

23 FEB 1926

REPORT ON BOILERS.

No. 44943

Received at London Office

26 AUG 1925

Date of writing Report 24 Aug 1925. When handed in at Local Office 24.8.1925

Port of Glasgow

No. in Survey held at Reg. Book.

Date, First Survey 5.5.25

Last Survey 21.8.1925.

(Number of Visits 19)

Gross
Tons
Neton the *Highland Barge "RUKAMAYATI"*

Master

Built at

Leith

By whom built

Henry Rahl Ltd.

Yard No.

35

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

Glasgow.

By whom made

Ross and Duncan.

Boiler No.

1717

When made 1925

Nominal Horse Power

88

Owners

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons

(Letter for Record S)

Total Heating Surface of Boilers

1316.5 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

No. and Description of Boilers

One Cyl. Mult. Single End.

Working Pressure 130 lb.

Tested by hydraulic pressure to

245 lb.

Date of test

21.8.25

No. of Certificate

16913

Can each boiler be worked separately

Area of Firegrate in each Boiler

37.4 sq. ft.

No. and Description of safety valves to each boiler

Two Spring loaded

Area of each set of valves per boiler

per Rule 11.35

as fitted 11.89

Pressure to which they are adjusted

130 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

1'-6"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

12'-0"

Length

10'-0"

Shell plates: Material

S

Tensile strength

28/32 T.

Thickness

3/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

inter.

long. seams

DBS/TR.

Diameter of rivet holes in

circ. seams 1"

long. seams 7/8"

Pitch of rivets

3/8"

Percentage of strength of circ. end seams

plate 68.0

rivets 57.1

Percentage of strength of circ. intermediate seam

plate 84.8

rivets 85.8

Percentage of strength of longitudinal joint

plate 84.8

rivets 85.8

combined 91.1

Working pressure of shell by Rules

132 lb.

Thickness of butt straps

outer 3/4"

inner 3/4"

No. and Description of Furnaces in each Boiler

Two Plain

Material

S.

Tensile strength

26/30 T.

Smallest outside diameter

43 1/2"

Length of plain part

top 73"

bottom 73"

Thickness of plates

crown 11/16"

bottom 11/16"

Description of longitudinal joint

Weld.

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

none

Working pressure of furnace by Rules

151 lb.

End plates in steam space: Material

S.

Tensile strength

26/30 T.

Thickness

25/32"

Pitch of stays 16 x 16"

How are stays secured

D.N.W.

Working pressure by Rules

134 lb.

Tube plates: Material

front S

back S

Tensile strength

26/30 T.

Thickness

23/32"

Mean pitch of stay tubes in nests

11 1/4 x 8 1/2"

Pitch across wide water spaces

13 1/4"

Working pressure

front 131 lb.

back 143 lb.

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 T.

Depth and thickness of girder

at centre

67 1/8 x 1 1/2"

Length as per Rule

30 25/32"

Distance apart

9"

No. and pitch of stays

in each

2 @ 9 1/2"

Working pressure by Rules

132 lb.

Combustion chamber plates: Material

S

Tensile strength

26/30 T.

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

9 1/2 x 9"

Back

9 1/2 x 9"

Top

9 1/2 x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

142 lb.

Front plate at bottom: Material

S.

Tensile strength

26/30 T.

Thickness

23/32"

Lower back plate: Material

S.

Tensile strength

26/30 T.

Thickness

11/16"

Pitch of stays at wide water space

14 x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

136 lb.

Main stays: Material

S.

Tensile strength

28/32 T.

Diameter

At body of stay, 2 3/8"

or Over threads 2 3/8"

No. of threads per inch

6

Area supported by each stay

256 sq. in.

Working pressure by Rules

154 lb.

Screw stays: Material

S.

Tensile strength

26/30 T.

Diameter

At turned off part, 1 1/2"

or Over threads 1 1/2"

No. of threads per inch

9

Area supported by each stay

85.5 sq. in.

Working pressure by Rules $147\frac{1}{2}$ Are the stays drilled at the outer ends $20\frac{1}{2}$ Margin stays: Diameter { At turned off part, $1\frac{1}{8}$ or Over threads $1\frac{1}{8}$
No. of threads per inch 9 Area supported by each stay 105.50 Working pressure by Rules $143\frac{1}{2}$
Tubes: Material 2. External diameter { Plain $3\frac{1}{4}$ Stay $3\frac{1}{4}$ Thickness $9\frac{1}{16}$ No. of threads per inch 9.
Pitch of tubes $4\frac{1}{2} \times 4\frac{1}{4}$ Working pressure by Rules $184\frac{1}{2}$ Manhole compensation: Size of opening in
shell plate 16×12 Section of compensating ring $14 \times 3\frac{1}{4}$ No. of rivets and diameter of rivet holes $38 - 7\frac{1}{8}$
Outer row rivet pitch at ends $5\frac{7}{8}$ Depth of flange if manhole flanged
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

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 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, 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 23 inclusive for boilers been complied with

The foregoing is a correct description,

Ross & Duncan Manufacturer.

Dates of Survey { During progress of work in shops -- 1925. May 5. 8. 12. 14. 19. 21. 26. 29. Are the approved plans of boiler and superheater forwarded herewith Yes
while building { During erection on board vessel -- June 4. 9. 12. 15. Aug 6. 10. 14. 29. 31. (If not state date of approval.)
Total No. of visits 19.

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

The above Boiler has been constructed under special survey in accordance with the Rules and approved plan. The materials and workmanship employed in its construction are sound and good. It will be fitted on board the vessel to suit.

This boiler has now been fitted on board the vessel in an efficient manner, boiler examined under steam and safety valves adjusted to 130 lbs per sq inch and all found satisfactory.

Survey Fee ... £ 8 : 16 : 0
Travelling Expenses (if any) £

When applied for, 25 AUG 1925
When received, 27. 8. 1925

W. Lane *A. Morris*
Engineer Surveyor to Lloyd's Register of Shipping

FRI. 26 FEB 1926

Committee's Minute GLASGOW 25 AUG 1925

Assigned TRANSMIT TO LONDON



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