

# REPORT ON BOILERS

No. 10931.

Received at London Office

SAT. 21 MAY. 1921

Date of writing Report 13<sup>th</sup> May 1921 When handed in at Local Office 20<sup>th</sup> May 1921 Port of Southampton  
 No. in Survey held at Southampton Date, First Survey 10<sup>th</sup> Nov. 1920 Last Survey 4<sup>th</sup> April 1921  
 Reg. Book. Southampton (Number of Visits 7) Gross 492.31  
 on the Boiler No. 388. S.S. "BLACKCOCK" Tons Net 226.02  
 Master Southampton Built at Southampton By whom built Day, Summers & Co. Ltd When built 1921  
 Engines made at Southampton By whom made Day, Summers & Co. Ltd when made 1921  
 Boilers made at Southampton By whom made Day, Summers & Co. Ltd when made 1921  
 Registered Horse Power                      Owners General Steam Nav. Co. Ltd Port belonging to London

## MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel David Colville & Sons Ltd

(Letter for record S) Total Heating Surface of Boilers 1602 Is forced draft fitted NO No. and Description of

Boilers One, Single Ended Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 4-4-21

No. of Certificate 349 Can each boiler be worked separately ✓ Area of fire grate in each boiler 56 sq ft No. and Description of

safety valves to each boiler Two Spring loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 185 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 3'-6" Mean dia. of boilers 13'-1 1/16" Length 10'-0"

Material of shell plates Steel Thickness 1 1/16" Range of tensile strength 28 to 32 Are the shell plates welded or flanged NO

Descrip. of riveting: cir. seams D.R. LAP. long. seams T.R. BUTT STRAPS Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8"

Lap of plates or width of butt straps 16 3/4" Per centages of strength of longitudinal joint rivets 86.9 Working pressure of shell by plate 85.9

rules 180.4 Size of manhole in shell 16" X 12" Size of compensating ring 2'-8" X 2'-4" No. and Description of Furnaces in each

boiler 3 Plain Material Steel Outside diameter 3'-3 7/8" Length of plain part top 6'-9 1/4" Thickness of plates crown 3/4" bottom 3/4"

Description of longitudinal joint Welded No. of strengthening rings ✓ Working pressure of furnace by the rules 188.4 Combustion chamber

plates: Material Steel Thickness: Sides 1 1/16" Back 2 1/32" Top 2 1/32" Bottom 1 1/16" Pitch of stays to ditto: Sides 8 1/2" X 10" Back 8 1/4" X 9 1/4"

Top 8 1/2" X 9" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 189.6 Material of stays Steel AREA Diameter at

smallest part 1.73 Area supported by each stay 85 Working pressure by rules 183.1 End plates in steam space: Material Steel Thickness 1 3/32"

Pitch of stays 18" X 17 1/4" How are stays secured DOUBLE NUTS & WASHERS Working pressure by rules 182.3 Material of stays Steel AREA Diameter at smallest part 6.10

Area supported by each stay 310.5 Working pressure by rules 204.3 Material of Front plates at bottom Steel Thickness 1" Material of

Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13 1/2" X 8 1/4" Working pressure of plate by rules 182.2 Diameter of tubes 3 1/4"

Pitch of tubes 4 1/4" X 4 1/4" Material of tube plates Steel Thickness: Front 1" Back 25/32" Mean pitch of stays 10 5/8" Pitch across wide

water spaces 13 3/4" Working pressures by rules 189.5 Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 6 1/2" X 1 3/4" Length as per rule 2'-2" Distance apart 9" Number and pitch of Stays in each 2 - 8 1/2"

Working pressure by rules 192.4 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

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 ✓

For DAY, SUMMERS & Co. Ltd.  
The foregoing is a correct description,  
Graham E. L. Day Manufacturer.

Dates of Survey } During progress of work in shops - - } 10, 20, 31, 5, 13, 24, 4 1921  
 while building } During erection on board vessel - - - }                       
 Is the approved plan of boiler forwarded herewith yes  
 Total No. of visits 7

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

The Boiler has been built under Special Survey for Steam.  
 The Materials and workmanship are sound and good.  
 The Boiler has been efficiently fitted on board the above vessel and on trial proved satisfactory.

Survey Fee ... .. £ 10.14 When applied for. 20. May 1921  
 Travelling Expenses (if any) £                      When received. 23. 5. 21/1921

Committee's Minute FRI. 4 NOV. 1921  
 Assigned Not for Classing Committee  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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PORA HEAD



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Foundation