

REPORT ON BOILERS.

No. 53777

9 SEP 1933

Received at London Office

23 AUG 1933

Date of writing Report

19

When handed in at Local Office

21 8 1933

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

13. 3. 33

Last Survey

16-8-

1933

on the

new steel S/S "PULBOROUGH"

(Number of Visits

Tons { Gross
Net

3

Built at Buntidane

By whom built

Buntidane SBCol Yard No. 178

When built 1933

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No. 959

When made 1933

Boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No. 959

When made 1933

nominal Horse Power

118

Owners

Port belonging to

ULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Lochmiller Ltd

(Letter for Record (S))

Total Heating Surface of Boilers

1985 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

and Description of Boilers

one single ended

Working Pressure 200

tested by hydraulic pressure to

350

Date of test

21-6-33

No. of Certificate

19242

Can each boiler be worked separately

—

area of Firegrate in each Boiler

53 3/4 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 6.47 sq ft
as fitted 6.28 sq ft

Pressure to which they are adjusted

200 lb

Are they fitted with easing gear

Yes

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

No

Smallest distance between boilers or uptakes and bunkers or ~~woodwork~~

11"

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

Longest internal dia. of boilers

15'-0"

Length

10'-3"

Shell plates: Material

steel

Tensile strength

29,330 lb

Thickness

15/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

{ end
inter.

g. seams

WBS TR

Diameter of rivet holes in

{ circ. seams F 1 1/4" B 1 3/8"
long. seams 1 9/8"

Pitch of rivets

F 3.2" B 3.742"

Percentage of strength of circ. end seams

{ plate F 60.9 B 63.2
rivets F 51.1 B 47.8

Percentage of strength of circ. intermediate seam

{ plate
rivets

Percentage of strength of longitudinal joint

{ plate 84.7
rivets 93.2
combined 88

Working pressure of shell by Rules

201

Thickness of butt straps

{ outer 1 1/8"
inner 1 1/8"

No. and Description of Furnaces in each Boiler

Three Deighton

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

42.219"

Length of plain part

{ top
bottom

Thickness of plates

{ crown 3/32"
bottom 3/64"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

200

Stays in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1/4"

Pitch of stays 18" x 20"

How are stays secured

WN

Working pressure by Rules

201

Stays in steam space: Material

{ front steel
back "

Tensile strength

26-30 tons

Thickness

{ 3/32"
25/32"

202

Long pitch of stay tubes in nests

10' 18"

Pitch across wide water spaces

14 1/4"

Working pressure

{ front
back

210

Stays to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

Centre

2 @ 8 7/8 x 7/8"

Length as per Rule

32-63"

Distance apart

9 1/2"

No. and pitch of stays

Each

3 @ 8"

Working pressure by Rules

203

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

1/16"

Top

3/4"

Bottom

3/4"

Height of stays to ditto: Sides

9 1/2 x 8"

Back

9 1/2 x 8"

Top

9 1/2 x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

214

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

3/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

25/32"

Height of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

201

Main stays: Material

steel

Tensile strength

28-32 tons

At body of stay

3" & 2 3/4"

No. of threads per inch

6

Area supported by each stay 395 & 328 sq in

Working pressure by Rules

200 lb

Screw stays: Material

steel

Tensile strength

26-30 tons

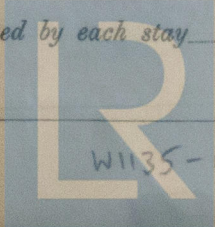
At turned off part

+ 98"

No. of threads per inch

9

Area supported by each stay 760" 2020



Working pressure by Rules 200 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 3/4", 1 7/8" + 2
No. of threads per inch 9 Area supported by each stay 89.62 Working pressure by Rules 201
Tubes: Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W.S. 1/4", 5/16", 3/8" No. of threads per inch 9
Pitch of tubes 4 3/8" x 4 1/16" Working pressure by Rules 230 Manhole compensation: Size of opening
shell plate 15 1/2" x 19 1/2" Section of compensating ring 9 1/2" x 1 7/16" No. of rivets and diameter of rivet holes 32 @ 1 3/8"
Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 3" Steam Dome: Material none
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes 8 1/16" Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Working pressure by Rules Thickness of crown No. and diameter
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 8 1/16"

Type of Superheater none 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
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
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 22 inclusive for boilers been complied with

The foregoing is a correct description,
For David Rowan & Co. Ltd
Arch. H. Frierson

Dates { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - - SEE ACCOMPANYING MACHINERY REPORT
Total No. of visits 32

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No.

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 and has been seen to be fitted in the vessel.

This boiler has been efficiently fitted on board the vessel, examined under steam & safety valves adjusted 200 lbs

21/8/33

Survey Fee ... £ When applied for, 19
Travelling Expenses (if any) £ See Machinery Report When received, 19

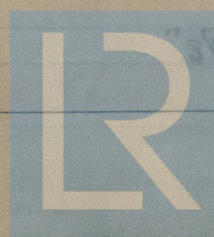
S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping

FRI 15 SEP 1933

Committee's Minute GLASGOW 22 AUG 1933

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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