

15223 Lm Stockton 3525 Rec 8/10/75

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.

ENGINES.

Description *Inverted Compound surface Condensing,*
 Made by *Messrs J. Richardson & Sons, Hartlepool.*
 In the year *1875.*
 Present condition *New.*
 Diameter of cylinder *8 HP 26, 1P 4 9.*
 Length of stroke *30 30.*
 No. of revolutions per minute *70.*
 Point of cut off *1/2 stroke.*
 Paddle, or Screw *Screw.*
 Nominal Horse Power *98.*
 Diameter of screw, or of paddle wheel *12 7.*
 Pitch of screw *15 0.*
 No. of blades, *4* total surface *49 sq. feet.*
 No. of bilge pumps *1* and size *3 1/4 dia x 22 1/2 stroke single acting.*
 Do they pump from each compartment *yes.*
 Is there provision made for pumping }
 from the wings of the stoke hole } *yes.*

Are all the bilge suction pipes fitted with roses *yes.*
 What vacuum and steam gauges are }
 there attached to the engines } *1 vacuum gauge on Condenser.*
 and boilers..... } *1 steam gauge in Engine room,*
1 steam " stokehole.
 No. of feed pumps *1* and sizes *3 1/4 dia x 22 1/2 stroke single acting.*
 Description and size of } *Inverted Cyl 6 dia x 6 stroke*
 Donkey Engine... } *Pump 4 1/2 dia x 6 " double acting.*
 Will it feed the boilers, pump }
 from the bilges, and pump } *yes.*
 on deck }
 Can it be driven by steam }
 from a separate boiler } *yes.*
 No. of bilge injections *1* and sizes *4 1/2 dia.*
 Are they fitted with non return valves *yes.*
 Is there a hand pump in the engine room *yes.*
 Can it be worked by the main engines *no.*
 Is there a deck hose of sufficient length }
 to reach to any part of the vessel } *yes.*

CONNECTIONS ON HULL.

Are all connections with the sea }
 direct on the skin of the ship } *yes.*
 Are they Kingston valves or common cocks *Stop valves & Common Cocks.*
 Are they fixed sufficiently high on }
 the ship's side to be seen } *yes.*
 without lifting the stokehole }
 plates }
 Are the discharge pipes above or }
 below the deep water line } *Above.*
 Are they each fitted with a discharge }
 valve on the plating of the vessel } *yes.*

Are any pipes carried through the bunkers *none.*
 If so state how protected
 When was the stern tube, }
 propeller, screw shaft, } *new propeller fitted and other*
 and all connections } *parts examined Aug. 1875.*
 examined in dry dock }
 How are the pipes, cocks, and valves }
 arranged so as to prevent } *non return valve and shell*
 an unintentional connection } *cocks with only 1 port in side*
 between the sea and the bilge } *of plug.*
 Have the bilge suction non- }
 return valves fitted or not } *not fitted*

BOILERS.

Number *one.*
 Description *Cylindrical.*
 Made by *Messrs J. Richardson & Sons.*
 In the year *1875.*
 Present condition *good.*
 When last extensively repaired *new.*
 Working pressure *65 lbs per sq. inch.*
 When tested by Hydraulic pressure *Sept 1875.*
 To what pressure tested *130.*
 Any super-heating apparatus *none.*
 Describe it
 Can each boiler be worked separately *yes.*
 Is each boiler fitted with a separate steam gauge *yes.*

Can the super-heater be shut off and }
 the boilers worked separately }
 No. of safety valves on each boiler *2.*
 Description and area of each safety valve *Spring 4 3/8 = 15 0 area,*
 No. of square feet of fire-grate } *51 1/4.*
 surface in each boiler }
 Is there a separate blow off and }
 brine cock on each boiler, } *yes. (both into 1 Cock on ship's side)*
 independent of those }
 on the vessel's skin }
 Is the screw shaft tunnel water }
 tight and fitted with a } *Tunnel not watertight,*
 sluice door on bulkhead } *sluice door fitted.*
 Are all pipes, cocks, and roses in con- }
 nection with these boilers acces- } *yes.*
 sible to the engineer at all times }

J. Richardson & Sons Manufacturer.
M. Chas. Smith

I was present when steam was raised and engines worked. Sep 23/75.
Steam 65 lbs vacuum 2 1/2 revolutions 72. at full speed.
machinery all satisfactory. n. d.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle)
 Steam Vessel *"Lord Byron"* owned by *Messrs Palgrave & Co.*
 of the Port of *Dublin* of *515.44* Tons Register, and *98* Nominal Horse Power,
 have been carefully inspected and examined by *me* at *Hartlepool* and found to be
 at this date, viz., *September 23 1875.* in good order and safe working condition.

William Allison,
 Engineer Surveyor to Lloyd's Register of Shipping.