

REPORT ON BOILERS.

No. 100957

Received at London Office

14 JAN 1943

Date of writing Report

19

When handed in at Local Office

19

Port of

NEWCASTLE-ON-TYNE

No. in
Reg. Book.

Wallsend on Tyne

Date, First Survey

27/13/42

Last Survey

29/12/1942

(Number of Visits)

Gross

Tons

Net

86515 on the SS "EMPIRE. COLLINS"

Built at Sunderland.

By whom built

Sir J. Laing & Sons Ltd

Yard No. 745

When built

Engines made at

Wallsend.

By whom made

N.E. Marine Eng Co (1938) Ltd

Engine No. 3033

When made 1942

Boilers made at

By whom made

Boiler No. 3033

When made 1942

Nominal Horse Power

Owners

Ministry of War Transport

Port belonging to

Sunderland.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Covilles Ltd.

(Letter for Record S

Total Heating Surface of Boilers

10020

Is forced draught fitted

440

Coal or Oil fired

oil

No. and Description of Boilers

3 SB.

Working Pressure

220

Tested by hydraulic pressure to

380

Date of test

3 9. 11. 42
11. 11. 42
12. 11. 42

No. of Certificate

1014
1015
1016

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 Double improved high lift

Area of each set of valves per boiler

per Rule
as fitted8.88
9.8

Pressure to which they are adjusted

225

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

yes

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

16'-2 3/32"

Length

12'-6"

Shell plates: Material

S

Tensile strength

30-34

Thickness

1 33/64"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR

long. seams

TR. DBS.

Diameter of rivet holes in

circ. seams
long. seams

1 9/16"

Pitch of rivets

4 1/8"

10 1/4"

Percentage of strength of circ. end seams

plate
rivets62.1
47

Percentage of strength of circ. intermediate seam

plate
rivets

Percentage of strength of longitudinal joint

plate
rivets
combined84.75
88.7
87.4

Thickness of butt straps

outer
inner1 9/32"
1 9/32"

No. and Description of Furnaces in each Boiler

3 cf.

Material

S.

Tensile strength

26-30

Smallest outside diameter

47 23/32"

Length of plain part

top
bottom

Thickness of plates

crown
bottom

47/164"

Description of longitudinal joint

weld

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

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 13/32"

Pitch of stays 22 1/4" x 18 1/2"

How are stays secured

Double nuts

Tube plates: Material

front
back

S

Tensile strength

26-30

Thickness

15/16"
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

S

Tensile strength

29-33

Depth and thickness of girder

at centre

11 3/4" x 1" Dble

Length as per Rule

46 1/2"

Distance apart

8 1/2" wing 9" Centre

No. and pitch of stays

in each

3 @ 11 1/8"

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

13/16"

Back

23/32"

Top

13/16"

Bottom

29/32"

Pitch of stays to ditto: Sides

11 1/8" x 8 1/2"

Back

9 3/4" x 8"

Top

11 1/8" x 9"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

15/16"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

15/16"

Pitch of stays at wide water space

15 3/8" x 8"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay,
or
Over threads

3 1/4" + 3 1/2"

No. of threads per inch

6

Screw stays: Material

S

Tensile strength

26-30

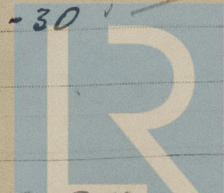
Diameter

At turned off part,
or
Over threads

1 3/4" + 2"

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, or Over threads 2 1/8" & 2" ✓
No. of threads per inch 9
Tubes: Material L.W. Steel External diameter { Plain 2 1/2" ✓ Stay 2 1/2" ✓ Thickness { 8 L.W. 4 ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 x 3 7/8" Manhole compensation: Size of opening in
shell plate none Section of compensating ring _____ No. of rivets and diameter of rivet holes 21" ✓
Outer row rivet pitch at ends _____ Depth of flange if manhole flanged _____ 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
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 N.E.M. Combustion Chamber Manufacturers of { Tubes Talbot Stead ✓
Steel forgings Headers Stewarts & Lloyds ✓
Steel castings _____
Number of elements 36 ✓ Material of tubes S.D. Steel ✓ Internal diameter and thickness of tubes 1.273 7 W.G. ✓
Material of headers S.D. Steel ✓ Tensile strength 26-28 ✓ 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" ✓ Are the safety valves fitted with easing gear yes ✓
Pressure to which the safety valves are adjusted 225 lbs. ✓ Hydraulic test pressure: _____
tubes 1500 ✓ Headers 660 ✓ 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 NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
The foregoing is a correct description,
Harry Hunter Manufacturer.
DIRECTOR

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }
See Melby Report Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits _____

Is this Boiler a duplicate of a previous case yes ✓ If so, state Vessel's name and Report No. Standard Tankers N.W.C. 100141

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers & Superheaters have been constructed under Special Survey in accordance with the approved Plans & the Requirements of the Rules & Specification
The materials & workmanship are good & the boilers proved sound & tight under hydraulic test

Survey Fee ... £ See Melby Rpt. When applied for, 19
Travelling Expenses (if any) £ When received, 19

R. C. Moffitt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 19 JAN 1943

Assigned

See Std. J.E. 33571



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Foundation