

21819 Iron
Rec 7/10/71

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

<p>Description <i>Compound Inverted Direct Acting</i></p> <p>Made by <i>Messrs R. Napier & Sons</i></p> <p>When <i>1848</i> At <i>Glasgow</i></p> <p>Diameter of cylinder <i>32" 55"</i> Length of stroke <i>36"</i></p> <p>No. of revolutions per minute <i>40</i></p> <p>Point of cut off <i>From .3 to .4</i></p> <p>Diameter of screw shaft <i>9 1/2"</i></p> <p>Diameter of crank shaft journals <i>10 3/4"</i></p> <p>Diameter of screw, or of paddle wheel <i>12 ft</i></p> <p>Pitch of screw <i>15" 3"</i></p> <p>No. of blades <i>Four</i> Total surface <i>50 ft</i></p> <p>No. of bilge pumps <i>Two</i> and sizes <i>3 1/2" dia x 18"</i></p> <p>Do they pump from each compartment <i>Yes</i></p>	<p>Are all the bilge suction pipes fitted with roses <i>Yes</i></p> <p>No. of feed pumps <i>Two</i> and sizes <i>3 1/2" dia x 18" Stroke</i></p> <p>What gauges are there attached to the engines and boilers... <i>Three Steam One Vacuum One Compound</i></p> <p>Description and size of Donkey Pumps... <i>Double Acting 5" x 10" Stroke</i></p> <p>Where do they pump from... <i>From the Sea, Bilge & Hotwell</i></p> <p>No. of bilge injections <i>Two</i> and sizes <i>4"</i></p> <p>Are they connected to air, or circulating pumps... <i>2 Air & Circulating</i></p> <p>Is there a hand pump in the engine room <i>Yes</i></p> <p>Can it be worked by the main engines <i>No</i></p> <p>Is there a deck hose of sufficient length to reach to any part of the vessel <i>Yes</i></p>
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MAIN BOILERS.

<p>Number <i>One</i> Description <i>Round Horizontal</i></p> <p>Made by <i>R. Napier & Sons</i></p> <p>When <i>1848</i> At <i>Glasgow</i></p> <p>Working pressure <i>44 lbs. Valves loaded to 165 lbs.</i></p> <p>Tested by hydraulic pressure to <i>130 lbs.</i> Date <i>Aug 6th 1848</i></p> <p>Description of super-heating apparatus <i>Round Vertical with Single Tube</i></p> <p>Can each boiler be worked separately <i>Yes</i></p>	<p>Can the super-heater be shut off and the boilers worked separately <i>No</i></p> <p>Description and area of safety valves on each boiler... <i>Two Direct Spring each 21.64" Area</i></p> <p>No. of square feet of fire-grate surface in each boiler <i>85 ft</i></p> <p>Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin <i>Yes</i></p> <p>Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times... <i>Yes</i></p>
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DONKEY BOILER.

<p>Description <i>Round Horizontal Tubular</i></p> <p>Where fixed <i>on line of Main Deck</i></p> <p>Working pressure <i>45 lbs</i></p>	<p>Tested by hydraulic pressure to <i>90 lbs</i> Date <i>Aug 6th 1848</i></p> <p>Description and area of safety valves <i>Lever & Weight by area</i></p> <p>No. of square feet of fire grate <i>10 ft</i></p>
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PIPES, COCKS, AND CONNECTIONS.

<p>Are all connections with the sea direct on the skin of the ship <i>Yes</i></p> <p>Are they Kingston valves or common cocks... <i>Screw down Valves & Cocks</i></p> <p>Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates... <i>All fitted above the turn of the Bilge</i></p> <p>Are the discharge pipes above or below the deep water line <i>Above</i></p> <p>Are they each fitted with a discharge valve on the plating of the vessel <i>Yes</i></p>	<p>What pipes are carried through the bunkers <i>None</i></p> <p>How are they protected <i>None</i></p> <p>When were the stern tube, propeller, screw shaft, and all connections examined in dry dock <i>On Slip previous to being launched</i></p> <p>Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge <i>Yes</i></p> <p>Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead <i>Yes</i></p>
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R. Napier & Sons Manufacturers

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (and Wood) Screw (or Paddle) Steam Vessel *"Sunfield"* owned by *J. Currie & Co* of the Port of *LONDON* of *742* Tons Register, and *150* Registered Horse Power, and that they have been carefully inspected and examined by me at *Glasgow* and found to be at this date, viz., *Oct 2nd 1848* in good order and safe working condition.

Amount of Fee for Survey ... £ *4.10.0* Paid
(Travelling Expenses, if any, £ ..)

James Mollison
Engineer Surveyor to Lloyd's Register of Shipping.

Iron 480-0302

The Machinery of this vessel is
fitted according to the rules
submitted that she is
eligible to have Lloyd's

M.C. and a Certificate
given 2^d October 1878

W.P.

8-10-78



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Foundation