

SHIP'S NAME *L. J. Thetis*

*Iron 24390*

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

*Recd 17/9/79*

Description *Inverted direct acting, Compounded*  
 Made by *W Hawthorn & Co* in *Decr 1871*  
 When *April* 1866 At *Newcastle*  
 Diameter of cylinder *19 1/2* Length of stroke *28*  
 No. of revolutions per minute *62*  
 Point of cut off *half stroke*  
 Diameter of screw shaft *6 3/4*  
 Diameter of crank shaft journals *6 3/4*  
 Diameter of screw, or of paddle wheel *10 ft 6 in*  
 Pitch of screw *14 ft*  
 No. of blades, *4* Total surface *40 sq feet*  
 No. of bilge pumps *2* and sizes *3 1/4 x 14*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *3 1/4 x 14*  
 What gauges are there attached to the engines and boilers ... *1 Steam / 1 Case in Engine room / 1 Steam / 1 Water in S' H*  
 Description and size of Donkey Pumps ... *One 4" x 8" double acting*  
 Where do they pump from ... *Sea, Tanks & bilges*  
 No. of bilge injections *1* and sizes *4"*  
 Are they connected to air, or circulating pumps *no*  
 Is there a hand pump in the engine room *no*  
 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*

### MAIN BOILERS.

Number *One* Description *Cylindrical tubular*  
 Made by *J & F Greenham*  
 When *July* 1879 At *South Shields*  
 Working pressure *70 lb*  
 Tested by hydraulic pressure to *140 lb*, Date *20.6.79*  
 Description of super-heating apparatus *none*  
 Can each boiler be worked separately *one boiler*

Can the super-heater be shut off and the boilers worked separately *no*  
 Description and area of safety valves on each boiler ... *5 3/8" dia. Lever & weight = 22.8 sq in area*  
 No. of square feet of fire-grate surface in each boiler *50 sq ft*  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes*  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *yes*

### DONKEY BOILER.

Description *Upright Cylindrical*  
 Where fixed *Hold*  
 Working pressure *35 lb*

Tested by hydraulic pressure to \_\_\_\_\_, Date \_\_\_\_\_  
 Description and area of safety valves *dead weight, adjusted*  
 No. of square feet of fire grate *12 ft* *later factory*

### PIPES, COCKS, AND CONNECTIONS.

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

What pipes are carried through the bunkers *discharge from donkey*  
 How are they protected *Iron plates*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *July 1879*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *yes*

Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *Thetis* owned by *Messrs J & J. Nait.*  
 of the Port of *North Shields* of *532* Tons Register, and *98* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *South Shields*  
 and found to be at this date, viz., *4th Aug 1879* in good order and safe working condition.

Amount of Fee for Survey ... £ \_\_\_\_\_  
 (Travelling Expenses, if any, £ \_\_\_\_\_)

*John Brockat*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
*North Shields*

Report (if any) on Hull of Vessel. Port *Newcastle* No. *143-12*

Form No. 8-1000-25/5/79

IRON 24390-0187