

REPORT ON BOILERS.

No. 16293

Received at London Office 21/11/1925

Date of writing Report 20th April 1925 When handed in at Local Office 30 Apr 1925 Port of WEST HARTLEPOOL
 No. in Survey held at West Hartlepool Date, First Survey 23 Sept 1924 Last Survey 21 April 1925
 1. Book. 8371 on the S.S. "CITY OF KIMBERLEY" (Number of Visits 92) Tons {Gross 6204.93
 Net 3979.59
 Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 967 When built 1925
 Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 967 When made 1925
 Boilers made at ditto By whom made ditto Boiler No. 967 When made 1925
 Nominal Horse Power 592 Owners Ellerman & Bucknall S. S. Co. Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. Colville & Sons Ltd. (Letter for Record S)
 Total Heating Surface of Boilers 8379 ³⁵⁸ Is forced draught fitted yes Coal or Oil fired either
 2. 5. and Description of Boilers Three Single ended. Working Pressure 225
 Tested by hydraulic pressure to 388 Date of test 23.1.25 No. of Certificate 3653 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 69 ^{11.64} No. and Description of safety valves to each boiler 2 Cockburn Mechanical high lift
 Area of each set of valves per boiler {per Rule 11.64 as fitted 14.14} Pressure to which they are adjusted 230 Are they fitted with easing gear yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no
 Smallest distance between ~~boilers~~ or uptakes and bunkers or ~~woodwork~~ 16" Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating yes Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 16'-0" Length 12'-4" Shell plates: Material Steel Tensile strength 28/30
 Thickness 1 5/8" Are the shell plates welded or flanged yes Description of riveting: circ. seams {end DR Lap
 inter Tub. R. Lap}
 Long. seams Tub. R. D.B.S. Diameter of rivet holes in {circ. seams 1 5/8" long. seams 1 5/8"} Pitch of rivets {5" 11 3/16"}
 Percentage of strength of circ. end seams {plate Shell rivets flanged. 85.5} Percentage of strength of circ. intermediate seam {plate 67.5 rivets 62.8}
 Percentage of strength of longitudinal joint {plate 88 rivets 88.6} Working pressure of shell by Rules 226
 Thickness of butt straps {outer 1 1/4" inner 1 3/8"} No. and Description of Furnaces in each Boiler 4 Deightons
 Material Steel Tensile strength 26/30 Smallest outside diameter 39 3/8"
 Length of plain part {top ✓ bottom ✓} Thickness of plates {crown 2 1/2" bottom 3 1/2"} Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 244
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 17" x 20 3/4"
 How are stays secured Nuts & washers Working pressure by Rules 230 15"
 Tube plates: Material {front Steel back Steel} Tensile strength {26/30 26/30} Thickness {13 1/16" 13 1/16"}
 Mean pitch of stay tubes in nests 12" x 8" Pitch across wide water spaces 14" Working pressure {front 233 back 237}
 Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder
 at centre 9 3/4" x 1 3/4" Length as per Rule 36 7/16" Distance apart 8 3/4" No. and pitch of stays
 in each Three 9" Working pressure by Rules 226 Combustion chamber plates: Material Steel
 Tensile strength 26/30 Thickness: Sides 23 3/32" Back 23 3/32" Top 23 3/32" Bottom 7 3/8"
 Pitch of stays to ditto: Sides 8 3/4" x 9" Back 8 3/4" x 9" Top 8 3/4" x 9" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 230 Front plate at bottom: Material Steel Tensile strength 26/30
 Thickness 15 1/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 29 3/32"
 Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over nuts
 Working Pressure 243 Main stays: Material Steel Tensile strength 28/32
 Diameter {At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 20 3/4" x 14"
 Over threads ✓ Working pressure by Rules 228 Screw stays: Material Steel Tensile strength 26/30
 Diameter {At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 8 3/4" x 9"
 Over threads ✓

Working pressure by Rules 230 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 Area supported by each stay 9" x 11 3/8" Working pressure by Rules 242
Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 WG ✓ 5/16" x 1/4" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4" x 4" Working pressure by Rules 275 + 243 Manhole compensation: Size of opening in shell plate 16 x 21 ✓ Section of compensating ring 21" x 1 5/8" No. of rivets and diameter of rivet holes 28 1 5/8"
Outer row rivet pitch at ends 11" ✓ Depth of flange if manhole flanged ✓ 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 Schmidt ✓ Manufacturers of { Tubes Marine & Loco. Superheater Co. ✓ Steel castings ✓
Number of elements 216 Material of tubes Steel Internal diameter and thickness of tubes 15 3/4" m. 2 1/2" m
Material of headers Forged steel Tensile strength _____ Thickness 1" Can the superheater be shut off and the boiler be worked separately yes ✓ 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. ft. ✓ Are the safety valves fitted with easing gear yes ✓ Working pressure as per Rules 225 lb Pressure to which the safety valves are adjusted 235 lb ✓ Hydraulic test pressure: tubes 675 lb ✓, castings 675 lb and after assembly in place 450 lb ✓ Are drain cocks or valves fitted to free the superheater from water where necessary yes ✓
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes ✓

FOR THE CENTRAL MARINE ENGINE WORKS.
The foregoing is a correct description,

John. H. Geering Manufacturer.

DIRECTOR:

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

See attached report on Machinery

Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

Total No. of visits ✓

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

A 25 ton evaporator fitted, the coils of which were tested to 450 lb., and the body to 50 lbs. per square inch.

See machinery report accompanying

Survey Fee ... £ See Mar. Rpt. When applied for, 192
Travelling Expenses (if any) £ See Mar. Rpt. When received, 192

R. D. Shilston

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 MAY 1925

Assigned

See other rpt



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