

REPORT ON BOILERS.

No. 12110

Received at London Office 11 OCT 1924

Date of writing Report 1924 When handed in at Local Office 9.10.24 Port of Middlesbrough

No. in Reg. Book. Survey held at Stockton-on-Tees Date, First Survey 1st August 1924 Last Survey 6th October 1924

on the S.S. DRAKEPOOL (Number of Visits 11) Tons {Gross Net

Master Built at Stockton By whom built Roper S B & Rybo Yard No. 546 When built 1924

Engines made at Stockton By whom made Thos Blair & Co Ltd Engine No 1957 When made 1924

Boilers made at Stockton By whom made Thos Riley & Co Ltd Boiler No 5532 When made 1924

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. Colville & Son Ltd & Steel Co of Scotland (Letter for Record (S))

Total Heating Surface of Boilers 975 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single ended Working Pressure 110

Tested by hydraulic pressure to 200 Date of test 6.10.24 No. of Certificate 6401 Can each boiler be worked separately

Area of Firegrate in each Boiler 34.3 sq ft No. and Description of safety valves to each boiler 2 Direct Spring - "High Lift"

Area of each set of valves per boiler {per Rule 7.06 as fitted 7.96 Pressure to which they are adjusted 105 Are they fitted with easing gear No

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 13ft on upper deck Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 10'-6" Length 10'-0" Shell plates: Material Steel Tensile strength 28-32

Thickness 21/32 Are the shell plates welded or flanged No Description of riveting: circ. seams {end 2 Riv & Zap inter. 15" 16" 15" 16" Pitch of rivets {3" x 6" 3 7/8"

Long. seams 2 Butt 2 Riweld Diameter of rivet holes in {circ. seams 15" 16" long. seams 15" 16" Percentage of strength of circ. end seams {plate 68.66 rivets 50.2 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 75.81 rivets 83.70 combined Working pressure of shell by Rules 116 lbs

Thickness of butt straps {outer 9 5/8" x 7/16" inner 9 5/8" x 9/16" No. and Description of Furnaces in each Boiler Two plain

Material Steel Tensile strength 26-30 tons Smallest outside diameter 39"

Length of plain part {top 74 1/16" bottom 81" Thickness of plates {crown 9/16" bottom 9/16" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 103 lbs

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 21/32 F 3/8" Pitch of stays 18" x 18" to 19" x 15" tubes

How are stays secured Double nuts 7/8" x 5/8" loose washers Working pressure by Rules 121 lbs

Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons Thickness {3/8" 3/8"

Mean pitch of stay tubes in nests 10 3/8" Pitch across wide water spaces 14" x 9" Working pressure {front 136 lbs back 127 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 6" x 1 1/4" Length as per Rule 28" Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 8 3/4" Working pressure by Rules 104 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 1/2" Back 17/32" Top 1/2" Bottom 3/4"

Pitch of stays to ditto: Sides 9 1/2" x 8 3/4" Back 10" x 9" Top 9 1/2" x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 101 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 27/32

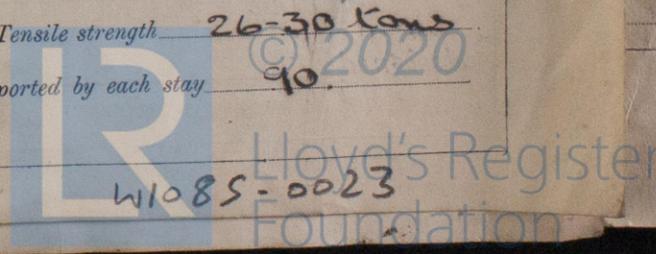
Pitch of stays at wide water space 14" x 10" Are stays fitted with nuts or riveted over nuts

Working Pressure 197 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter {At body of stay 2 3/8" No. of threads per inch 6 Area supported by each stay 351

Working pressure by Rules 112 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter {At turned off part 1 3/8" No. of threads per inch 9 Area supported by each stay 90



Working pressure by Rules 112 lbs Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, Over thread 1 1/2"

No. of threads per inch 9 Area supported by each stay 110 Working pressure by Rules 113 lbs

Tubes; Material Iron External diameter Plain 3 1/2" Stay 3" Thickness 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 130 lbs Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 7 x 3/4" curved No. of rivets and diameter of rivet holes 36 @ 1 1/2"

Outer row rivet pitch at ends 6" 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

Manufacturers of Tubes Steel castings

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 _____ Hydraulic test pressure: _____

Pressure to which the safety valves are adjusted _____

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

FOR RILEY BROS. (BOILERMAKERS) LTD.
The foregoing is a correct description,
W. E. Morrison Manufacturer.

Dates of Survey During progress of work in shops -- 1924 Aug. 1, 7, 27, Sep. 2, 11, 14, 26 Are the approved plans of boiler and superheater forwarded herewith yes
 while building During erection on board vessel --- 24, Oct. 16 (If not state date of approval.)

Total No. of visits 11

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

This boiler has now been satisfactorily secured on board and fitted in accordance with the Rules, examined under steam and safety valves adjusted

W. E. Morrison

Survey Fee ... £ 6 : 10 : 0 When applied for, MONTHLY A/c. 192

Travelling Expenses (if any) £ ✓ : : When received, 192

W. E. Morrison
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 2 DEC 1924

Assigned _____