

# REPORT ON BOILERS.

No. 55721

Received at London Office

19 JUN 1935

of writing Report

19

When handed in at Local Office

8. 5. 1935

Port of

Glasgow

Survey held at

Glasgow

Date, First Survey

29. 10. 34

Last Survey

30-4-

1935

on the

New steel 515" HARPAGON

(Number of Visits

62)

Gross

5719

Net

3378

ter

Built at

Port Glasgow

By whom built

Lithgow Ltd

Yard No.

874

When built

1935

ines made at

Glasgow

By whom made

Davie Rowan & Co Ltd

Engine No.

972

When made

1935

lers made at

Glasgow

By whom made

Davie Rowan & Co Ltd

Boiler No.

972

When made

1935

inal Horse Power

475

Owners

J.T. Harrison & Co

Port belonging to

London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Platts - Steel Co of Scotland Ltd

(Letter for Record (7))

al Heating Surface of Boilers

5000 sq ft

Is forced draught fitted

yes

Coal or Oil fired

both

and Description of Boilers

Two single ended

Working Pressure

220

ted by hydraulic pressure to

380

Date of test

22-2-35

No. of Certificate

19515

Can each boiler be worked separately

yes

a of Firegrate in each Boiler

50.35 sq ft

No. and Description of safety valves to each boiler

Two Improved High Lift.

a of each set of valves per boiler

per Rule

8.86 sq ft

as fitted

9.82 sq ft

Pressure to which they are adjusted

7.95 sq ft

Are they fitted with easing gear

yes

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

—

allest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Is oil fuel carried in the double bottom under boilers

no

allest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

yes

gest internal dia. of boilers

15'-3 ft

Length

11'-6"

Shell plates: Material

steel

Tensile strength

29.53 tons

ckness

1 15/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR

g. seams

WB5 TR

Diameter of rivet holes in

circ. seams

F 1 3/8" B 1 1/2"

Pitch of rivets

F 3.43" B 4.083"

long. seams

1 1/2"

10 7/16"

centage of strength of circ. end seams

plate

F 60 B 63.2

rivets

F 46.9 B 46.9

Percentage of strength of circ. intermediate seam

plate

85.6

rivets

85.14

centage of strength of longitudinal joint

plate

85.6

rivets

85.14

Working pressure of shell by Rules

220

ckness of butt straps

outer

1 1/4"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

Three Deighton

terial

steel

Tensile strength

26-30 tons

Smallest outside diameter

46 1/4"

ngth of plain part

top

3 1/4"

bottom

3 1/4"

Thickness of plates

crown

3 1/4"

Description of longitudinal joint

welded

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

—

Working pressure of furnace by Rules

238

d plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 3/8"

Pitch of stays

19" x 21"

w are stays secured

WN

Working pressure by Rules

221

be plates: Material

front

steel

back

"

Tensile strength

26-30 tons

Thickness

15/16"

25/32"

an pitch of stay tubes in nests

9.60"

Pitch across wide water spaces

14"

Working pressure

front

228

back

236

orders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

centre

2 @ 9 5/8" x 7 1/8"

Length as per Rule

34.5"

Distance apart

9 5/8"

No. and pitch of stays

each

3 @ 8 1/4"

Working pressure by Rules

220

Combustion chamber plates: Material

steel

nsile strength

26-30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

27/32"

27/32"

ch of stays to ditto: Sides

8 1/4" x 9 5/8"

Back

10" x 8"

Top

8 1/4" x 9 5/8"

Are stays fitted with nuts or riveted over

nuts

orking pressure by Rules

220

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

ickness

15/16"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

15/16"

ch of stays at wide water space

13 7/8"

Are stays fitted with nuts or riveted over

nuts

orking Pressure

220

Main stays: Material

steel

Tensile strength

28-32 tons

meter

At body of stay,

3 & 3 3/4"

or

Over threads

No. of threads per inch

6

Area supported by each stay

352 & 433 sq in

orking pressure by Rules

224 & 220

Screw stays: Material

2 in

Tensile strength

21 1/2 tons

meter

At turned off part,

1 7/8"

or

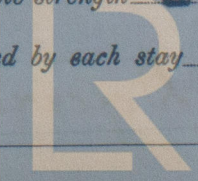
Over threads

No. of threads per inch

9

Area supported by each stay

800 sq in



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W43-0125



Working pressure by Rules 266 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" 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.S. No. of threads per inch 9  
Pitch of tubes 4 1/8 x 4 1/16 Working pressure by Rules 250H Manhole compensation: Size of opening  
shell plate 19 1/2 x 18 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 7/16 Depth of flange if manhole flanged 10 1/2 x 1 1/2 Steam Dome: Material Iron  
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  
stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and  
of rivets in outer row in dome connection to shell

Type of Superheater Smoke tube Manufacturers of { Tubes See New Cent. N° C 2496 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 440 Hydraulic test pressure  
tubes -, castings - and after assembly in place 440 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. H. Grierson Manufacturer

Dates of Survey { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith yes  
while building { During erection on board vessel - - - (If not state date of approval.)  
SEE ACCOMPANYING MACHINERY REPORT.

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "Harbledown" Gls Rpt. N° 53

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

GLASGOW 30-4-35

The materials and workmanship are good.

The boilers have been constructed under Special Survey and have been placed on board the vessel.

7/5/35

Survey Fee £ 2.50 When applied for, 19  
Travelling Expenses (if any) £ 1.00 When received, 19

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 8 MAY 1935 9.5.35

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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