

REPORT ON BOILERS.

Mdb. No. 4384
Std. No. 22614
WED. 14 FEB 1906

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

No. in Survey held at Stockton Date, first Survey 23rd Nov. 1905 Last Survey 1st Feb^y 1906
Reg. Book. (Number of Visits 50)

on the Donkey Boiler No 3594 for S. S. Ludgate Tons { Gross 3708.46
Net 2390.03

Master H. Nicholson Built at Sunderland By whom built Bartram & Sons When built 1906

Engines made at Sunderland By whom made J. Dickinson & Sons when made 1906

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

Registered Horse Power _____ Owners Dowgate Steamship Co. Ltd. Port belonging to London

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

(Letter for record (S)) Total Heating Surface of Boilers 830 ft² Is forced draft fitted. No. and Description of

Boilers One Cyl. Mult. Single ended Working Pressure 100 lb Tested by hydraulic pressure to 200 lb Date of test 28.12.05

No. of Certificate 3576 Can each boiler be worked separately Area of fire grate in each boiler 29 ft² No. and Description of

safety valves to each boiler 2 spring Area of each valve 7.07 in² Pressure to which they are adjusted 100 lb

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 Mean dia. of boilers 10'-0" Length 9'-6"

Material of shell plates Steel Thickness 5/8" Range of tensile strength 27/32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR lap long. seams DR. DR.S. Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4"

Lap of plates or width of butt straps 9 1/2" Per centages of strength of longitudinal joint rivets 82 Working pressure of shell by plate 76.5

rules 107 lb. Size of manhole in shell 16" x 21" Size of compensating ring 9" x 1" No. and Description of Furnaces in each

boiler Two plain Material steel Outside diameter 3'-0" Length of plain part top 6'-1 1/2" Thickness of plates crown } 19" bottom } 32"

Description of longitudinal joint welded No. of strengthening rings Working pressure of furnace by the rules 106 Combustion chamber

plates: Material Steel Thickness: Sides 15/32 Back 15/32 Top 9/16" Bottom 5/8" Pitch of stays to ditto: Sides 8 1/4" x 7" Back 7 1/4" x 8 1/4"

Top 7" x 12" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 105 lb Material of stays Steel Diameter at

smallest part 1 1/8" Area supported by each stay 78.4 in² Working pressure by rules 100.9 End plates in steam space: Material Steel Thickness 2 1/2"

Pitch of stays 18" x 18" How are stays secured DR riv. stays Working pressure by rules 123 Material of stays Steel Diameter at smallest part 2 1/4"

Area supported by each stay 324 in² Working pressure by rules 122 Material of Front plates at bottom Steel Thickness 3 1/2" Material of

Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 12 x 7 3/4" Working pressure of plate by rules 241 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates Steel Thickness: Front 2 1/2" Back 9/16" Mean pitch of stays 9 1/2" Pitch across wide

water spaces 13 1/2" Working pressures by rules 125 & 150 Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 7" x 1 1/2" Length as per rule 2'-2" Distance apart 12" Number and pitch of Stays in each two 7"

Working pressure by rules 122 lb 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 _____ 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 _____

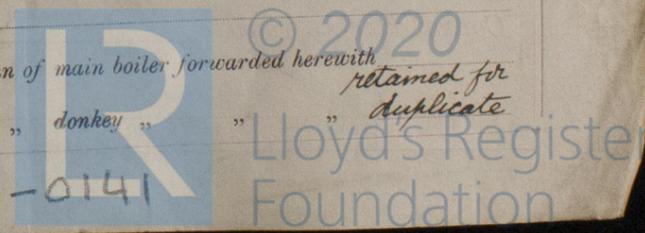
The foregoing is a correct description,

J. H. Riley Manufacturer.

1905 Nov. 23-27. Dec. 6. 8. 13. 19. 22. 28

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

Is the approved plan of main boiler forwarded herewith _____
" " " donkey " " _____
" " " " " " _____



W831-0141

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

This 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

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 | £ | : | : | 6.1.1906 |
| Donkey Boiler Fee ... | £ | 2 | 2 | When received. |
| Travelling Expenses (if any) £ | : | : | : | 12.1.1906 per sec. Ct. |

R.D. Shilston & R.W. Coomber.
 Engineer Surveyors to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 16 FEB 1906

Assigned



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 Foundation