

REPORT ON BOILERS.

No. 12735

Port of West Hartlepool Date, first Survey 7th March Received at London Office WED. 3 JAN 1906
 No. in Survey held at 272 on the Cable steamer "Electra" Last Survey 3rd July 1915
 Reg. Book. 272 on the Cable steamer "Electra" (Number of Visits 17)
 Master Glasgow Built at Glasgow By whom built R Napier & Sons When built 1885
 Engines made at Glasgow By whom made R Napier & Sons when made 1885
 NEW Boilers made at Hartlepool By whom made Richardsons Westgarth & Co Ltd when made 1905
 Registered Horse Power 220 Owners Eastern Telegraph Co Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel John Spencer & Sons Limited(Letter for record 0) Total Heating Surface of 2 Boilers 3723 sq ft Is forced draft fitted No No. and Description ofBoilers Two single end Cyl. Mult. Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 12.5.05No. of Certificate 2988 Can each boiler be worked separately Yes Area of fire grate in each boiler 54.75 sq ft No. and Description ofsafety valves to each boiler Two Spring loaded $3\frac{3}{4}$ dia. Area of each valve 11.04 sq in Pressure to which they are adjusted 92 lbs Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 13-5" Length 10-4"Material of shell plates Steel Thickness $5\frac{1}{8}$ " Range of tensile strength 28.2 to 32 Are the shell plates welded or flanged NoDescrip. of riveting: cir. seams double long. seams double Diameter of rivet holes in long. seams $\frac{1}{8}$ " Pitch of rivets $4\frac{1}{8}$ "Lap of plates or width of butt straps 10" Per centages of strength of longitudinal joint rivets 88% Working pressure of shell byrules 90.25 lbs Size of manhole in shell 12" x 16" Size of compensating ring McNiel's plate 82.05% No. and Description of Furnaces in eachboiler 3 Morrison Material Steel Outside diameter 40 $\frac{1}{2}$ " Length of plain part top $7\frac{1}{2}$ " Thickness of plates crown $3\frac{3}{8}$ " bottom $3\frac{3}{8}$ "Description of longitudinal joint Weld No. of strengthening rings ✓ Working pressure of furnace by the rules 119 lbs Combustion chamberplates: Material Steel Thickness: Sides $\frac{15}{32}$ " Back $\frac{15}{32}$ " Top $\frac{15}{32}$ " Bottom $\frac{1}{2}$ " Pitch of stays to ditto: Sides $8\frac{1}{2}$ " Back $8\frac{1}{4}$ "Top $8\frac{1}{2}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 93.5 lbs Material of stays steel Diameter atsmallest part $1\frac{1}{8}$ " Area supported by each stay 72.2 sq in Working pressure by rules 100 lbs End plates in steam space: Material Steel Thickness $\frac{11}{16}$ "Pitch of stays 18 x 13 How are stays secured Weld Working pressure by rules 90 lbs Material of stays iron Diameter at smallest part 2"Area supported by each stay 235 sq in Working pressure by rules 101 lbs Material of Front plates at bottom steel Thickness $\frac{5}{8}$ " Material ofLower back plate Steel Thickness $\frac{9}{16}$ " Greatest pitch of stays 13" Working pressure of plate by rules 92 lbs Diameter of tubes 3"Pitch of tubes $4\frac{1}{8}$ " Material of tube plates steel Thickness: Front $\frac{11}{16}$ " Back $\frac{5}{8}$ " Mean pitch of stays $8\frac{1}{4}$ " Pitch across widewater spaces 14" Working pressures by rules 92.5 lbs Girders to Chamber tops: Material steel Depth and thickness ofgirder at centre 6" x 1 $\frac{1}{4}$ " Length as per rule 28 $\frac{1}{2}$ " Distance apart 8 $\frac{1}{2}$ " Number and pitch of Stays in each Two 8 $\frac{1}{2}$ "Working pressure by rules 91.8 lbs Superheater or Steam chest: how connected to boiler 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,
 for RICHARDSONS, WESTGARTH & CO., LIMITED.
 Manufacturer.

Dates of Survey { During progress of work in shops - - - }
 while { During erection on board vessel - - - }
 building { Total No. of visits }
19th. Mar. 7. 8. 9. 12. 14. 15. 21. 22. 23. Apr. 4. 5. 10. 14. 28. May 12. June 20. July 3.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

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Lloyds Register
Foundation

DWN 130B-0136

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

These boilers have been constructed under special survey
accordance with the approved plan; the materials and
workmanship are good & in my opinion are eligible to be
recorded of * NB with date in the Register Book

A J Graham
91

✓
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	£	10	6 : 8	18. 10. 05
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	23/10/05

Committee's Minute

Assigned

FRL 5 JAN 1906

A J Graham
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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