Rpt. 5a.

COPY.

REPORT ON BOILERS.

No. 74,297

Received at London Office TUE. APR. 22 1924

Date of writing Report April 1921. When handed in at Local Office 19 Port of Newcastle-on-Tyne

No. in Reg. Book. Survey held at Wallsend-on-Tyne. Date, First Survey Feb. 8th Last Survey April 6th 1921.

(Number of Visits 4)

on the Six Single Ended Steel main Boilers No. 343 B Tons Gross ✓ Net ✓

Master ✓ Built at ✓ By whom built ✓ When built ✓

Engines made at ✓ By whom made ✓ When made ✓

Boilers partly made at Wallsend-on-Tyne By whom made The Wallsend Slipway & Eng. Co. When made 1921.

Registered Horse Power ✓ Owners The Commonwealth of Australia S.S. Nos. 47 & 48 Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel Deighton Furnace Co. & John Spence

(Letter for record S) **Total Heating Surface of Boilers** 18150 Is forced draft fitted — **No. and Description of Boilers** 6 single ended multitubular **Working Pressure** 220 Tested by hydraulic pressure to Date of test

No. of Certificate ✓ Can each boiler be worked separately ✓ **Area of fire grate in each boiler** not given No. and Description of safety valves to each boiler ✓ Area of each valve ✓ Pressure to which they are adjusted ✓

Are they fitted with easing gear ✓ 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 16'-6" Length 12'-8 5/8"

Material of shell plates steel Thickness 1 9/16" Range of tensile strength 30/34 tons Are the shell plates welded or flanged no.

Descrip. of riveting:- cir. seams D.R. long. seams TR:DB Diameter of rivet holes in long. seams 1 19/32" Pitch of rivets 10 3/4"

~~Lap of plates or~~ width of butt straps 23 11/16" Per centages of strength of longitudinal joint rivets 85.2 plate 85.1 Working pressure of shell by rules 225 lbs Size of manhole in shell ~~19"~~ 16" × ~~15"~~ 12" Size of compensating ring 8 7/8" × 1 9/16" **No. and Description of Furnaces in each boiler** 4 Morrisons Material Hole steel 20 3/4 × 18. Outside diameter 3'-8 1/4" Length of plain part top - bottom - Thickness of plates crown bottom 5/8"

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 227 Combustion chamber plates:- Material steel Thickness:- Sides 11/16" Back 11/16" Top 11/16" Bottom 15/16" Pitch of stays to ditto:- Sides 9" × 8 1/4" Back 9 3/4" × 7 1/2" Top 9" × 8 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 220 lbs Material of stays steel Area at smallest part 2.03" Area supported by each stay 78.75" Working pressure by rules 246 lbs End plates in steam space:- Material steel Thickness 1 1/4" Pitch of stays 18" × 17 1/2" How are stays secured double nuts and washers Working pressure by rules 222 lbs Material of stays steel Area at smallest part 7.24 □" Area supported by each stay 315 □" Working pressure by rules 239 lbs Material of Front plates at bottom steel Thickness 31/32" Material of Lower back plate steel Thickness 31/32" Greatest pitch of stays 9 3/4" × 15 1/2" Working pressure of plate by rules 220 lbs Diameter of tubes 2 3/4" Pitch of tubes 4" × 4" Material of tube plates steel Thickness:- Front 31/32" Back 13/16" Mean pitch of stays 8" × 8" Pitch across wide water spaces 14 3/4" Working pressures by rules 220 lbs Girders to Chamber tops:- Material steel Depth and thickness of girder at centre 10 5/8" × 1 1/2" Length as per rule 3'-1 31/32" Distance apart 8 1/4" Number and pitch of Stays in each 3'-9" Working pressure by rules 225 lbs Steam dome: description of joint to shell ✓ % of strength of joint ✓

Diameter ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓

Pitch of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓

SUPERHEATER. Type ✓ Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓

Date of Test ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓

Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

For The Wallsend Slipway & Engineering Co. Ltd.

The foregoing is a correct description,

(Signed) Andrew Laing. Director. Manufacturer.

Dates of Survey while building: During progress of work in shops - - - ; During erection on board vessel - - - : Feb 8, 23, Mar 3, Apl. 6.

Is the approved plan of boiler forwarded herewith yes

Total No. of visits 4

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The plates for these boilers have been flanged and annealed, the manhole doublings have been bent, flanged and annealed, but the rest of the material has not been worked, as the whole of it is to be sent to Australia, and the boilers are to be finished there. The material & workmanship as far as the latter has gone are good, eligible in our opinion to be fitted on a classed vessel. The boilers have been despatched to Cockatoo Island, Sydney, N. S. W.

Survey Fee £2.2.0. for each boiler ... £ 12 : 12. : When applied for, ... 19.....

Travelling Expenses (if any) £ : : When received, ... 19.....

(Signed) Maurice Ritson & C. H. Stuart.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. APR. 29 1924

Assigned