

# REPORT ON MACHINERY.

Port of Greenock

THUR, 3 MAR 1898

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No. in Survey held at Greenock & Port Glasgow Date, first Survey 25 Nov 1896 Last Survey 25 Feb 1898  
Reg. Book. Sept (Number of Visits 157)

37 on the Screw Steamer "Boveric" Tons { Gross 3987  
Net 2578  
Master A. Shotton Built at Port Glasgow By whom built Russell & Co. When built 1898

Engines made at Greenock By whom made Rankin & Blackimure when made 1897 & 8  
Boilers made at do By whom made do do do when made 1897 & 8

Registered Horse Power 346 Owners Steam Ship Boveric Coy. (Lim<sup>d</sup>) Port belonging to Glasgow  
Nom. Horse Power as per Section 28 346 Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted direct acting triple exp<sup>r</sup> No. of Cylinders Three No. of Cranks Three  
 Diameter of Cylinders 25" 41" 66" Length of Stroke 45" Revolutions per minute 70 Diameter of Screw shaft as per rule 12 3/4"  
 Diameter of Tunnel shaft as per rule 11 3/8" Diameter of Crank shaft journals 12 1/4" Diameter of Crank pins 12 1/4" Size of Crank webs 16 1/4" x 8 1/2"  
 Diameter of screw 18" 0" Pitch of screw 16.9" No. of blades Four State whether moveable no Total surface 94 sq ft  
 No. of Feed pumps Two Diameter of ditto 3 1/2" Stroke 22" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two Diameter of ditto 4 1/2" Stroke 22" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines Two Sizes of Pumps 12" x 10" & 6" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Three 3 1/2" In Holds, &c. Eight 3 1/2" in holds & one 2 1/2" in tunnel well.  
 No. of bilge injections one sizes 4 1/2" valves Connected to condenser, or to circulating pumps As a separate donkey suction fitted in Engine room & size yes 3 1/2"  
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the discharge pipes above or below the deep water line above.  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off cocks fitted with a spigot and brass covering plate yes.  
 What pipes are carried through the bunkers Bilge pipes How are they protected Wood casing.  
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes.  
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock on ship before launching, and in general dry dock 18. 2. 98. Is the screw shaft tunnel watertight yes.  
 Is it fitted with a watertight door yes worked from Engine room top platform.

BOILERS, &c.— (Letter for record B) Total Heating Surface of Boilers 4804 sq ft Is forced draft fitted yes.  
 No. and Description of Boilers Two Cylindrical Multitubular Working Pressure 160 lbs Tested by hydraulic pressure to 320.  
 Date of test 22.12.97 Can each boiler be worked separately yes Area of fire grate in each boiler 56 sq ft No. and Description of safety valves to each boiler Two direct spring Area of each valve 9.62 sq in Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes. Smallest distance between boilers or uptakes and bunkers or woodwork 16" Mean diameter of boilers 15.3"  
 Length 11.6" Material of shell plates Steel Thickness 1 1/32" Description of riveting: circum. seams Lap double long. seams 9 B. straps triple  
 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4" & 4 3/8" Lap of plates or width of butt straps 18 1/4" straps.  
 Per centages of strength of longitudinal joint rivets 85.6 Working pressure of shell by rules 163 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 30" x 26" x 1 1/4" No. and Description of Furnaces in each boiler Three suspension Material Steel Outside diameter 49 1/4"  
 Length of plain part top 5 1/2" bottom 5 3/2" Thickness of plates crown 3 1/2" Description of longitudinal joint welded. No. of strengthening rings no  
 Working pressure of furnace by the rules 166 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4"  
 Pitch of stays to ditto: Sides 8 1/4" x 7 1/4" Back 8" x 7 3/8" Top 8 1/4" x 8 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 160 to 170 lbs.  
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 61 to 89 sq in Working pressure by rules 160 to 170 lbs. End plates in steam space: riv. washers 16 1/2" x 7/8"  
 Material Steel Thickness 7/8" with Pitch of stays 16 1/4" x 15 1/2" How are stays secured double nuts Working pressure by rules 162 lbs. Material of stays Steel  
 Diameter at smallest part 2 1/2" Area supported by each stay 252 sq in Working pressure by rules 167 lbs. Material of Front plates at bottom Steel  
 Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" & 1/2" Greatest pitch of stays 12 1/2" to 13" Working pressure of plate by rules 169 to 204 lbs.  
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/8" Material of tube plates Steel Thickness: Front 25" doubling at wide spaces. Back 3 1/4" Mean pitch of stays 7.32 x 11"  
 Pitch across wide water spaces 13" Working pressures by rules 225 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10" x 5 1/2" double Length as per rule 35" Distance apart 8 1/4" Number and pitch of Stays in each Three 8 1/4"  
 Working pressure by rules 173 lbs. Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no  
 Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no  
 If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no  
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

When state whether and when, one will be sent? report also sent on the hull of the ship?



