

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

*Re 11/9/79*

*Port Newcastle No. 145-19*

Description *Mounted Compound Surface Condensing* Are all the bilge suction pipes fitted with roses *Yes*  
 Made by *Messrs R. & W. Hawthorn* No. of feed pumps *2* and sizes *3 1/2" dia x 20" stroke*  
 When *August 18 79* At *Newcastle on Tyne* What gauges are there attached to the engines and boilers ... *Vac. Comp. & Press. one of each in C.R. one pressure to each boiler in stow hold*  
 Diameter of cylinder *32" + 62"* Length of stroke *42"* Description and size of Donkey Pumps ... *1 Ballast 8" x 14 double Acting 1 Feed 3 1/2 x 8"*  
 No. of revolutions per minute *from 65 to 40* Where do they pump from ... *Ballast. Forward from "Tacks" Pipes and Condenser. Feed Forward from same place. & hotwell & sea.*  
 Point of cut off *H.P. 6 L.P. 54 of stroke* No. of bilge injections *1* and sizes *4" dia*  
 Diameter of screw shaft *10 1/2* Are they connected to air, or circulating pumps *% Circulating*  
 Diameter of crank shaft journals *10 3/4* Is there a hand pump in the engine room *No - The Feed*  
 Diameter of screw, or of paddle wheel *15" - 6"* Can it be worked by the main engines *Working can be used*  
 Pitch of screw *14 to 18* Is there a deck hose of sufficient length to reach to any part of the vessel *Yes from Iron Pipe*  
 No. of blades, *4* Total surface *62 sq. feet*  
 No. of bilge pumps *2* and sizes *3 1/2" dia x 20" stroke*  
 Do they pump from each compartment *Yes*

### MAIN BOILERS.

Number *2* Description *Cyl. & Multitubular* Can the super-heater be shut off and the boilers worked separately *No super heater*  
 Made by *Messrs R. & W. Hawthorn* Description and area of safety valves on each boiler ... *2 Spring Valves 4" dia Area = 25.12 sq. in*  
 When *August 18 79* At *Newcastle on Tyne* No. of square feet of fire-grate surface in each boiler *43.5 sq. feet*  
 Working pressure *80 lbs per sq. in* Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*  
 Tested by hydraulic pressure to *160*, Date *10. 7. 79* Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times ... *Yes. except one rose in the fore hold*  
 Description of super-heating apparatus *None*  
 Can each boiler be worked separately *Yes*

### DONKEY BOILER.

Description *Circular Vertical* Tested by hydraulic pressure to *160 lbs*, Date *24.6.79*  
 Where fixed *In Stowhold* Description and area of safety valves *1 direct loaded 11" Area*  
 Working pressure *80 lbs per sq. inch* No. of square feet of fire grate *20 sq. feet*

### PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Yes* What pipes are carried through the bunkers *None*  
 Are they Kingston valves or common cocks ... *Stop Valves & Cocks* How are they protected *None*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes* When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Now*  
 Are the discharge pipes above or below the deep water line *Above* Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*  
 Are they each fitted with a discharge valve on the plating of the vessel *Yes* Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Apparently water tight and sluice door fitted*  
 Manufacturer *R. & W. Hawthorn* *Except of the bowing boiler*

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 *"Mangerton"* owned by *Mr J. D. Milburn* of the Port of *London* *1317.16* Tons Register, and *200* Registered Horse Power, and that they have been carefully inspected and examined by me at *Newcastle on Tyne* and found to be at this date, viz., *August 22<sup>nd</sup> 18 79* in good order and safe working condition.

Amount of Fee for Survey ... *£10:0:0* *Ruby* *M. E. G. G. Young* Engineer Surveyor to Lloyd's Register of Shipping.  
 (Travelling Expenses, if any, £ *0:5:0*)  
*10/9/79*  
 North Shields

Report (if any) on Hull of Vessel. *Iron of 1000 & heavier with a bar*

IRON 487-0383

It is submitted that this  
vessel is eligible to have  
a machinery certificate  
granted Folio 8.79  
referred

Drubton

11/9/79



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