

# REPORT ON BOILERS.

No. 92498

Received at London Office

Writing Report 29/4/1935 When handed in at Local Office 29/4/1935 Port of **NEWCASTLE-ON-TYNE** MAY 1935

Survey held at Wallsend-on-Tyne Date, First Survey 21<sup>st</sup> March Last Survey 18/4/1935

On the Steel Sc. "HOPETOR" (Number of Visits       ) Tons { Gross 4980 Net 3099

Built at        By whom built        Yard No.        When built       

Made at        By whom made        Engine No.        When made       

Made at        By whom made        Boiler No.        When made       

Horse Power        Owners        Port belonging to       

## TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Materials of Steel        (Letter for Record       )

Working Surface of Boilers        Is forced draught fitted        Coal or Oil fired       

Description of Boilers        Working Pressure       

hydraulic pressure to        Date of test        No. of Certificate        Can each boiler be worked separately       

Firegrate in each Boiler        No. and Description of safety valves to each boiler       

Each set of valves per boiler { per Rule        as fitted        Pressure to which they are adjusted        Are they fitted with easing gear       

For donkey boilers, state whether steam from main boilers can enter the donkey boiler       

Distance between boilers or uptakes and bunkers or woodwork        Is oil fuel carried in the double bottom under boilers       

Distance between shell of boiler and tank top plating        Is the bottom of the boiler insulated       

Internal dia. of boilers        Length        Shell plates: Material        Tensile strength       

Are the shell plates welded or flanged        Description of riveting: circ. seams { end        inter.       

Diameter of rivet holes in { circ. seams        long. seams        Pitch of rivets {       

Percentage of strength of circ. end seams { plate        rivets        Percentage of strength of circ. intermediate seam { plate        rivets       

Percentage of strength of longitudinal joint { plate        rivets        combined        Working pressure of shell by Rules       

of butt straps { outer        inner        No. and Description of Furnaces in each Boiler       

Tensile strength        Smallest outside diameter       

plain part { top        bottom        Thickness of plates { crown        bottom        Description of longitudinal joint       

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

Stays in steam space: Material        Tensile strength        Thickness        Pitch of stays       

Stays secured        Working pressure by Rules       

Stays: Material { front        back        Tensile strength {        Thickness {       

Pitch of stay tubes in nests        Pitch across wide water spaces        Working pressure { front        back       

Combustion chamber tops: Material        Tensile strength        Depth and thickness of girder       

Length as per Rule        Distance apart        No. and pitch of stays       

Working pressure by Rules        Combustion chamber plates: Material       

Thickness: Sides        Back        Top        Bottom       

Stays to ditto: Sides        Back        Top        Are stays fitted with nuts or riveted over       

Working pressure by Rules        Front plate at bottom: Material        Tensile strength       

Lower back plate: Material        Tensile strength        Thickness       

Stays at wide water space        Are stays fitted with nuts or riveted over       

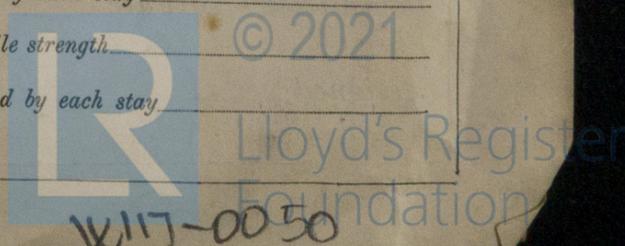
Working pressure        Main stays: Material        Tensile strength       

At body of stay,        No. of threads per inch        Area supported by each stay       

Over threads        pressure by Rules        Screw stays: Material        Tensile strength       

At turned off part,        No. of threads per inch        Area supported by each stay       

Over threads       



Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, or Over threads } \_\_\_\_\_  
 No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
 Tubes: Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Stay \_\_\_\_\_ } Thickness { \_\_\_\_\_ } No. of threads per inch \_\_\_\_\_  
 Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of 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 \_\_\_\_\_ 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 \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and d stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
 How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_ Diameter of rivet hole of rivets in outer row in dome connection to shell \_\_\_\_\_

Type of Superheater The Superheater Co. Ltd. Manufacturers of { Tubes See certificates for tests etc Steel castings \_\_\_\_\_ }  
 Number of elements 72 in each boiler Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 1/4" x 1/8"  
 Material of headers Forged Steel Tensile strength ✓ Thickness ✓ Can the superheater be 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 3.94 sq ins Are the safety valves fitted with easing gear yes Working pressure Rules 277 lb/in<sup>2</sup> Pressure to which the safety valves are adjusted 205 lb/in<sup>2</sup> Hydraulic test tubes 1000 lb/in<sup>2</sup>, castings 600 lb/in<sup>2</sup> and after assembly in place 400 lb/in<sup>2</sup> Are drain cocks or 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 foregoing is a correct description, \_\_\_\_\_  
 \_\_\_\_\_

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

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

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
Superheaters fitted to all three main boilers.  
New headers and other steam pipes fitted for new arrangement made solid drawn steel and tested to 600 lb/in<sup>2</sup>.  
All valves and connections made of cast steel and tested to 400 lb/in<sup>2</sup>.  
Cylinders and valve liners etc made of suitable material for superheated steam.  
Superheater safety valves adjusted under steam as above.  
Main steam pipes tested by hydraulic pressure to 600 lb/in<sup>2</sup>.  
H.P. cylinder and valve liners renewed. H.P. piston rod skimmed and new piston rings fitted. M.P. piston rod skimmed up and piston adjusted. H.P. piston valve and liner renewed and valve rod skimmed.  
New neck and gland bushes fitted to H.P. piston & valve rods and M.P. piston rod.

Survey Fee ... .. £ : : When applied for, 10  
 Travelling Expenses (if any) £ : : When received, 10

A. Whiddeell  
 Engineer Surveyor to Lloyd's Register of

Committee's Minute FRI. 10 MAY 1935

Assigned See other rpt.  
Nwc. 92498

