

REPORT ON BOILERS.

No. 98976

NOV 27 1940

Received at London Office

Date of writing Report

10

When handed in at Local Office 25/11/40 to 40 Port of

NEWCASTLE-on-TYNE

No. in Survey held at
eg. Book.

Wallsend.

Date, First Survey 21 Nov 1939 Last Survey 15 Nov 1940

(Number of Visits)

Gross

Tons

Net

SS. "RICHMOND HILL"

Built at Sunderland By whom built Bartram & Sons Ltd.

Yard No. 284. When built 1940

Engines made at

Wallsend.

By whom made N.E. Marine Eng Co (1938) Ltd.

Engine No. 2954 When made 1940

Boilers made at

By whom made

Boiler No. 2954 When made 1940

Nominal Horse Power

Owners Rethymnis & Kulukundis Ltd Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd & Steel Co of Scotland Ltd.

(Letter for Record)

S

Total Heating Surface of Boilers

6130 ft²

Is forced draught fitted

yes

Coal or Oil fired

oil

No. and Description of Boilers

2 S B.

Working Pressure

220 lbs

Tested by hydraulic pressure to

380

Date of test

19.4.40

No. of Certificate

846

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

8.2

per Rule

as fitted

9.82

Pressure to which they are adjusted

1 Double Improved high lift.

Pressure to which they are adjusted

225 lbs

Are they fitted with easing gear

yes

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

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1-10"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

2'-2"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

15'-6"

Length

12'-4 1/2"

Shell plates: Material

Steel

Tensile strength

29-33

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

Long. seams T.R. D.B.S. 5 rivets

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

4"

10 1/4"

Percentage of strength of circ. end seams

plate

62.5

rivets

46.7

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.36

rivets

85.4

combined

87.8

Thickness of butt straps

outer 1 9/32"

inner 1 9/32"

No. and Description of Furnaces in each Boiler

3 cf.

Material

Steel

Tensile strength

26-30

Smallest outside diameter

44 7/8"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/16"

Description of longitudinal joint

weld

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

End plates in steam space: Material

Steel

Tensile strength

26-30

Thickness

1 1/2"

Pitch of stays

23 x 20 13/16"

How are stays secured

Double nuts

Tube plates: Material

front

back

Steel

Tensile strength

26-30

Thickness

1 7/16"

7/8"

Mean pitch of stay tubes in nests

8.7"

Pitch across wide water spaces

14 1/2" x 7 1/4"

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33

Depth and thickness of girder

at centre

11 3/4" x 1" double

Length as per Rule

46 1/2"

Distance apart

8 5/16"

No. and pitch of stays

in each

3

10 3/4"

Combustion chamber plates: Material

Steel

Tensile strength

26-30

Thickness: Sides

25/32"

Back

13/16"

Top

27/32"

Bottom

27"

32"

Pitch of stays to ditto: Sides

10 3/4" x 8 5/16"

Back

11 1/2" x 8 5/16"

Top

10 3/4" x 8 5/16"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26-30

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30

Thickness

15/16"

Pitch of stays at wide water space

14 1/2" x 10 1/2"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28-32

Diameter

At body of stay,

or

Over threads

3 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part,

or

Over threads

1 7/8"

No. of threads per inch

9

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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 ✓
Tubes: Material S.D. Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 8 W.G. 7/16" & 3/8" No. of threads per inch 9 ✓
Pitch of tubes 3 3/4" x 3 7/8" Manhole compensation: Size of opening
shell plate ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4 7/16" + 3 1/2" ✓ Steam Dome: Material ✓
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 rivets ✓
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 North Eastern. NEMEN.CO. Manufacturers of

Number of elements 32 ✓ Material of tubes S.D. Steel ✓ Internal diameter and thickness of tubes 1 1/4" x 7 W.G. ✓
Material of headers S.D. Steel ✓ Tensile strength 26 to 28 ✓ Thickness 1" ✓ Can the superheater be shut off and 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 3.14 sq" ✓ Are the safety valves fitted with easing gear yes ✓
Pressure to which the safety valves are adjusted 225 lbs ✓ Hydraulic test pressure 440 lbs ✓
tubes 1500 lbs ✓ forgings and castings 660 lbs ✓ and after assembly in place 440 lbs ✓ Are drain cocks 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

The foregoing is a correct description,

John Neill

Manufacture

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }

See Mchly Report

Are the approved plans of boiler and superheater forwarded herewith 9-11-39 (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No. ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers & superheaters have been made under Special Survey in accordance with the approved Plans & the Requirements of the Rules. The materials & workmanship are good. The boilers proved satisfactory under hydraulic test & have been installed & found satisfactory under steam.

Survey Fee ... £
Travelling Expenses (if any) £

See Mchly Rpt

When applied for, 19
When received, 19

B. C. Moffatt

Engineer Surveyor Lloyd's Register of Shipping.

Committee's Minute FRI. 18 DEC 1940

Assigned

See Std J.E. 33009



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