

REPORT ON BOILERS.

No. 7528.
MON. SEP. 2 1912

Received at London Office
 Date of writing Report 16.8.12 When handed in at Local Office 16.8 1912 Port of MIDDLESBROUGH-ON-TEES,
 No. in Survey held at Stockton-on-Tees Date, First Survey As per first entry report
 of Safety Reg. Book. on the Auxiliary Boiler of S.S. NURTURETON (S.S. No 471) Tons } Gross 1059.60
 Master H. E. Howell Built at Stockton By whom built Messrs Popner & Sons When built 1912
 Engines made at Stockton By whom made Messrs Blair & Co Ltd (1739) when made 1912
 Boilers made at Stockton By whom made Messrs Blair & Co Ltd (No. E.188) when made 1912
 Registered Horse Power Owners Chapman Port belonging to Newcastle

MULTITUBULAR BOILERS—~~MAIN~~, AUXILIARY OR ~~DONKEY~~—Manufacturers of Steel Messrs John Spencer & Son

(Letter for record (5)) Total Heating Surface of Boilers 1775 Is forced draught fitted _____ No. and Description of Boilers One single ended Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 21.6.12
 No. of Certificate 4896 Can each boiler be worked separately Area of fire grate in each boiler 48 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 5.93 sq in Pressure to which they are adjusted 185
 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 on ~~woodwork~~ 2'-0" ^{External} Mean dia. of boilers 14'-0" Length 10'-6"
 Material of shell plates steel Thickness 1 1/8" Range of tensile strength 28-32 Are the shell plates welded or flanged no
 Descrip. of riveting: cir. seams 2 Riv lap long. seams 2 B-3 Riv Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 3/8"
 Lap of plates or width of butt straps 17 3/8" x 1 1/2" Per centages of strength of longitudinal joint rivets 87.3 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12" Size of compensating ring 7 1/2" x 1 1/8" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 41 3/8" Length of plain part ^{top} 33 Thickness of plates ^{bottom} 64
 Description of longitudinal joint weld No. of strengthening rings Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/6" Top 1/6" Bottom 3/4" Pitch of stays to ditto: Sides 9 1/4" x 9 1/4" Back 9 3/4" x 9 3/8"
 Top 9" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 Material of stays steel Diameter at smallest part 1.59 Area supported by each stay 90.19 Working pressure by rules 198 End plates in steam space: Material steel Thickness 1 1/2"
 Pitch of stays 18" x 18" How are stays secured nuts + 9 x 1 washers Working pressure by rules 195 Material of stays steel Diameter at smallest part 2.79
 Area supported by each stay 324 Working pressure by rules 226 Material of Front plates at bottom steel Thickness 1 1/2" Material of Lower back plate steel Thickness 1" Greatest pitch of stays 14 1/2" x 9 1/8" Working pressure of plate by rules 236 Diameter of tubes 3 1/2"
 Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates steel Thickness: Front 1 1/2" Back 1 1/8" Mean pitch of stays 9 1/2" Pitch across wide water spaces 14 1/2" Working pressures by rules 194 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 1/4" x 1 3/4" Length as per rule 29 1/2" Distance apart 9" Number and pitch of Stays in each 2 @ 9 1/2"
 Working pressure by rules 183 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 _____

The foregoing is a correct description,
Geo. Netherthorpe Manufacturer.

As per first entry report Is the approved plan of boiler forwarded herewith yes
 Dates of Survey } During progress of work in shops - - }
 while building } During erection on board vessel - - }
 Total No. of visits _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results. The boiler has now been satisfactorily secured on board, examined under steam and safety valves adjusted

Survey Fee ... £ _____ : } When applied for. 19.
 Travelling Expenses (if any) £ _____ : } When received. 19.
Wm Morrison
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.