

REPORT ON BOILERS.

No. 48411

Date of writing Report

192

When handed in at Local Office

21. 9. 1928

Port of

Glasgow

Received at London Office

27 SEP 1928

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

8. 2. 28

Last Survey

20-9-

1928

(Number of Visits 46)

Gross 4333

Tons

Net

on the new steel 5/5" KERMA.

Master

Built at

Glasgow

By whom built

D & W. Henderson & Co. Ltd

Yard No. 831

When built 1928

Engines made at

Glasgow

By whom made

D & W. Henderson & Co. Ltd

Engine No. 831

When made 1928

Boilers made at

Glasgow

By whom made

D & W. Henderson & Co. Ltd

Boiler No. 831

When made 1928

Nominal Horse Power

346

Owners

Port belonging to

London

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

Dain & Whille & Sons Ltd

(Letter for Record (S))

Total Heating Surface of Boilers

1265 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure 120

Tested by hydraulic pressure to

230

Date of test

20-8-28

No. of Certificate

18017

Can each boiler be worked separately

Area of Firegrate in each Boiler

38.5 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 6.959
as fitted 7.96

Pressure to which they are adjusted

122

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

5'-0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

no tank

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

12'-0"

Length

10'-6"

Shell plates: Material

steel

Tensile strength 28-32 tons

Thickness

11/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end DR
inter. -

long. seams

D.B.S. TR

Diameter of rivet holes in

circ. seams 1"
long. seams 1 1/16"

Pitch of rivets

4"
5 13/32"

Percentage of strength of circ. end seams

plate 75.0
rivets 46.9

Percentage of strength of circ. intermediate seam

plate
rivets

Percentage of strength of longitudinal joint

plate 84.9
rivets 85.9
combined 91.4

Working pressure of shell by Rules

120

Thickness of butt straps

outer 5/8"
inner 3/4"

No. and Description of Furnaces in each Boiler

Two plain

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

43.25"

Length of plain part

top 82"
bottom 80"

Thickness of plates

crown 3 1/32"
bottom 3 1/32"

Description of longitudinal joint

welded

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

3 1/2" x 3 1/2" x 3 1/2"

Working pressure of furnace by Rules

122

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

53/64"

Pitch of stays

17" x 15"

How are stays secured

DN

Working pressure by Rules

121

Tube plates: Material

front steel
back "

Tensile strength

26-30 tons

Thickness

27/32"
2 1/32"

Mean pitch of stay tubes in nests

9"

Pitch across wide water spaces

1'-2 1/4"

Working pressure

front 123
back 227

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 8 1/4" x 5/8"

Length as per Rule

33"

Distance apart

9"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

127

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

9" x 10"

Back

9 1/2" x 10"

Top

9" x 10"

Are stays fitted with nuts or riveted over

DN

Working pressure by Rules

130

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

27/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

43/64"

Pitch of stays at wide water space

14 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

121

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay, 2 1/4"

No. of threads per inch

6

Area supported by each stay

251

Working pressure by Rules

176

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part, 1 1/2"

No. of threads per inch

9

Area supported by each stay

950"

004635-004641-0274

Lloyd's Register
Foundation

Working pressure by Rules 132 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 5/8 or Over threads 1 5/8

No. of threads per inch 9 Area supported by each stay 115 Working pressure by Rules 132

Tubes: Material Iron External diameter ^{Plain} 3 1/4 Thickness ^{Stay} 3/4 No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 8 1/2" x 13/16" No. of rivets and diameter of rivet holes 46 @ 1 3/16"

Outer row rivet pitch at ends 5 13/32" Depth of flange if manhole flanged 3" Steam Dome: Material none

Tensile strength 168 Thickness of shell 1/4" Description of longitudinal joint none

Diameter of rivet holes 108 Pitch of rivets 1 1/2" Percentage of strength of joint 100

Internal diameter 108 Working pressure by Rules 180 Thickness of crown 1/4" No. and diameter of stays 108 Inner radius of crown 108 Working pressure by Rules 180

How connected to shell none Size of doubling plate under dome none Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell none

Type of Superheater none

Manufacturers of

Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes 3 1/4" x 1/4"

Material of headers Iron Tensile strength 168 Thickness 1/4" Can the superheater be shut off and the boiler be worked separately yes

Area of each safety valve 108 Are the safety valves fitted with easing gear yes Working pressure as per Rules 132 Pressure to which the safety valves are adjusted 132 Hydraulic test pressure: 198

tubes 108 and after assembly in place 198 Are drain cocks or valves fitted to free the superheater from water where necessary yes

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

The foregoing is a correct description.
For DAVID & WILLIAM HENDERSON & CO., LTD.

Manufacturer.
DIRECTOR.

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes

Total No. of visits 46

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 its safety valves adjusted under steam.

Survey Fee £ 8 : 8 :
Travelling Expenses (if any) £ :

When applied for, 26 SEP 1928
When received, 2.10.1928

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 SEP 1928

Assigned See accompanying Machy Report



© 2020

Lloyd's Register Foundation