

SS. "Harley"

REPORT ON BOILERS.

No. 4248.

Port of MIDDLESBROUGH-ON-TEES.Received at London Office MUN. 2 OCT. 1905

No. in Survey held at Stockton Date, first Survey 15th May 1905 Last Survey 28th July 1905
 Reg. Book. 174 on the Donkey Boiler No. 3523 for Furness Withy's S/S 283 Harley Tons { Gross 3518.24
 Master E. I. Smith Built at W Hartlepool By whom built Furness Withy & Co Ltd When built 1905
 Engines made at W Hartlepool By whom made Richardsons Westgarth & Co Ltd when made 1905
 Boilers made at Stockton By whom made Riley Bros when made 1905
 Registered Horse Power 319 Owners J & C Harrison Ltd Port belonging to London

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

(Letter for record (S)) Total Heating Surface of Boilers 1070 sq ft Is forced draft fitted No. and Description of Boilers One Cylindrical Tubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/7/05
 No. of Certificate 3493 Can each boiler be worked separately Area of fire grate in each boiler 35 sq ft No. and Description of safety valves to each boiler Two spring loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 185 lbs
 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 boiler or uptakes and bunkers or woodwork 18" Mean dia. of boilers 11'-0" Length 10'-6"
 Material of shell plates Steel Thickness 15/16" Range of tensile strength 28/32 Tons Are the shell plates welded or flanged No
 Descrip. of riveting: cir. seams I.R. Lap long. seams I.B. Staps Rivet diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/4"
 Lap of plates or width of butt straps 16" Per centages of strength of longitudinal joint 91.3% Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12" Size of compensating ring 6" brass 1 1/2" thick No. and Description of Furnaces in each boiler 2. Monitors Material Steel Outside diameter 3'-4 1/4" Length of plain part 7'-4 1/4" Thickness of plates 1 1/2"
 Description of longitudinal joint Welded No. of strengthening rings ✓ Working pressure of furnace by the rules 187 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4" Pitch of stays to ditto: Sides 7" x 7 7/8" Back 7 3/4" x 7 7/8"
 Top 7" x 7 7/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 185 lbs Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 75.3 sq in Working pressure by rules 202 End plates in steam space: Material Steel Thickness 1"
 Pitch of stays 15 1/2" x 15" How are stays secured Nuts & Washers Working pressure by rules 211 Material of stays Steel Diameter at smallest part 2 3/8" Exp
 Area supported by each stay 236.2 sq in Working pressure by rules 187.3 Material of Front plates at bottom Steel Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 1 3/2" x 7 5/8" Working pressure of plate by rules 296 Diameter of tubes 3 1/4"
 Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9" Pitch across wide water spaces 14" Working pressures by rules 196.5 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 3/4" x 1 3/4" Length as per rule 2'-6" Distance apart 7 7/8" Number and pitch of Stays in each 3, 7" Pitch
 Working pressure by rules 191.5 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes
 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,

Manufacturer.

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

Geo. W. Riley 1905: May 15-19 July 10-14-15-18-25-28.
Eight.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " " "

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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 & efficient
and when tested with hydraulic pressure was
found tight and satisfactory.*

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 ... | £ | : | : | 3.8. 1905 |
| Donkey Boiler Fee ... | £ | 2 | 2 | When received. |
| Travelling Expenses (if any) £ | : | : | : | 8.8. 1905 |

Geo A. Milner *P. J. Hudson*
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

TUES. 3 OCT 1905

Committee's Minute

Assigned



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