

REPORT ON BOILERS.

No. 77989

Received at London Office JUN 21 1924

Date of writing Report 1924 When handed in at Local Office 20/6/1924 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle Date, First Survey 27 Feb 1924 Last Survey 17 June 1924

11470 on the Hull & WOODCOTE (Number of Visits —) Tons { Gross 1740 Net 720

Master Built at Bumbland By whom built Bumbland S. G. L. Yard No. 131 When built 1924

Engines made at Newcastle By whom made North Eastern Marine Engineering Co. Ltd. Engine No. 2567 When made 1924

Boilers made at Newcastle By whom made North Eastern Marine Engineering Co. Ltd. Boiler No. 2567 When made 1924
Wansworth Wimplesdon & Gosson District

Nominal Horse Power 164 Owners J. G. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Spencer & Sons Ltd. & Edwille & Sons Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 2368 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers One single-end cylindrical multitubular Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 21 May 1924 No. of Certificate 9824 Can each boiler be worked separately

Area of Firegrate in each Boiler 56 sq ft No. and Description of safety valves to each boiler Two Spring-loaded

Area of each set of valves per boiler { per Rule 15.1 sq ft as fitted 16.59 sq ft Pressure to which they are adjusted 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 on uptakes and bunkers or woodwork 14" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14'-6 7/8" Length 11'-6" Shell plates: Material Steel Tensile strength 28/32 Tons

Thickness 1 3/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end 13/16" inter. 3 3/4" Pitch of rivets { 8 3/4"

Long. seams Jette Rivet N.B.S. Diameter of rivet holes in { circ. seams 1 3/4" long. seams 1 1/4" Percentage of strength of circ. end seams { plate 66.75 rivets 45.2 Percentage of strength of circ. intermediate seam { plate 85.71 rivets 91 Working pressure of shell by Rules 180 lbs

Percentage of strength of longitudinal joint { plate 85.71 rivets 91 combined 89.6

Thickness of butt straps { outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler Three Deighton

Material Steel Tensile strength 26/30 Tons Smallest outside diameter 41 7/16"

Length of plain part { top bottom Thickness of plates { crown 1 7/32" bottom 1 1/32" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 186 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 1 13/32" Pitch of stays 25 1/2" x 22 1/4"

How are stays secured Double nuts & washers 3 1/2" Working pressure by Rules 181 lbs

Tube plates: Material { front back Steel Tensile strength { 26/30 Tons Thickness { 1 5/16" 3/4" Working pressure { front 198 lbs back 356 lbs

Mean pitch of stay tubes in nests 7 1/2" Pitch across wide water spaces 14 1/2" x 7 1/2" Working pressure { front 198 lbs back 356 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 26/30 Tons Depth and thickness of girder at centre 8 1/2" x 1 1/2" Length as per Rule 30" Distance apart 10 1/4" No. and pitch of stays in each Two - 9 3/4" Working pressure by Rules 207 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 Tons Thickness: Sides 23/32" Back 3/4" Top 23/32" Bottom 1"

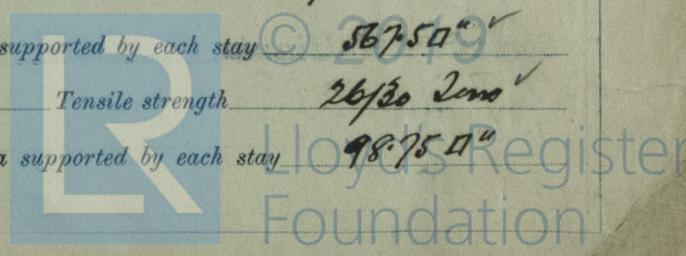
Pitch of stays to ditto: Sides 10 1/4" x 9 3/4" Back 10 1/4" x 9 1/4" Top 10 1/4" x 9 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 181 lbs Front plate at bottom: Material Steel Tensile strength 26/30 Tons Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 7/8"

Pitch of stays at wide water space 14 1/2" x 10 1/16" Are stays fitted with nuts or riveted over nuts

Working Pressure 193 lbs Main stays: Material Steel Tensile strength 28/32 Tons Diameter { At body of stay, 3 1/2" No. of threads per inch Six Area supported by each stay 567.5 sq in

Working pressure by Rules 190 lbs Screw stays: Material Steel Tensile strength 26/30 Tons Diameter { At turned off part, 1 3/4" No. of threads per inch Nine Area supported by each stay 98.75 sq in



Working pressure by Rules 184lb Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2"
 No. of threads per inch nine Area supported by each stay 126750" Working pressure by Rules 195lb
 Tubes: Material Iron External diameter ^{Plain} 2 1/2" Thickness ^{8-L.S.G.} 3/8" No. of threads per inch nine
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 250lb Manhole compensation: Size of opening in
~~End~~ plate Flanged 16"x12" 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 1/4" Steam Dome: Material Iron
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint ^{Plate} _____
 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} _____
 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 Yes ✓

The foregoing is a correct description,
 THE NORTH EASTERN MARINE ENGINEERING CO., LTD.
 Manufacturer.

J. J. Harrison
 Secretary

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

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

This Boiler was constructed under Special Survey. The materials & workmanship are sound and good. It satisfactorily withstood a hydraulic pressure test, was efficiently installed on board the vessel and the safety valves were adjusted under steam. In our opinion the vessel is eligible for classification ✓

Survey Fee £ See Machinery Rpt : | When applied for, 192
 Travelling Expenses (if any) £ _____ : | When received, 192

R. Lee Amess L. R. Home.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 24 JUN 1924

Assigned _____



© 2019

Lloyd's Register
 Foundation