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LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

Rec 10/12/77

Report (if any) on Hull of Vessel. Port W. Hartlepool No. 3915
Report on Engines No 34

ENGINES.

Description: Compound. Inverted Surface Condensing
Made by: Blair & Co (Lim)
When: Nov 1877 At: Stockton
Diameter of cylinder: 30 & 55 Length of stroke: 36"
No. of revolutions per minute: About 65
Point of cut off: 1/2 stroke
Diameter of screw shaft: 10"
Diameter of crank shaft journals: 10". Tunnel shaft 9 4 dia
Diameter of screw, ~~or of paddle wheel~~: 13'-6"
Pitch of screw: About 14'-0"
No. of blades, 4 Total surface: Not ascertained
No. of bilge pumps: 2 and sizes: 3½" x 26" stke. Single Acting
Do they pump from each compartment: No 1 pump draws from ballast tanks engine room, fore hold & afterwell. After pump draws from engine room only

Are all the bilge suction pipes fitted with roses: Yes
No. of feed pumps: 2 and sizes: 3½ x 26 stke Single Acting
What gauges are there attached to the engines and boilers ...: 3 steam, 1 vacuum
Description and size of Donkey Pumps ...: No 1 pump 7½ dia x 9 stk. Double acting; No 2 " 4 " x 8 " " "
Where do they pump from ...: No 1 pumps from ballast tanks, wings and centre of engine room, fore hold & afterwell. No 2 pumps from sea, hotwell, wings of ~~engine room~~, fore hold & afterwell
No. of bilge injections: 1 and sizes: 4½
Are they connected to air, or circulating pumps: Circulating pump
Is there a hand pump in the engine room: Donkeys work by hand
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: Two Description: Cylindrical Multitubular
Made by: Blair & Co (Lim)
When: Nov. 1877 At: Stockton
Working pressure: 74 lbs
Tested by hydraulic pressure to: 148 lbs, Date: 17th Oct 1877
Description of super-heating apparatus ...: None
Can each boiler be worked separately: Yes

Can the super-heater be shut off and the boilers worked separately: No Superheater
Description and area of safety valves on each boiler ...: Two spring valves on each boiler. Area of two valves 16.6 sq in
No. of square feet of fire-grate surface in each boiler: 27 sq feet
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 ...: All except suction pipes & pumps in holds when ship is loaded

DONKEY BOILER Made by N. Porter. Stockton

Description: Vertical. Water tubes in furnace
Where fixed: In stokehole
Working pressure: 60
Tested by hydraulic pressure to: 120, Date: 24th Oct 1877
Description and area of safety valves: 1 direct & 1 lever & weight. Total Area 1.959 in
No. of square feet of fire grate: 14.5 sq feet

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 ...: Stop valves & 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: Yes
Are they each fitted with a discharge valve on the plating of the vessel: Yes

What pipes are carried through the bunkers: None
How are they protected: —
When were the stern tube, propeller, screw shaft, and all connections examined in dry dock: New
Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge: Drain cocks on ballast tanks. Handles carried above water line. Yes
Is the screw shaft-tunnel water-tight and fitted with a sluice door on bulkhead: Tunnel not watertight. Sluice door fitted

Pro Blair Hea Ld
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Manufacturers of Engines & Main Boilers only

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 Dalton *owned by* Symon Bell & Co *of the Port of* Newcastle on Tyne *of* 1263.76 *Tons Register, and* 120 *Registered Horse Power, and that they have been carefully inspected and examined by me at* Stockton on Tees *and found to be at this date, viz.,* 1st Dec. 1877 *in good order and safe working condition.*

Amount of Fee for Survey ... ... £ 6.0.0
Certificate 0.5.0
(*Travelling Expenses, if any,* £)

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

(1000/31/7/76.)

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