depth of flange if manhole flanged 85 mm
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,
FRIED. KRUPP
GERMANIAWERKE
Aktien-Gesellschaft
Manufacture

Dates of Survey { During progress of work in shops - 10/3 - 15/3 - 22/5 - 8/6 - 15/6/25
while building { During erection on board vessel - 12/3 - 23/3 - 24/3 - 14/4/26
Is the approved plan of boiler forwarded herewith (If not state date of approval.) Yes, Ref. 1637
Total No. of visits 9

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) Material & workmanship of this Donkey Boiler are of good quality. The materials used in the construction are made of iron recognized by the Committee and tested by the Society's Surveyors in accordance with the Rules. This Donkey Boiler has been made in accordance with the approved plan, the Secretary's letter and otherwise in conformity with the requirements of the Rules and was found to be tight and sound under steam in every respect and is eligible in my opinion for record "N. I. B-26"

Survey Fee ... £ 4 : 4 : When applied for, 27.5.26
Travelling Expenses (if any) £ : : When received, 14.5.26

Friedrich J. ...
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 30 APR 1926
Assigned See B. 8. 1. attached