

REPORT ON BOILERS.

No. 48639

Received at London Office 28 NOV 1928

Date of writing Report

192

When handed in at Local Office 23. 11. 1928

Port of

Glasgow.

No. in
Reg. Book.

Survey held at

Paisley.

Date, First Survey 29. 3. 28

Last Survey 22nd Nov. 1928

S.S. "KALAVATI"

(Number of Visits 43)

Gross 118 5/8

Net 480

Master

Built at

Paisley.

By whom built

Bow MacLellan & Co Ltd

Hull No. 479

When built 1928

Engines made at

Paisley

By whom made

Bow MacLellan & Co Ltd

Engine No. 3975

When made 1928

Boilers made at

Paisley

By whom made

Bow MacLellan & Co Ltd.

Boilers No. 1187-8

When made 1928

Nominal Horse Power

267.2

Owners

Bombay S. Nav. Co. Ltd

Port belonging to

Bombay

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

James Dunlop & Co Ltd, D. Colville Sons Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

4500 Sq. ft.

Is forced draught fitted

yes

Coal or Oil fired

Coal

No. and Description of Boilers

Two Single-Ended Return Tube Boilers.

Working Pressure 200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

27/7/28

No. of Certificate

17971

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

65.7 sq. ft.

No. and Description of safety valves to each boiler

One pair 3" Spring Loaded.

Area of each set of valves per boiler

per Rule 13.08 sq. ft.

as fitted 14.14 sq. ft.

Pressure to which they are adjusted

200 lbs.

Are they fitted with easing gear

yes

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

✓

Smallest distance between boilers or uptakes and bunkers or woodwork

well clear

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

12"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

14'-6"

Length

11'-9"

Shell plates: Material

Steel

Tensile strength

28/30 Tns.

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.P. 2 1/2"

inter.

long. seams

TR. DBS.

Diameter of rivet holes in

circ. seams 1 1/2"

long. seams 1 3/8"

Pitch of rivets

3.744"

9 1/16"

Percentage of strength of circ. end seams

plate 59.9

rivets 57.7

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.8

rivets 87.6

combined 89.2

Working pressure of shell by Rules

206 lbs.

Thickness of butt straps

outer 1 1/2"

inner 1 3/4"

No. and Description of Furnaces in each Boiler

3 Single Section.

Material

Steel

Tensile strength

26/30 Tns.

Smallest outside diameter

3'-9"

Length of plain part

top

bottom

Thickness of plates

crown 7/8"

bottom 7/8"

Description of longitudinal joint

Yins. weld.

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

✓

Working pressure of furnace by Rules

202 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tns.

Thickness

1 1/2"

Pitch of stays 18 1/2" x 16 1/2"

How are stays secured

Nuts inside & outside

Working pressure by Rules

202.5 lbs.

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30 Tns.

Thickness

1 1/8"

Mean pitch of stay tubes in nests

8"

Pitch across wide water spaces

13 1/2"

Working pressure

front 200.5 lbs.

back 262 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/30 Tns.

Depth and thickness of girder

at centre

9 x (9 x 3/2)

Length as per Rule

34.66"

Distance apart

8"

No. and pitch of stays

in each

3 at 8 1/2"

Working pressure by Rules

207 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tns.

Thickness: Sides

2 1/2"

Back

2 1/2"

Top

2 1/2"

Bottom

2 1/2" 23/32

Pitch of stays to ditto: Sides

8 1/2" x 8 1/2"

Back

8 1/2" x 8 1/2"

Top

8 1/2" x 8"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

208 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tns.

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30 Tns.

Thickness

7/8"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

296 lbs.

Main stays: Material

Steel

Tensile strength

28/30 Tns.

Diameter

At body of stay, 2 7/8"

or Over threads

No. of threads per inch

6

Area supported by each stay

305 sq. ins.

Working pressure by Rules

200 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tns.

Diameter

At turned off part, 1 5/8"

or Over threads

No. of threads per inch

9

Area supported by each stay

72.25 sq. ins.

00249-00259-0080

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Working pressure by Rules 210 lbs Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 7/8" 2" or Over threads. 228 lbs
No. of threads per inch 9 Area supported by each stay 93.5 sq in Working pressure by Rules 228 lbs
Tubes: Material Woot Iron External diameter { Plain 2 1/4" Thickness { 8.146 No. of threads per inch 9
Stay 2 1/2" 28" 7/16"
Pitch of tubes 4 1/8" x 3 3/8" Working pressure by Rules 275 lbs Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 16" x 1 1/32" No. of rivets and diameter of rivet holes 32 @ 1 5/16"
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged - 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 - 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

The foregoing is a correct description,

BOW, MCLACHLAN & CO. LTD

Manufacturer.

Dates of Survey { During progress of work in shops - - See Accompanying
while building { During erection on board vessel - - Machinery Report

Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.)
Total No. of visits 43

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

These boilers have been constructed
under Survey in accordance with the Rules and approved plan.

Materials and workmanship good.

They have been secured on board. Safety valves adjusted under steam, and
found sound and tight

Survey Fee ... £ ✓ : 192
Travelling Expenses (if any) £ : 192

When applied for,

192

When received,

192

Alfred T. Thomas & G. E. Murdoch

Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 27 NOV 1928**

Assigned See Accompanying Machinery Report



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