

REPORT ON BOILERS.

Received at London Office 26 FEB 1930

Date of writing Report to When handed in at Local Office 21.2.1930 Port of Newcastle-on-Tyne

No. in Survey held at Wallsend-on-Tyne Date, First Survey 4 Feb 1919 Last Survey 14 Feb 1930

Reg. Book. on the New Steel No 1 "Luxcor." (Number of Visits ---) Tons } Gross 6554 Net 3926

Master Built at Jarrow By whom built Palmers S B & Co Yard No. 994 When built 1930
Engines made at Wallsend By whom made Wallsend Slipway & E Co Ltd Engine No. 885 When made 1930
Boilers made at Wallsend By whom made Wallsend Slipway & E Co Ltd Boiler No. 885 When made 1930
Nominal Horse Power 449 Owners H. E. Moss & Co Port belonging to Liverpool

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel Debolville & Sons Ltd. (Letter for Record 5)

Total Heating Surface of Boilers 216 H² Is forced draught fitted Yes. Coal or Oil fired oil

No. and Description of Boilers Two single ended. Working Pressure 120 lbs

Tested by hydraulic pressure to 230 Date of test 28.8.29 No. of Certificate 380 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler O.F. only. No. and Description of safety valves to each boiler Two spring loaded, High lift.

Area of each set of valves per boiler { per Rule 12.032 as fitted 4.96 } Pressure to which they are adjusted 125 lbs 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 2'-0" Is oil fuel carried in the double bottom under boilers Yes.

Smallest distance between shell of boiler and tank top plating 2'-1" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 10'-4 3/4" Length 11'-6" Shell plates: Material Steel Tensile strength 29 to 33 tons

Thickness 5/8" Are the shell plates welded or flanged No Description of riveting: circ. seams { end S.R. inter. 2.095 } long. seams D.R.D.B.S. Diameter of rivet holes in { circ. seams 15/16" long. seams 13/16" } Pitch of rivets { 4 1/16" }

Percentage of strength of circ. end seams { plate 55.8 rivets 48 } Percentage of strength of circ. intermediate seam { plate 81.4 rivets 83 }

Percentage of strength of longitudinal joint { plate 83 rivets 91.2 } Working pressure of shell by Rules 124 lbs

Thickness of butt straps { outer 5/8" inner 5/8" } No. and Description of Furnaces in each Boiler Two corrugated (Deighton)

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 2'-1 1/4"

Length of plain part { top bottom } ✓ Thickness of plates { crown 3/8" bottom } Description of longitudinal joint Weld

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

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1" Pitch of stays 20 3/4" x 2 1/2"

How are stays secured D. nuts Working pressure by Rules 121 lbs. 3/4"

Tube plates: Material { front back } Steel Tensile strength { 26 to 30 tons } Thickness { 3/4" 1/16" }

Mean pitch of stay tubes in nests 10 5/8" Pitch across wide water spaces 13 1/4" x 4 1/4" Working pressure { front 120.6 lbs back 144 lbs }

Girders to combustion chamber tops: Material Steel Tensile strength 29 to 33 tons Depth and thickness of girder

at centre 2 @ 5/8" x 4 1/8" Length as per Rule 2'-6 3/8" Distance apart 10" No. and pitch of stays

in each 2 @ 9 1/16" Working pressure by Rules 123 lbs. Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 19 3/8" Back 19 3/8" Top 19 3/8" Bottom 19 3/8"

Pitch of stays to ditto: Sides 9 1/16" x 10" Back 10" x 9" Top 10" x 9 1/16" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 128 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 3/4" Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 1/16"

Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Nuts

Working Pressure 13 1/4 lbs. Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter { At body of stay, or Over threads } 2 3/4" No. of threads per inch 6 Area supported by each stay 415 sq"

Working pressure by Rules 133 lbs Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter { At turned off part, or Over threads } 1 1/2" No. of threads per inch 9 Area supported by each stay 94.4 sq"

Working pressure by Rules 132 lbs Are the stays drilled at the outer ends no Margin stays: Diameter 1 5/8" At turned off part, or Over threads

No. of threads per inch 9 Area supported by each stay 108 sq" Working pressure by Rules 140

Tubes: Material Steel External diameter 2 1/2" Thickness 11 L.S.G. 1/4" S116 No. of threads per inch 9

Pitch of tubes 3 1/8" x 3 3/4" Working pressure by Rules 140 nests Manhole compensation: Size of opening in shell plate 19 1/2" x 15 1/8" Section of compensating ring 10" x 5/8" No. of rivets and diameter of rivet holes 44 @ 2 1/32"

Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged 2 5/8" Steam Dome: Material None.

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 Babcock & Wilcox (nests in uptake) up to 2nd. Manufacturers of Steel castings

Number of elements 36 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 1/2" x 10 wls.

Material of headers Steel Tensile strength ✓ Thickness ✓ Can the superheater be shut off and the boiler be worked separately yes

Area of each safety valve 1.074 sq" Are the safety valves fitted to every part of the superheater which can be shut off from the boiler yes

Rules 120 lbs. Pressure to which the safety valves are adjusted 125 lbs. Working pressure as per tubes ✓ castings 360 lbs and after assembly in place 250 lbs Hydraulic test pressure: 250 lbs 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 foregoing is a correct description,
 FOR THE WALLSEND SURVEY & ENGINEERING CO. LIMITED.
A. Lang DIRECTOR Manufacturer.

Dates of Survey During progress of work in shops - - - See Incky Report. Are the approved plans of boiler and superheater forwarded herewith yes
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.) These Boilers have been built under Special Survey. Materials & workmanship good. Hydraulic tests satisfactory. They have been examined under steam & safety valves adjusted.

Survey Fee ... £ : ✓ : When applied for, 19
 Travelling Expenses (if any) £ : ✓ : When received, 19

William D. Bates
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 4 MAR 1930
 Assigned See other J.C. Rpt.

