

REPORT ON BOILERS.

No. 62627

Received at London Office

JUL 25 1940

Date of writing Report

When handed in at Local Office

22-7-40

Port of

GLASGOW

No. in Reg. Book

Survey held at

Glasgow

Date, First Survey

Last Survey

10th July 1940

(Number of Visits)

Gross

6343.44

Tons

Net

on the

s/s "DALESMAN"

Built at

Glasgow

By whom built Lithgown Ld.

Yard No. 927

When built 1940

Engines made at

Glasgow

By whom made

David Rowan & Co. Ld.

Engine No. 1038

When made 1940

Boilers made at

do.

By whom made

do.

Boiler No. 1038

When made 1940

Nominal Horse Power

867

Owners

T & J. Hanson, Ld.

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record)

Total Heating Surface of Boilers

2805 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

1 - Single-ended

Working Pressure

215 lb.

Tested by hydraulic pressure to

373 lb.

Date of test

11-4-40

No. of Certificate

20599

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

69 sq ft

No. and Description of safety valves to each boiler

2 Spring loaded ordinary

Area of each set of valves per boiler

per Rule 15.24 sq in

as fitted 16.58 sq in

Pressure to which they are adjusted

215 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

28"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

27"

Is the bottom of the boiler insulated

Yes

Internal dia. of boilers

17'-2"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

31/35 tons

Thickness

1 35/64"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

butt

inter

butt

long. seams

D.B.S. T.R.

Diameter of rivet holes in

circ. seams

F 1 7/16" B+C 1 9/8"

Pitch of rivets

F 3-7" B+C 4-6 5/8"

Percentage of strength of circ. end seams

plate B 65 F 61.1

Percentage of strength of circ. intermediate seam

plate 65

rivets 63.8

Percentage of strength of longitudinal joint

plate B 84.52 F 84.89

rivet B 91.3 F 88.4

combined B 87.4 F 87.9

Thickness of butt straps

outer F 1 7/32" B 1 3/16"

inner 1 9/32" 1 9/16"

No. and Description of Furnaces in each Boiler

3

Right star

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

4'-3 17/32"

Length of plain part

top

Thickness of plates

bottom

crown 4 9/64"

Description of longitudinal joint

welded

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

No

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 15/32"

Pitch of stays 20 1/2" x 25"

How are stays secured

DN

Tube plates: Material

front Steel

back

Tensile strength

26/30 tons

Thickness

1 15/16"

Mean pitch of stay tubes in nests

11.28"

Pitch across wide water spaces

12.18" 14 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 tons

Depth and thickness of girder

at centre

2 @ 11" x 7/8"

Length as per Rule

3'-6 11/32"

Distance apart

9 1/4"

No. and pitch of stays

in each

4 @ 8 1/2"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 3/32"

Bottom

1"

Pitch of stays to ditto: Sides

8 1/2" x 9"

Back

8 3/4" x 9 5/8"

Top

8 1/2" x 9 1/4"

Are stays fitted with nuts or riveted over

Nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

2 9/32"

Pitch of stays at wide water space

15 5/8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay, 3 1/4" + 3 1/2"

No. of threads per inch

6

Screw stays: Material

Iron

Tensile strength

2 1/2 tons

Diameter

At turned off part, 1 3/4"

No. of threads per inch

9



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002653-002653-0018

Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 2" ^{or} 2" ^{Over threads}

No. of threads per inch 9

Tubes: Material Iron External diameter ^{Plain} 3 1/2" ^{Stay} 3 1/2" Thickness ^{7 W.G.} 5/16", 3/8", 9/16" No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 7/8" Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 11 3/4" x 1 5/8" No. of rivets and diameter of rivet holes 36 @ 1 5/8"

Outer row rivet pitch at ends 10 29/32" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material None

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 _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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 S.M. Ketate Manufacturers of ^{Tubes} See Mech. Certs. 17² C 530 + C 5 ^{Steel forgings} Copies herewith. ^{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 at the boiler be worked separately Yes 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 1.76 sq" Are the safety valves fitted with easing gear Yes

Pressure to which the safety valves are adjusted 215 lb. Hydraulic test pressure _____

tubes _____ forgings and castings _____ and after assembly in place 430 lb. Are drain cocks 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^{ts} W. Grierson, Manufacturer

Dates of Survey ^{During progress of work in shops - - -} _____ Are the approved plans of boiler and superheater forwarded herewith Yes ^(if not state date of approval.)

THE ACCOMPANYING MACHINERY REPORT.

while building ^{During erection on board vessel. - - -} _____ Total No. of visits _____

Is this Boiler a duplicate of a previous case YES If so, state Vessel's name and Report No. "BARRISTER" GLS. R 2561

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

This boiler has been built under special survey in accordance with the Rules and approved plan, and the materials and workmanship are good. It has been satisfactorily installed in the vessel, examined under steam and the safety valves have been adjusted to the working pressure.

Exb
22/7/40

Survey Fee £ _____ : _____ When applied for, _____ 19 _____

Travelling Expenses (if any) See memo & ret. £ _____ : _____ When received, _____ 19 _____

W. J. Brown
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Glasgow. 23 JUL 1940

Assigned _____