

# REPORT ON BOILERS.

Port of Bundee

Received at London Office 16 DEC. 1922

No. in Survey held at Bundee Date, first Survey 23<sup>rd</sup> Sept 1921 Last Survey 9<sup>th</sup> Dec 1922  
 Reg. Book. on the S.S. "British Commander" (Number of Visits 23)  
 Master Bundee Built at Bundee By whom built Caledon S.B. & Co. Ltd When built 1922  
 Engines made at Manchester By whom made Metropolitan-Vickers Electrical Co. Ltd when made 1922  
 Boilers made at Bundee By whom made Caledon S.B. & Co. when made 1922  
 Registered Horse Power                      Owners British Tankers Ltd. Port belonging to London

## MULTITUBULAR BOILERS — MAIN, AUXILIARY OR DONKEY. — Manufacturers of Steel Rawthorn, South Durham, Scotland I.R.S.

(Letter for record 5) Total Heating Surface of Boilers 1114 sq ft Is forced draft fitted no No. and Description of Boilers Single ended multitubular Working Pressure 120 lbs Tested by hydraulic pressure to 230 Date of test 27-1-22  
 No. of Certificate 994 Can each boiler be worked separately ✓ Area of fire grate in each boiler 27.34 sq ft No. and Description of safety valves to each boiler Two spring loaded Area of each valve 7.06 sq in Pressure to which they are adjusted 125 lbs  
 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 Casings 18" Mean dia. of boilers 10'-6" MEAN Length 10'-6"  
 Material of shell plates S Thickness 5/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams L.D.R. long. seams D. STRAPS. T.R. Diameter of rivet holes in long. seams 11/16" Pitch of rivets 4 7/8"  
 Top of plates or width of butt straps 10 3/16" Per centages of strength of longitudinal joint 92.6 Working pressure of shell by rules 125 lbs Size of manhole in shell 16 x 12" Size of compensating ring 3'-3" x 2'-9" x 5/8" No. and Description of Furnaces in each boiler Two corrugated Material S Outside diameter 35 1/2" Length of plain part                      Thickness of plates 3/8"  
 Description of longitudinal joint Weld No. of strengthening rings None Working pressure of furnace by the rules 148 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 3/4" Top 5/8" Bottom 5/8" Pitch of stays to ditto: Sides 8 1/2" x 8" Back 10 1/2" x 9 1/2"  
 Top 8 1/2" x 10" If stays are fitted with nuts or riveted heads Riveted heads Working pressure by rules 131 Material of stays S Area at smallest part 1.96 sq in Area supported by each stay 4.65 Working pressure by rules 125 End plates in steam space: Material S Thickness 1"  
 Pitch of stays 9 1/4" x 15" How are stays secured D. Nuts & Washers Working pressure by rules 120 Material of stays S Area at smallest part 4.104  
 Area supported by each stay 3.60 sq in Working pressure by rules 123 Material of Front plates at bottom S Thickness 3/4" Material of lower back plate S Thickness 3/4" Greatest pitch of stays 14 1/4" x 9 1/2" Working pressure of plate by rules 205 Diameter of tubes 3" set  
 Pitch of tubes 4 1/4" x 14 1/4" Material of tube plates S Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10" Pitch across wide water spaces 14 1/4" Working pressures by rules 137 Girders to Chamber tops: Material S Depth and thickness of girder at centre 6" x 1" Length as per rule 25 3/4" Distance apart 8 1/2" Number and pitch of Stays in each 2 @ 10"  
 Working pressure by rules 123 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 rivets                      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                     

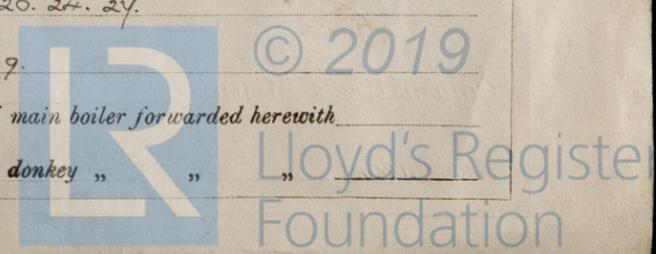
## VERTICAL DONKEY BOILER — No.                      Description                      Manufacturers of steel

Made at                      By whom made                      When made                      Where fixed                       
 Working pressure tested by hydraulic pressure to                      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                       
 Gap of plating                      Per centage of strength of joint                      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, Manufacturer.                     

Dates During progress of work in shops 1921 SEPT. 23. OCT. 19. NOV. 4. DEC. 1. 12. 23. 30. 1922 JAN. 6. 14. 20. 24. 27.  
 During erection on board vessel 1922 FEB. 6. 14. SEP. 21. OCT. 12. 14. 31. NOV. 3. 14. 24. DEC. 4. 9.  
 Total No. of visits 23 Is the approved plan of main boiler forwarded herewith                       
 " " " donkey " "                     

W351-0060



**GENERAL REMARKS**

(State quality of workmanship, opinions as to class, &c. *This boiler has been built under special survey and in accordance with the Rules & approved plan; the materials and workmanship are sound and good, on completion it was tested by water pressure to 230 lbs & found tight and satisfactory in all respects.*

*It has been fitted on board in a satisfactory manner, tried under working conditions and found efficient.*

Certificate (if required) to be sent to

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

*J. H. Mackie for self & J. H. Mackie & Co.  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.*

Committee's Minute FRI. 29 DEC. 1922

Assigned