

Received at London Office
 Date of writing Report 25/11/19 191 When handed in at Local Office 25/11/19 191 Port of MIDDLESBRO'
 No. in Survey held at Stockton-on-Tees Date, First Survey 6th August Last Survey 17 November 1919
 Reg. Book. (Number of Visits 11) Gross 1688.08
5690 on the Hull auxiliary Tugs Lt H.M.S. Lt "DANEDRONNING" (YARD N° 2) Tons Net 1229.08
 Master A. Sandry Built at Ridbyham By whom built Ridbyham Yards Ltd. When built 1920
 Engines made at Holby By whom made Holby Diesel Motor Fabric When made 1920
 Pilers made at Stockton By whom made Messrs Riley Bros Ltd (N° 5207) When made 1919
 Registered Horse Power 320 Owners J. & R. Sandry & Co. Ltd. (Messrs J. & R. Sandry & Co. Ltd.) Port belonging to Copplestone

ULTITUBULAR BOILERS—~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel *Mason John Spencer & Sons Ltd*

Letter for record (5)) Total Heating Surface of Boilers 555 ft^2 Is forced draft fitted *No* No. and Description of
Boilers *One single ended* Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 17.11.19
No. of Certificate 6052 Can each boiler be worked separately ☒ Area of fire grate in each boiler 28 ft^2 No. and Description of
Safety valves to each boiler *2 off directly spring loaded* Area of each valve 3.14 ft^2 Pressure to which they are adjusted 100 lbs.
Are they fitted with easing gear *yes* In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *to main boiler*
Smallest distance between boilers or uptakes and bunkers or woodwork 23" Mean dia. of boilers 8'-8" Length 8'-8"
Material of shell plates *steel* Thickness $\frac{17}{32}$ Range of tensile strength 28-32 Are the shell plates welded or flanged *no*
Descrip. of riveting: cir. seams *single lap* long. seams 2 B-2 Riv Diameter of rivet holes in long. seams $\frac{13}{16}$ Pitch of rivets $4\frac{1}{2}$ "
Pitch of plates or width of butt straps $8\frac{1}{2} \times \frac{1}{2}$ " Per centages of strength of longitudinal joint rivets 97.0
plates 82.0 Working pressure of shell by
rules 112 Size of manhole in shell $17\frac{1}{2} \times 15\frac{1}{2}$ Size of compensating ring $7 \times \frac{13}{16}$ No. and Description of Furnaces in each
Boiler 2 plain Material *steel* Outside diameter 32" Length of plain part top $63\frac{3}{8}$ " Thickness of plates crown $\frac{17}{32}$
bottom 89" bottom $\frac{17}{32}$
Description of longitudinal joint *weld* No. of strengthening rings *none* Working pressure of furnace by the rules 107 Combustion chamber
Material *steel* Thickness: Sides $\frac{17}{32}$ Back $\frac{17}{32}$ Top $\frac{17}{32}$ Bottom $\frac{17}{32}$ Pitch of stays to ditto: Sides 9×9 Back $9 \times 8\frac{1}{2}$ "
Pitch 9×8 " If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules 150 Material of stays *steel* Diameter at
smallest part .96 Area supported by each stay 76.5 Working pressure by rules 100 End plates in steam space: Material *steel* Thickness $\frac{3}{4}$ "
Pitch of stays $14\frac{3}{4} \times 15\frac{1}{2}$ How are stays secured *nuts & washers* Working pressure by rules 100 Material of stays *steel* Diameter at smallest part 2.87
Area supported by each stay 228 Working pressure by rules 104 Material of Front plates at bottom *steel* Thickness $\frac{3}{4}$ " Material of
over back plate *steel* Thickness $\frac{3}{4}$ " Greatest pitch of stays $13\frac{1}{2} \times 9$ Working pressure of plate by rules 147 Diameter of tubes $3\frac{1}{4}$ "
Pitch of tubes $4\frac{1}{2} \times 4\frac{1}{4}$ Material of tube plates *steel* Thickness: Front $\frac{3}{4}$ Back $\frac{5}{8}$ Mean pitch of stays *11* Pitch across wide
inter spaces $13\frac{1}{2}$ " Working pressures by rules 116 Girders to Chamber tops: Material *steel* Depth and thickness of
Girder at centre $5\frac{1}{2} \times 1\frac{1}{4}$ Length as per rule 26" Distance apart 8" Number and pitch of Stays in each 2 @ 9"
Working pressure by rules 113 Superheater or Steam chest: how connected to boiler *none* Can the superheater be shut off and the boiler worked
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
Stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

The foregoing is a correct description,
RILEY BROS. (COULERMAKERS) LIMITED. *Manufacturers.*

Notes	During progress of work in shops - -	1919. Aug 6-12. Sep 22-24-29. Oct 13-17-24. Nov 5-11-17	Is the approved plan of boiler forwarded herewith <i>Y</i> , <i>no</i>
Survey			
While building	During erection on board vessel - - -		Total No. of visits <i>11</i> Forwarded with Report <i>No 10505</i>

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey: is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results. The boiler is to be forwarded to Copenhagen

duplex feed pump $4\frac{1}{2} \times 2 \times 4$ and a feed injector are fitted to the donkey boiler.

Survey Fee ... £ 2-2-0 When applied for, Monthly 191 ^{d/c}

Travelling Expenses (if any) £ : : When received, 191

Wm Morrison
Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 47 DEC. 1920
Signed

W473 - 0178