Sta. Rpt. 25775

Rpt. 5a.

REPORT ON BOILERS.

No. 7975.

WED. JUN. 18. 1913

Received at London Office

Date of writing Report 16.6.13 191 When handed in at Local Office 17.6. 1913 Port of Middlesbrough 24 July 913

No. in Reg. Book. Survey held at Stockton-on-Tees Date, First Survey 31st Jany. Last Survey 11th ~~June~~ 1913 (Number of Visits 14)

Supp'd on the new steel S/S "LUCELLUM". (S.S. No. 642) Tons Gross 5784 Net 3233

Master Built at Sunderland By whom built Sir Jas Laing & Son Ltd When built 1913

Engines made at Sunderland By whom made George Clark Ltd (No. 983) When made 1913

~~Donkey~~ Boilers made at Stockton By whom made Messrs Riley Bros Ltd (No. 4473) When made 1913

Registered Horse Power Owners H.E. Moss & Co. Port belonging to Liverpool

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

(Letter for record (S)) **Total Heating Surface of Boilers** 1120 ☐ft Is forced draft fitted no **No. and Description of Boilers** One single ended **Working Pressure** 100 Tested by hydraulic pressure to 200 Date of test 11.6.13

No. of Certificate 5092 Can each boiler be worked separately ✓ **Area of fire grate in each boiler** 35 ☐ft No. and Description of safety valves to each boiler Two. direct spring Area of each valve 7.07 □" Pressure to which they are adjusted 105

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~~ 2'-2" ~~Mean~~ Inside dia. of boilers 11'-0" Length 10'-6"

Material of shell plates steel Thickness 19/32" Range of tensile strength 28-32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams 2-R. lap long. seams 2 R - 2 Rivets 3 Rivets per pitch Diameter of rivet holes in long. seams 15/16 Pitch of rivets 5½"

~~Lap of plates or~~ width of butt straps 9 × 19/32 Per centages of strength of longitudinal joint rivets 95. plate 82.9 Working pressure of shell by rules 103 Size of manhole in shell 16" × 12" Size of compensating ring 7 × 19/32 **No. and Description of Furnaces in each boiler** 2 plain Material steel Outside diameter 40" Length of plain part top 78" bottom 110" Thickness of plates crown 5/8" bottom 21/32 mean

Description of longitudinal joint weld No. of strengthening rings none Working pressure of furnace by the rules 105 Combustion chamber plates: Material steel ~~Thickness~~: Sides 15/32" Back 15/32 Top 15/32 Bottom 13/16" Pitch of stays to ditto: Sides 7⅞ × 7⅞" Back 7⅞" × 7⅝" Top 7⅞" × 7⅞" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 108 Material of stays steel ~~Diameter~~ area at smallest part .96 Area supported by each stay 62.02 Working pressure by rules 124 End plates in steam space: Material steel Thickness 25/32 Pitch of stays 15¾ × 15¾ How are stays secured nuts + 6⅜ × 17/32 washers Working pressure by rules 107 Material of stays steel ~~Diameter~~ area at smallest part 2.51 Area supported by each stay 227 Working pressure by rules 115 Material of Front plates at bottom steel Thickness 25/32 Material of Lower back plate steel Thickness 25/32 Greatest pitch of stays 12" × 7⅝" Working pressure of plate by rules 190 Diameter of tubes 3¼" Pitch of tubes 4½" × 4½" Material of tube plates steel ~~Thickness~~: Front 25/32" Back 5/8" Mean pitch of stays 10⅜" Pitch across wide water spaces 13½" Working pressures by rules 110 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7" × 1¼" Length as per rule 32" Distance apart 7⅞" Number and pitch of Stays in each 3 @ 7⅞" Working pressure by rules 107 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. 612 ATTACHED.

FOR RILEY BROS. (BOILERMAKERS) LIMITED. The foregoing is a correct description,

SECRETARY. Manufacturer.

Dates of Survey while building: During progress of work in shops - - 31st Jany. 7 July 4.8.27.28. Apl 2.25. May. 16.17.24. During erection on board vessel - - 28.30 June. 7.11. Jun 28 Jul 1. 20.

Is the approved plan of boiler forwarded herewith yes

Total No. of visits ~~14~~ 17

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 has been satisfactorily fixed on the main deck of the vessel and it's safety valves adjusted as above. adjusting washers:- both 15/32.

Survey Fee ... ... £ 3-15-0 When applied for, MONTHLY A/c. 191

Travelling Expenses (if any) £ ✓ When received, 191

Wm Morrison Lewis Davis

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

Committee's Minute FEBRUARY 1913

Assigned see minute on Sta Rpt 25775

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