

REPORT ON BOILERS.

Hpl. No. 13021
No. 4622

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office **TUES. 24 JUL 1906**

No. in Reg. Book. 29 Survey held at Stockton Date, first Survey January 24 Last Survey 19
 on the Donkey Boiler No 2069 for S. S. Rada (Number of Visits) _____ Tons } Gross
 Master _____ Built at Hull By whom built James White & Co When built 1906 } Net
 Engines made at _____ By whom made _____ when made _____
 Boilers made at _____ By whom made _____ when made _____
 Registered Horse Power _____ Owners _____ Port belonging to _____

Hpl. No. 290

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

Letter for record 2 Total Heating Surface of Boilers 604 sq ft Is forced draft fitted No No. and Description of Boilers One Cyl Multitubular Working Pressure 90 lb Tested by hydraulic pressure to 180 lb Date of test 23-5-06
 No. of Certificate 3677 Can each boiler be worked separately ✓ Area of fire grate in each boiler 26.5 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 90 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 _____ Dia. of boilers 9'-0" Length 9'-0"
 Material of shell plates Steel Thickness 17/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No
 Descrip. of riveting: cir. seams 2 1/2 in long. seams 2 1/2 in Diameter of rivet holes in long. seams 15/16" Pitch of rivets 3 1/2"
 Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint rivets 94% Working pressure of shell by plate 73.2%
 rules 90 lb Size of manhole in shell 16 x 12 Size of compensating ring 5 1/2 x 3 1/4 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2'-9" Length of plain part top 5'-10" Thickness of plates crown 1/2" bottom 7/8"
 Description of longitudinal joint Welded No. of strengthening rings _____ Working pressure of furnace by the rules 97 lb Combustion chamber plates: Material Steel Thickness: Sides 17/32" Back 9/16" Top 17/32" Bottom 5/8" Pitch of stays to ditto: Sides 9 1/4 x 8 3/8" Back 9 x 9"
 Top 8 1/2 x 8 3/8" If stays are fitted with nuts or riveted heads Nut heads Working pressure by rules 93 lb Material of stays Iron Diameter at smallest part 1.45" Area supported by each stay 81 sq in Working pressure by rules 107 lb End plates in steam space: Material Steel Thickness 3/4"
 Pitch of stays 15 1/2 x 16 1/2" How are stays secured nut & wash Working pressure by rules 104 lb Material of stays Iron Diameter at smallest part 3.43"
 Area supported by each stay 259.7 sq in Working pressure by rules 100 lb Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 x 9" Working pressure of plate by rules 146 lb Diameter of tubes 3"
 Pitch of tubes 4 1/4 x 4 1/4" Material of tube plates Steel Thickness: Front 3/4" Back 9/16" Mean pitch of stays 10.6" Pitch across wide water spaces 13 1/2" Working pressures by rules 110.5 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 1/2 x 1 1/4" Length as per rule 22 3/8" Distance apart 8 1/2" Number and pitch of Stays in each One 8 3/16"
 Working pressure by rules 92 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 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,

THOMAS DONKEY BOILER CO. LIMITED
A. S. Smith Manufacturer of Donkey Boilers.

1906 January 24. March 1. 13. 14. 20. 22 April 3. 10. 20. May 5. 9. 15. 25

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 " " _____

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

This boiler has been constructed under Special Survey
 the materials and workmanship are good & efficient
 and when tested with hydraulic pressure was found
 tight and satisfactory.

This boiler has now been fitted in place
Navarona

West Hartlepool

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) £				19

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

Committee's Minute **FRI. 27 JUL 1906**

Assigned



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