

# REPORT ON BOILERS.

No. 5384

Received at London Office MON. 24 FEB 1908

Port of MIDDLESBROUGH-ON-TEES.  
Date, First Survey 4 Nov 1907 Last Survey 18 Feb 1908  
No. in Survey held at Stockton  
on the Donkey Boiler No. 3888, for S.S. "Dacre Castle"  
By whom built R. Cragg & Sons When built 1908  
By whom made Polair & Co. Ltd when made 1908  
By whom made Paley Bros Ltd when made 1907  
Port belonging to Liverpool  
Registered Horse Power

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

Letter for record S. Total Heating Surface of Boilers 1021 sq ft Is forced draft fitted no No. and Description of  
boilers One cyl. multi single ended Working Pressure 100 lb Tested by hydraulic pressure to 200 Date of test 16/12/07

No. of Certificate 4064 Can each boiler be worked separately ✓ Area of fire grate in each boiler 32.5 sq ft No. and Description of

safety valves to each boiler Two, spring Area of each valve 9.62 sq in Pressure to which they are adjusted 100 lb

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 14" Mean dia. of boilers 11'-0" Length 10'-0"

Material of shell plates Steel Thickness 5" Range of tensile strength 28/32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR. L. long. seams DR. D.B.S. Diameter of rivet holes in long. seams 5/16 Pitch of rivets 4"

Top of plates or width of butt straps 9 1/2 x 5" Per centages of strength of longitudinal joint rivets 82 Working pressure of shell by plate 70.5

Rules 102 Size of manhole in shell 15 x 20 Size of compensating ring 9" x 1" No. and Description of Furnaces in each

boiler 2 plain Material Steel Outside diameter 3'-4" Length of plain part 6'-5 1/2" Thickness of plates crown 5" bottom 8"

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 100 Combustion chamber

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

Top 8 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 106 Material of stays Steel Diameter at

smallest part 1 1/8" Area supported by each stay 72 sq in Working pressure by rules 110 End plates in steam space: Material Steel Thickness 3/4" double

Pitch of stays 20 x 21 How are stays secured DR. & W. Working pressure by rules 131 Material of stays Steel Diameter at smallest part 2 1/8"

Area supported by each stay 430 sq in Working pressure by rules 130 Material of Front plates at bottom Steel Thickness 3/4" Material of

Lower back plate Steel Thickness 3/4" Greatest pitch of stays 12 x 9 3/8" Working pressure of plate by rules 168 Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 10 3/2" Pitch across wide

water spaces 13 1/2" Working pressures by rules 116 Girders to Chamber tops: Material Steel Depth and thickness of

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

Working pressure by rules 109 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

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

Is the approved plan of boiler forwarded herewith yes SECRETARY

Dates of Survey During progress of 1907 Nov. 4-15-19-21-28 Dec. 3-10-12-16  
while building During erection on 1907 Dec. 20-30-1908 Jan. 23-31 Feb. 4-10-13-18 Total No. of visits 18

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey. The materials and workmanship are good. After being secured on board vessel & tested under steam was found satisfactory.

Survey Fee ... £ 2 : 2 : When applied for, 8.1.1908  
Travelling Expenses (if any) £ : : When received, 22.1.1908

R. D. Shilston & Geo. A. Milner  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute  
Assigned

FEB. 25 FEB 1908