

15690 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S CERTIFICATE & REPORT.

Per 20/1/76

### ENGINES.

Description *Compound, Inverted, Direct Acting,*  
 Made by *H. Napier & Sons*  
 In the year *1875*  
 Present condition *New*  
 Diameter of cylinder *One 47" and One 45"*  
 Length of stroke *48"*  
 No. of revolutions per minute *about 60*  
 Point of cut off *Variable*  
 Paddle, or Screw *Screw*  
 Nominal Horse Power *300*  
 Diameter of screw, ~~20 ft~~ *18"0"*  
 Pitch of screw *20 ft to 23 ft*  
 No. of blades, *4* total surface *85 ft*  
 No. of bilge pumps *Two* and size *4 1/2" dia x 24" Stroke*  
 Do they pump from each compartment *Yes*  
 Is there provision made for pumping }  
 from the wings of the stoke hold } *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 What vacuum and steam gauges are }  
 there attached to the engines } *One Vacuum, One Steam & One*  
 and boilers..... } *Compound Gauge in Engine Room &*  
*Two Steam to each boiler in stoke hold*  
 No. of feed pumps *Two* and sizes *4 1/2" x 24" Stroke*  
 Description and size of } *Inverted, double acting, 6" x 12" Stroke*  
 Donkey Engine... }  
 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 *Two* and sizes *One 6 1/2" attached to circulating pump*  
 Are they fitted with non return valves } *One 5 1/4" " " Air " "*  
 Is there a hand pump in the engine room } *The one to circulating pump is fitted*  
 Can it be worked by the main engines } *with a non return valve & the one to other*  
 Is there a deck hose of sufficient length } *pump has a screw down valve*  
 to reach to any part of the vessel } *Yes, about 6'*  
*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 } *Screw down valves & cocks*  
 Are they fixed sufficiently high on } *They are all fitted above*  
 the ship's side to be seen } *the turn of the bilge*  
 without lifting the stoke hold }  
 plates ..... }  
 Are the discharge pipes above or } *Above*  
 below the deep water line }  
 Are they each fitted with a discharge } *Yes*  
 valve on the plating of the vessel }

Are any pipes carried through the bunkers *No*  
 If so state how protected \_\_\_\_\_  
 When was the stern tube, } *On slip previous to being launched*  
 propeller, screw shaft, } *and all connections*  
 and all connections } *examined in dry dock*  
 How are the pipes, cocks, and valves } *Non return valves and intermed.*  
 arranged so as to prevent } *at*  
 an unintentional connection } *Cocks with slide ports in side*  
 between the sea and the bilge } *plates*  
 Have the bilge suction non- } *Yes*  
 return valves fitted or not }

### BOILERS.

Number *Two, Round, Horizontal with 3*  
 Description *furnaces in each end fired fore & aft*  
 Made by *H. Napier & Sons*  
 In the year *1875*  
 Present condition *New*  
 When last extensively repaired \_\_\_\_\_  
 Working pressure *60 lbs*  
 When tested by hydraulic pressure *Aug. 24<sup>th</sup> 1875*  
 To what pressure tested *120 lbs*  
 Any super-heating apparatus *Yes*  
 Describe it *Round vertical with 4 tubes*  
 Can each boiler be worked separately *Yes*  
 Is each boiler fitted with a separate steam gauge *Two Gauges*

Can the super-heater be shut off and } *No*  
 the boilers worked separately }  
 No. of safety valves on each boiler *Two*  
 Description and area of each safety valve *Direct Spring 25.96" area*  
 No. of square feet of fire-grate } *92 ft.*  
 surface in each boiler }  
 Is there a separate blow off and } *Yes*  
 brine cock on each boiler, } *Yes*  
 independent of those } *Yes*  
 on the vessel's skin }  
 Is the screw shaft tunnel water } *Yes*  
 tight and fitted with a } *Yes*  
 sluice door on bulkhead }  
 Are all pipes, cocks, and roses in con- } *Yes, they are all fitted in*  
 nection with these boilers acces- } *Engine Room*  
 sible to the engineer at all times }

*Wm. H. Napier & Sons Manufacturers*  
*W. H. Napier*

I hereby certify that the whole of the above Machinery and Boilers of the Iron (~~and Wood~~) Screw (~~and Boiler~~)  
 Steam Vessel *"Dunrobin Castle"* owned by *Donald Currie & Coy.*  
 of the Port of *London* of *1873* Tons Register, and *300* Nominal Horse Power,  
 have been carefully inspected and examined by *me* at *Glasgow* and found to be  
 at this date, viz., *Jan 7<sup>th</sup> 1876* in good order and safe working condition.

*James Morrison*  
Engineer Surveyor to Lloyd's Register of Shipping.

