19814 Iron.

S REGISTER OF BRITISH AND FOREIGN SHIPPING.

Rec'd 24/12/77

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

mpound Inverted Surface Condensing
T. Richardson & Sons
r 1877 At Hartlepool
cylinder 29 & 55 Length of stroke 33"
tions per minute About 65
off 1/2 stroke
screw shaft 9¼
crank shaft journals 9¼
screw, ~~or of paddle wheel~~ 13 " 6
ew 15 " 6
s, Four Total surface 60 sq feet
pumps Two and sizes 2⅝" x 34" stke. Single Acting
mp from each compartment From fore hold, engine room & after well

Are all the bilge suction pipes fitted with roses Yes
No. of feed pumps Two and sizes 3¼ x 23½ stke. Single Acting
What gauges are there attached to the engines and boilers ... Two steam, one vacuum
Description and size of Donkey Pumps ... No 1 pump 7½ dia x 9" stke. Double Acting; No 2 " 3½ " x 7 " " "
Where do they pump from ..... No 1 pumps from engine room bilge and from ballast tanks, No 2 pumps from sea hotwell, fore hold, engine room & after well
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 Donkey works 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.

ne Description Multitubular Fired at both ends
T. Richardson & Sons
ec r 1877 At Hartlepool
pressure 70 lbs
y hydraulic pressure to 140 lbs, Date 10th Nov 1877
ion of super-heating aratus ..... None
n boiler be worked separately Only one boiler in ship

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 safety valves Combined area 35.4 sq in
No. of square feet of fire-grate surface in each boiler 58 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 roses in holds when ship is loaded

DONKEY BOILER.

ption Vertical Water tubes in furnace
fixed In stokehole
ng pressure 50 lbs

Tested by hydraulic pressure to 120 lbs, Date 2nd Nov 1877
Description and area of safety valves 1 direct & 1 lever & weight. Total area 11.8 sq in
No. of square feet of fire grate 19.6 sq ft

PIPES, COCKS, AND CONNECTIONS.

ll connections with the sea irect on the skin of the ship Yes
they Kingston valves r common cocks ... Stop valves and common cocks
ey fixed sufficiently high on e ship's side to be seen thout lifting the stoke hold ates ..... Yes
discharge pipes above or ow the deep water line Below
y each fitted with a discharge ve 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 Yes
Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead Tunnel not watertight. Sluice door fitted

Richardson & Sons Manufacturer.
Mr Chas Smith

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) w (or Paddle) Steam Vessel "Valhalla" *owned by* F. Herskind
e Port of West Hartlepool *of* 919.39 *Tons Register, and* 120 *Registered Horse Power,*
that they have been carefully inspected and examined by me at Hartlepool
found to be at this date, viz., 20th Decr 1877 *in good order and safe working condition.*

nt of Fee for Survey ... ... £ 6 : 0 : 0
Certificate 0 - 5 - 0
ing Expenses, if any, £

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

Recd. S.P.G.

/76.]

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