

REPORT ON BOILERS.

No. 62180

APR -3 1940

Received at London Office

Date of writing Report

19

When handed in at Local Office

1. 4.

1940

Port of GLASGOW

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

May 30th 1939

Last Survey

27th March 1940

(Number of Visits

17

Gross

5188.91

Tons

Net

on the

M/V.

"SUTLEY"

Master

Built at

Glasgow

By whom built

Carr. Connell & Co.

Yard No. 428

When built 1940

Engines made at

Glasgow

By whom made

Barclay Curle & Co. Ltd.

Engine No. 123

When made 1940

Boilers made at

do

By whom made

do

Boiler No. 123

When made 1940

Nominal Horse Power

Owners James Murrell Ltd.

Port belonging to London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

1183 sq ft 1416

Is forced draught fitted do

Coal or Oil fired Oil fired

No. and Description of Boilers

One Single ended

Working Pressure 120 lb.

Tested by hydraulic pressure to

230 lb.

Date of test

2/10/39

No. of Certificate

20458

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler

1-2 1/4" I.H.L. make spring

Area of each set of valves per boiler

{ per Rule 13.10"
as fitted 7.950"

Pressure to which they are adjusted 120 lb.

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 -

Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and tank top plating -

Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers

11'-6"

Length

11'-0"

Shell plates: Material

steel

Tensile strength

29/33 tons

Thickness

11/16"

Are the shell plates welded or flanged

do

Description of riveting: circ. seams

{ end D.R.
inter. -

long. seams

D.B.S. D.R.

Diameter of rivet holes in

{ circ. seams 13/16"
long. seams 7/8"

Pitch of rivets

{ 2.725"
4.75"

Percentage of strength of circ. end seams

{ plate 70.16
rivets 43.89

Percentage of strength of circ. intermediate seam

{ plate -
rivets -

Percentage of strength of longitudinal joint

{ plate 81.58
rivets 82.11
combined 90.51

Working pressure of shell by Rules 124 lb.

Thickness of butt straps

{ outer 9/16"
inner 4/16"

No. and Description of Furnaces in each Boiler

2 Straight

Material

steel

Tensile strength

26/30 tons

Smallest outside diameter

40 1/4"

Length of plain part

{ top -
bottom -

Thickness of plates

{ crown 3/8"
bottom -

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules 131 lb.

End plates in steam space: Material

steel

Tensile strength

26/30 tons

Thickness

13/16"

Pitch of stays 15 1/2" x 15"

How are stays secured

Drake nuts

Working pressure by Rules 120 lb.

Tube plates: Material

{ front steel
back -

Tensile strength

26/30 tons

Thickness

23/32"

11/16"

Mean pitch of stay tubes in nests

10.4275"

Pitch across wide water spaces

14"

Working pressure

{ front 129 lb.
back 153 lb.

Girders to combustion chamber tops: Material

steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

8 1/4" x 20 9/16"

Length as per Rule

32 23/32"

Distance apart

10"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

122 lb.

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

10" x 10"

Back

9 1/2" x 10 1/2"

Top

10" x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

121 lb.

Front plate at bottom: Material

steel

Tensile strength

26/30 tons

Thickness

23/32"

Lower back plate: Material

steel

Tensile strength

26/30 tons

Thickness

11/16"

Pitch of stays at wide water space

14 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

129 lb.

Main stays: Material

steel

Tensile strength 28/38 tons

Diameter

{ At body of stay,
or Over threads 2 1/8"

No. of threads per inch

6

Area supported by each stay

221 sq"

Working pressure by Rules

136 lb.

Screw stays: Material

steel

Tensile strength

26/30 tons

Diameter

{ At turned off part,
or Over threads 1 1/2"

No. of threads per inch

9

Area supported by each stay

99.8 sq"

Working pressure by Rules 125 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8"
No. of threads per inch 9 Area supported by each stay 114.84 sq" Working pressure by Rules 122 lbs.
Tubes: Material steel External diameter { Plain 3" Stay 3" Thickness { 10 W.G. No. of threads per inch 9
Pitch of tubes 4 1/8" x 4 1/4" Working pressure by Rules 140 lbs. Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 19" x 11/16" No. of rivets and diameter of rivet holes 44 0 1"
Outer row rivet pitch at ends 5 1/4" Depth of flange if manhole flanged 3 1/2" 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 Working pressure by Rules Thickness of crown No. and diameter of
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

Type of Superheater none Manufacturers of { Tubes Steel forgings 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 and
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 Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes forgings and 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,
Alexander Macneil Manufacturer.

Dates of Survey { During progress of work in shops - - - 1939 May 30, June 8, 13, July 12,
while building { During erection on board vessel - - - 31 Aug. 11, 16, 25, Sept. 16,
8, 15, 27, Oct. 2, 6, Nov. 3,
Dec. 5, 1940 Mar. 27. Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.)
Total No. of visits 17

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "INDUS" Jb. Rpt. 61982

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 plans, and the materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted under steam to 120 lbs/sq"

GB
1/4/40

Survey Fee ... £ 9 : 8 : - When applied for, 19
Travelling Expenses (if any) £ : : When received, 31/5/ 1940 R.S.Y.
5/6

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

Committee's Minute GLASGOW 2 APR 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT



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Foundation