

REPORT ON BOILERS.

No. 8161.

Port of Sydney, N.S.W.

Received at London Office

No. in Survey held at

Sydney, N.S.W.

Date, first Survey

11. 8. 21

Last Survey

TUE. APR. 22 1924

19 24.

Reg. Book.

39006 on the Steel Twin Screw Ste. FORDSDALE

(Number of Visits 77)

Gross 9673.5
Tons Net 5661.3

Master Ogilvie Built at Sydney, N.S.W. By whom built Commonwealth Dock. When built 1924

Engines made at Sydney, N.S.W. By whom made Commonwealth Dockyard when made 1924

Boilers made at Sydney, N.S.W. By whom made Commonwealth Dockyard when made 1924

Registered Horse Power 1205. Owners Commonwealth Govt. Line Port belonging to Melbourne.

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer & Sons. & Deighton Furnace Co.

(Letter for record S) Total Heating Surface of Boilers 18150 sq ft Is forced draft fitted yes No. and Description of Boilers 6 Single, E. Multitubular Working Pressure 220 Tested by hydraulic pressure to 380 Date of test See over

No. of Certificate See over Can each boiler be worked separately yes Area of fire grate in each boiler 72.875 sq ft No. and Description of safety valves to each boiler Two Cockburn & H. Nicols Full bore Type Area of each valve 20 5.41 sq in Pressure to which they are adjusted 220 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 5'-9" Mean dia. of boilers 16'-6" Length 12'-5 1/2"

Material of shell plates Steel Thickness 1 9/16 Range of tensile strength 30 3/4 Tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams 2 R long. seams 3 R, 2 straps 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 85.7 % Working pressure of shell by rules 225 Size of manhole in shell 20 3/4 x 18 Size of compensating ring 36 3/4 x 34 1/2 x No. and Description of Furnaces in each boiler 4 Morrison Material Steel Outside diameter 44 1/4 Length of plain part 8 7/8 x 1 1/16 top Thickness of plates crown 5 Bottom 8

Description of longitudinal joint Welded No. of strengthening rings Working pressure of furnace by the rules 222 Combustion chamber plates: Material Steel Thickness: Sides 11 Back 11 Top 11 Bottom 15 Pitch of stays to ditto: Sides 9 x 8 1/4 Back 9 3/4 x 7 1/4

Top 9 x 8 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 221 Material of stays Steel Diameter at smallest part 1 3/4 Area supported by each stay 74.25 Working pressure by rules 287 End plates in steam space: Material Steel Thickness 1 1/4

Pitch of stays 18 x 17 1/2 How are stays secured 2N + Washers Working pressure by rules 232 Material of stays Steel Diameter at smallest part 3 1/16

Area supported by each stay 315 sq in Working pressure by rules 285 Material of Front plates at bottom Steel Thickness 31/32 Material of lower back plate Steel Thickness 31/32 Greatest pitch of stays 15 1/2 x 9 3/4 Working pressure of plate by rules 248 Diameter of tubes 2 3/4 x 4

Pitch of tubes 4 x 4 Material of tube plates Steel Thickness: Front 31/32 Back 13/16 Mean pitch of stays 8 x 8 Pitch across wide water spaces 14 3/4 Working pressures by rules 240 lbs. Girders to Chamber tops: Material Steel Depth and thickness of order at centre 10 5/8 x 1 1/2 Length as per rule 3 x 2 Distance apart 8 1/4 Number and pitch of Stays in each 3 x 9

Working pressure by rules 220 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

les Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness 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 Date of test 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

length Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

up 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

Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

thickness of water tubes

The foregoing is a correct description, Board. The Australian Commonwealth Shipping Corporation, General Director Manufacturer.

Dates During progress of 11. 8. 21. 7. 3. 22 { 1923 } April, six visits, May, 3. June 4. July 2, Aug 4, Sep 2. Oct 3. Nov 6. work in shops - - - Dec. 6. Jan. 1 Feb 1. March 5. April 4 May. 2. June Nil. During erection on July 16. 1923 Aug 2. Sep 3. Oct 3. Nov 4. Dec 5. Jan 1924, 3. Feb 4. March board vessel - - - Total No. of visits Seventy Seven; 77. Is the approved plan of main boiler forwarded herewith yes

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

See Newcastle on Tyne Report N^o 74297, at which Port the Plates were flanged for these Main Boilers, -all other work on Boilers done at this Port of Sydney. N.S.W.
Cockburn and M^{rs} Nicols patent full bore Safety valves fitted on each Main Boiler; -approved London 27.4.22 and 10.8.22 each Boiler Safety Valves seen blowing freely at 220 lbs $\frac{1}{2}$ " and accumulation tests witnessed Satisfactory.
These Main Boilers seen securely and Satisfactorily fitted on board.

Main Boiler Hydraulic Tests.

	<u>Dates</u>	<u>N^o of Certificate</u>	<u>Pressure.</u>
A	13.6.22.	47 A	380 lbs
B	31.7.22.	47 B	380 "
C	5.9.22.	47 C	380 "
D	20.10.22.	47 D	380 "
E	9.1.22.	47 E	380 "
F	20.3.23.	47 F	380 "

All Main Boilers seen sound and tight under working conditions at 220 lbs $\frac{1}{2}$ ".

These Boilers have been constructed under Special Survey in accordance with the Rules and approved Plans, of tested materials, and workmanship of best quality and now eligible in my opinion for Record in Reg Book as noted on Steam Reciprocating Engine Machinery Report now forwarded.

Certificate (if required) to be sent to Sydney N. 5 v. (Received)

Included in Machinery Report.

The amount of Entry Fee...	£	:	:	When applied for,
Special ...	£	:	:	19
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any) £	£	:	:	19

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

Committee's Minute

TUE. APR. 29 1924

Assigned



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Foundation