

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.

### ENGINES.

Rec 19/8/75

Description *Compound, Inverted, Direct Acting.*  
 Made by *Messrs Lubnitz & Coulbourn & Co. Glasgow*  
 In the year *1875*  
 Present condition *New*  
 Diameter of cylinder *32" & 60"*  
 Length of stroke *42"*  
 No. of revolutions per minute *58*  
 Point of cut off *15" of stroke*  
 Paddle, or Screw *Screw*  
 Nominal Horse Power *160*  
 Diameter of screw, ~~or of paddle wheel~~ *14" 0*  
 Pitch of screw *Variable 17" to 18" 0"*  
 No. of blades, *4* total surface *5 1/2 ft*  
 No. of bilge pumps *2* and size *4" x 12" Stroke*  
 Do they pump from each compartment *Yes*  
 Is there provision made for pumping from the wings of the stoke hole *pumps from Engine Room at back of Boilers*

Are all the bilge suction pipes fitted with roses *Yes*  
 What vacuum and steam gauges are there attached to the engines and boilers *2 Vacuum attached to Engines & 2 Steam to Superheater common to both Boilers, with separate cocks*  
 No. of feed pumps *2* and sizes *4" x 12" Stroke*  
 Description and size of Donkey Engine *One 9" x 9" for Ballast Tanks & One 4" x 8"*  
 Will it feed the boilers, pump from the bilges, and pump on deck *Yes, the small one*  
 Can it be driven by steam from a separate boiler *Yes*  
 No. of bilge injections *1* and sizes *3" Connected to Circulating Injection*  
 Are they fitted with non return valves *Yes*  
 Is there a hand pump in the engine room *No*  
 Can it be worked by the main engines  
 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 *Screw down Valves & Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates *Blow off Cocks under Engine Room platform & Air cooling Cocks under Stokers' benches*  
 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 *All, except Small Stokers' discharge*

Are any pipes carried through the bunkers *Yes Two Bilge pipes, and two Ballast Tank pipes*  
 If so state how protected *Hard wood casing 2 3/4" thick*  
 When was the stern tube, propellor, screw shaft, and all connections examined in dry dock *Launched previous to Survey*  
 How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Intermediate Cocks have plugs which cannot be turned to the sea & bilge at the same time*  
 Have the bilge suction non-return valves fitted or not *No*

### BOILERS.

Number *Two Round, Horizontal, with 3 Furnaces in each fired from forward*  
 Description *3 Furnaces in each fired from forward*  
 Made by *Messrs Lubnitz & Coulbourn & Co. Glasgow*  
 In the year *1875*  
 Present condition *New*  
 When last extensively repaired  
 Working pressure *70 lbs*  
 When tested by Hydraulic pressure *29th June 1875*  
 To what pressure tested *140 lbs*  
 Any super-heating apparatus *Yes, One Round*  
 Describe it *Longitudinal common to both Boilers*  
 Can each boiler be worked separately *Yes*  
 Is each boiler fitted with a separate steam gauge *One common to both Boilers & Two attached to Superheater & Receiver*  
*Lubnitz & Coulbourn & Co. Manufacturer.*

Can the super-heater be shut off and the boilers worked separately *Yes*  
 No. of safety valves on each boiler *Two*  
 Description and area of each safety valve *Lever with weights, 23.2" area*  
 No. of square feet of fire-grate surface in each boiler *5 1/2 ft*  
 Is there a separate blow off and brine cock on each boiler, independent of those on the vessel's skin *Yes*  
 Is the screw shaft tunnel water tight and fitted with a sluice door on bulkhead *Yes. It has a wood top 3" thick, caulked*  
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times *Yes. Blow off Cocks are under Engine Room platform & have hatches fitted the others are above*

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Frederic Lanch"* owned by *J. Mallet & Co. of Havre* of the Port of *Havre* of *976.84* Tons Register, and *170* Nominal Horse Power, have been carefully inspected and examined by *me* at *Glasgow* and found to be at this date, viz., *Aug 17th 1875* in good order and safe working condition.

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