

REPORT ON BOILERS.

Mdb. Rpt. No 9339.

No. 9282

Received at London Office TUE. 28. MAR. 1916

Date of writing Report 1916 When handed in at Local Office 25/3/16 1916 Port of Middlesbrough

No. in Survey held at Stockton-on-Tees Date, First Survey 1915 June 9th Last Survey March 17 1916

Reg. Book. on the Donkey Boiler for the S.S. "Flimston" (S.S.N. 170) Tons } Gross } Net }

Master Built at Stockton By whom built Craig Taylor & Co When built 1916

Engines made at Stockton By whom made Messrs Blair & Co Lim. When made 1916

Boilers made at Stockton By whom made Messrs Riley Bros Ltd (No 4807) When made 1916

Registered Horse Power Owners Port belonging to

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

(Letter for record (S)) Total Heating Surface of Boilers 1530 sq ft Is forced draft fitted no No. and Description of Boilers One single ended Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 17.3.16

No. of Certificate 5624 Can each boiler be worked separately Area of fire grate in each boiler 50 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 5.94 Pressure to which they are adjusted 185 lb

Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler yes

Smallest distance between boilers uptakes and bunkers or woodwork 18" Mean dia. of boilers 12'-6" Length 11'-0"

Material of shell plates steel Thickness 3/32" Range of tensile strength 29 1/2 - 33 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams 2 R. Lap long seams 2 B - 3 Riv Diameter of rivet holes in long seams 1 1/16" Pitch of rivets 7 7/8"

Top of plates or width of butt straps 15 3/4 x 7/8" 5 Rivets per pitch Per centages of strength of longitudinal joint rivets 86.3 Working pressure of shell by rules 182 Size of manhole in shell 19" x 15" Size of compensating ring 7" x 9" 9/16" rivet plate 86.5

No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 39 1/2" Length of plain part top 1/2" bottom 1/2" Thickness of plates crown 1/2" bottom 1/2"

Description of longitudinal joint Weld No. of strengthening rings Working pressure of furnace by the rules 194 Combustion chamber plates: Material steel Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 1 3/16" Pitch of stays to ditto: Sides 9" x 9" Back 9" x 8 1/2" Top 9" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 194 Material of stays steel Diameter at smallest part 1.73 Area supported by each stay 76.5 Working pressure by rules 204 End plates in steam space: Material steel Thickness 1"

Pitch of stays 17" x 15" How are stays secured nuts Working pressure by rules 180 Material of stays steel Diameter at smallest part 4.57

Area supported by each stay 255 Working pressure by rules 186 Material of Front plates at bottom steel Thickness 1 5/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 13 5/8" x 9 3/8" Working pressure of plate by rules 205 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/8" x 4 1/4" Material of tube plates steel Thickness: Front 1 3/16" Back 2 3/32" Mean pitch of stays 9 1/8" Pitch across wide water spaces 13 5/8" Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/4" x 1 3/8" Length as per rule 32" Distance apart 9" Number and pitch of Stays in each 2 @ 9"

Working pressure by rules 188 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

SURVEY REQUEST NO. 1107. ATTACHED.

FOR THE FOREGOING IS A CORRECT DESCRIPTION, RILEY BROS. (BOILERMAKERS) LIMITED, Manufacturer.

SECRETARY.

Dates of Survey } During progress of work in shops - - } 1915 Jun 9-24 Oct 21-27-29 Nov 16-23-26 Dec 2-6-7-15-21-23-31 Is the approved plan of boiler forwarded herewith yes

while building } During erection on board vessel - - - } 1916 Jan 5-Feb 23-25 Mar 9-17 Total No. of visits 20.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey: is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results. The boiler is to be fitted on board at this port. This boiler has now been satisfactorily secured on board, examined under steam and safety valves adjusted.

Survey Fee ... £ 5-2-0 When applied for, Monthly a/c 1916

Travelling Expenses (if any) £ : : When received, 1916

Wm Morrison Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26. MAY. 1916

Assigned

