

Rpt. 5.

REPORT ON BOILERS.

Sub No. 4302
Rec No. 49,808
FRI. 15 DEC 1905

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

No. in Survey held at Stockton

Date first Survey 13th Sept.

Last Survey 13 Dec 1905

Reg. Book.

on the Donkey Boiler (No. 3581) 1/2 Alga

(Number of Visits 1)

Tons ^{Gross} 2752
_{Net} 1800

Master L. Randich Built at Newcastle By whom built S. Hunter & W. Richardson When built 1905

Engines made at Sunderland By whom made Richardson Westgate & Co. Ltd when made 1905

Donkey Boilers made at Stockton By whom made Riley Bros (Boilermakers) Ltd when made 1905

Registered Horse Power _____ Owners Alga S. Co. Ltd. Port belonging to Liester.

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John Spencer & Sons Ltd

(Letter for record (S) _____) Total Heating Surface of Boilers 720 sq ft Is forced draft fitted _____ No. and Description of Boilers One Cyl. Multi single ended Working Pressure 90 lb Tested by hydraulic pressure to 180 lb Date of test 14.10.05

No. of Certificate 3535 Can each boiler be worked separately Area of fire grate in each boiler 25.5 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 4.9 Pressure to which they are adjusted 90

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 No side bunkers Mean dia. of boilers 9'-6" Length 8'-6"

Material of shell plates Steel Thickness 7/16" Range of tensile strength 27/32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams S.P. Lap long. seams Treb. Riv. Lap Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4 1/8"

Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint rivets 75.8 Working pressure of shell by rules 90.6 lb Size of manhole in shell 16"x21" Size of compensating ring 9"x3 1/4" plate 74.24

boiler Two plain Material steel Outside diameter 2'-10" Length of plain part 5'-3 3/4" Thickness of plates 1 1/2"

Description of longitudinal joint welded No. of strengthening rings Working pressure of furnace by the rules 90.8 Combustion chamber plates: Material Steel Thickness: Sides 15/32" Back 17/32" Top 7/16" Bottom 9/16" Pitch of stays to ditto: Sides 7"x9" Back 9"x10"

Top 7"x8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 96 lb Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 72 sq in Working pressure by rules 125 End plates in steam space: Material Steel Thickness 13/16"

Pitch of stays 16"x18" How are stays secured by riv. stay Working pressure by rules 117 Material of stays Steel Diameter at smallest part 1 1/8"

Area supported by each stay 288 sq in Working pressure by rules 95.7 Material of Front plates at bottom Steel Thickness 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 11"x9" Working pressure of plate by rules 228 Diameter of tubes 3 1/2"

Pitch of tubes 4 1/2"x4 1/2" Material of tube plates Steel Thickness: Front 13/16" Back 9/16" Mean pitch of stays 10 3/8" Pitch across wide water spaces 13 1/2" Working pressures by rules 105 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5"x1 1/4" Length as per rule 24" Distance apart 8" Number and pitch of Stays in each two 7"

Working pressure by rules 94.8 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 holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____

If 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 _____

VERTICAL DONKEY BOILER—

No. _____ Description _____ Manufacturers of steel _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint Rivets _____ Plates _____ Working pressure of shell by rules _____ Thickness of shell crown plates _____

Radius of do. _____ No. of Stays to do. _____ Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____

Thickness of furnace plates _____ Description of joint _____ Working pressure of furnace by rules _____ Thickness of furnace crown plates _____

Stayed by _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

The foregoing is a correct description, _____

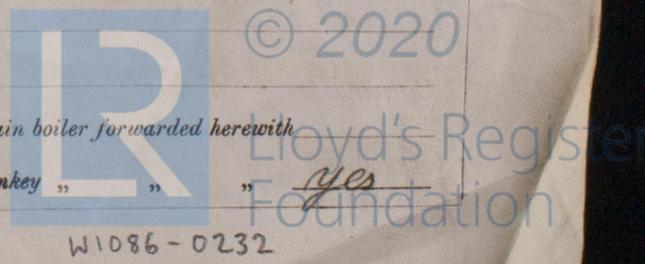
Riley Manufacturer. _____

Dates of Survey while building _____ During progress of work in shops _____ During erection on board vessel _____ Total No. of visits _____

1905: Sept. 13. 14. 21. 26 Oct. 10. 12. 14

Is the approved plan of main boiler forwarded herewith _____

" " " donkey " " Yes



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

This donkey boiler has been built under special survey.
 The materials and workmanship are good and efficient.
 After satisfactorily withstanding the hydraulic test it
 has been despatched for fitting on board.
 The boiler has been fitted properly & the safety
 set & tested under steam.
 J. H. Heck

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee...	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee ...	£	2	2	When received,
Travelling Expenses (if any) £	:	:	:	10 Nov 1905

Will be

R. D. Shelston / John H. Heck
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 15 DEC 1905

Assigned



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