

# REPORT ON BOILERS.

No. 24828

Port of Glasgow Received at London Office TUES. 21 AUG 1906

No. in Survey held at Northwell Date, First Survey 19 July Last Survey 6 Aug 1906

Req. Book. Donkey Boilers for S.S. "Bernie" (Number of Visits 3) Gross Tons 100 Net Tons 80

Master James Built at Northwell By whom built James & Co When built 1906

Engines made at Northwell By whom made (Ross & Duncanson 1866) when made 1866

Boilers made at Northwell By whom made (Marshall 18273) when made 18273

Registered Horse Power 100 Owners James & Co Port belonging to Glasgow

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel

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

Working Pressure      Tested by hydraulic pressure to      Date of test     

No. of Certificate      Can each boiler be worked separately      Area of fire grate in each boiler      No. and Description of safety valves to each boiler     

Area of each valve      Pressure to which they are adjusted     

Are they fitted with easing gear      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      Mean dia. of boilers      Length     

Material of shell plates      Thickness      Range of tensile strength      Are the shell plates welded or flanged     

Descrip. of riveting: cir. seams      long. seams      Diameter of rivet holes in long. seams      Pitch of rivets     

Lap of plates or width of butt straps      Per centages of strength of longitudinal joint      Working pressure of shell by rules     

Size of manhole in shell      Size of compensating ring      No. and Description of Furnaces in each boiler     

Material      Outside diameter      Length of plain part      Thickness of plates     

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

plates: Material      Thickness: Sides      Back      Top      Bottom      Pitch of stays to ditto: Sides      Back     

Top      If stays are fitted with nuts or riveted heads      Working pressure by rules      Material of stays      Diameter at smallest part     

Area supported by each stay      Working pressure by rules      End plates in steam space: Material      Thickness     

Pitch of stays      How are stays secured      Working pressure by rules      Material of stays      Diameter at smallest part     

Area supported by each stay      Working pressure by rules      Material of Front plates at bottom      Thickness      Material of Lower back plate     

Thickness      Greatest pitch of stays      Working pressure of plate by rules      Diameter of tubes     

Pitch of tubes      Material of tube plates      Thickness: Front      Back      Mean pitch of stays      Pitch across wide water spaces     

Working pressures by rules      Girders to Chamber tops: Material      Depth and thickness of girder at centre     

Length as per rule      Distance apart      Number and pitch of Stays in each     

Working pressure by rules      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     

**VERTICAL DONKEY BOILER**— No. 8243 Description Cross Tube Manufacturers of steel D. Bellville & Sons

Made at Northwell By whom made John Marshall & Co When made Aug 06 Where fixed In Stockholm Working pressure 45 lbs

tested by hydraulic pressure to 150 lbs Date of test 6/8/06 No. of Certificate 8243 Fire grate area 22 sq ft Description of safety valves Direct Spring

No. of safety valves One Area of each 11.04 sq ft Pressure to which they are adjusted 45 lbs If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No

Dia. of donkey boiler 6'-0" Length 10'-6" Material of shell plates Steel Thickness 3/8" Range of tensile strength 28-32

Descrip. of riveting long. seams Old riv lap Dia. of rivet holes 1 3/16" Whether punched or drilled Drilled Pitch of rivets 2 5/8"

Lap of plating 4" Per centage of strength of joint 69.04 Working pressure of shell by rules 44.3 Thickness of shell crown plates 9/16"

Radius of do. 6'-0" No. of Stays to do. 5 Dia. of stays 1 5/8" Diameter of furnace Top 5'-0" Bottom 5'-5" inside Length of furnace 6'-6"

Thickness of furnace plates 1 3/32" Description of joint 1/2" Sing riv Working pressure of furnace by rules 110 lbs Thickness of furnace crown plates 1 9/32"

Radius of do. 5'-0" Stayed by 5 @ 1 5/8" dia Diameter of uptake 16" Thickness of uptake plates 1/2"

Thickness of water tubes 3/8"

The foregoing is a correct description,  
For John Marshall & Co Manufacturer.

Dates of Survey while building

- During progress of work in shops - - 1906: July 19, 27, Aug 6
- During erection on board vessel - - -
- Total No. of visits 3

Is the approved plan of main boiler forwarded herewith     

" " " donkey " "     

Drawing No.     

Lloyd's Register Foundation  
009655-009666-0201

