

REPORT ON BOILERS.

No. 53464

10 MAY 1933

Received at London Office

Date of writing Report

19

When handed in at Local Office

9.5.33

Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

23rd Aug. 1932

Last Survey

4th May 1933

on the new steel ship "HARBLEDOWN"

(Number of Visits

84)

Gross 5414

Tons Net 3207

Master

Built at

Port Glasgow

By whom built

Lithgows Ltd

Yard No. 861

When built

Engines made at

Glasgow

By whom made

Davie Rowan & Co. Ltd

Engine No. 953

When made

Boilers made at

Glasgow

By whom made

Davie Rowan & Co. Ltd

Boiler No. 953

When made

Nominal Horse Power

502

Owners

J. & C. Harrison Ltd

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

L. Shillies Ltd

Total Heating Surface of Boilers

5000 sq. ft.

Is forced draught fitted

yes

(Letter for Record (r))

Coal or Oil fired coal

No. and Description of Boilers

Two single ended

Working Pressure 220

Tested by hydraulic pressure to

380

Date of test

28.12.32

No. of Certificate

19189

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

53.15 sq. ft.

No. and Description of safety valves to each boiler

Two Improved high lift.

Area of each set of valves per boiler

per Rule

8.86 sq. ft.

Pressure to which they are adjusted

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

2' 0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2' 6"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

15' 3 1/2"

Length

11' 6"

Shell plates: Material

steel

Tensile strength 29-33 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

Long. seams

WBS. TR

Diameter of rivet holes in

circ. seams

F 1 3/8"

B 1 1/2"

Pitch of rivets

F 3.43"

B 4.023"

Percentage of strength of circ. end seams

plate

F 60

B 63.2

rivets

F 46.9

B 46.8

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.6

rivets

85.74

combined

88.3

Working pressure of shell by Rules

220

Thickness of butt straps

outer

1 1/4"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

Three Weigh-ton

Material

steel

Tensile strength 26-30 tons

Smallest outside diameter

46 7/4"

Length of plain part

top

bottom

Thickness of plates

crown

3 1/4"

bottom

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

238

End plates in steam space: Material

steel

Tensile strength 26-30 tons

Thickness

1 3/8"

Pitch of stays 19" x 21"

How are stays secured

DN

Working pressure by Rules

221

Tube plates: Material

front

steel

back

Tensile strength

26-30

Thickness

15/16"

2 3/32"

Mean pitch of stay tubes in nests

9' 6"

Pitch across wide water spaces

14"

Working pressure

front

228

back

236

Girders to combustion chamber tops: Material

steel

Tensile strength 28-32 tons

Depth and thickness of girder

at centre

2 @ 9 7/8" x 7/8"

Length as per Rule

34' 5"

Distance apart

9 7/8"

No. and pitch of stays

in each

3 @ 8 1/4"

Working pressure by Rules

220

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

29/32"

Pitch of stays to ditto: Sides

8 1/4" x 9 7/8"

Back

10" x 8"

Top

8 1/4" x 9 7/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

220

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

13/16"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

220

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

3" & 3 1/4"

No. of threads per inch

6

Area supported by each stay

3528 & 4330

Working pressure by Rules

224 & 220

Screw stays: Material

Iron

Tensile strength

21 1/2 tons

Diameter

At turned off part,

or

Over threads

1 7/8"

No. of threads per inch

9

Area supported by each stay

800"

Working pressure by Rules 266 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 960" Working pressure by Rules 257
Tubes: Material Iron ✓ External diameter { Plain 3" ✓ Stay 3" ✓ Thickness { 8 w.g. 1/4", 7/16", 3/8" No. of threads per inch 9
Pitch of tubes 4 3/16" x 4 1/8" ✓ Working pressure by Rules 250 Manhole compensation: Size of opening
shell plate 19 1/2" x 15 1/2" Section of compensating ring 10 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 34 @ 1 1/2" ✓
Outer row rivet pitch at ends 10 1/16" ✓ Depth of flange if manhole flanged 3" ✓ Steam Dome: Material none ✓
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes 108 Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter cap Working pressure by Rules Thickness of crown cap No. and diameter
stays cap 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 Smoke tube Manufacturers of { Tubes See copy of New Cert. No. C 5553 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
the boiler be worked separately no Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
Area of each safety valve 1.770" ✓ Are the safety valves fitted with easing gear yes Working pressure as
Rules - Pressure to which the safety valves are adjusted 227 Hydraulic test pressure
tubes - castings - and after assembly in place 440 688 Are drain cocks or valves fitted
to free the superheater from water where necessary yes
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,
For David Rowan & Co. Ltd.
Arch. W. Grierson

Dates of Survey { During progress of work in shops - - - SEE ACCOMPANYING MACHINERY REPORT. (If not state date of approval.)
while building { During erection on board vessel - - -
Total No. of visits 8-4

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Harmaetris Gls Rpt. No. 5253

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

The materials and workmanship are good.
The boiler has been constructed under special survey in accordance with the rules, satisfactorily fitted in the vessel and their safety valves adjusted under steam.

Survey Fee ... £ 19 When applied for,
Travelling Expenses (if any) £ 10 When received,
Committee's Minute GLASGOW 9-MAY 1933
Assigned SEE ACCOMPANYING MACHINERY REPORT.

Engineer Surveyor to Lloyd's Register of Shipping



© 2019

Lloyd's Register Foundation