

# REPORT ON MACHINERY.

Port of London.

Received at London Office **MUR 28 SEP 1899**

No. in Survey held at London Date, first Survey 13 March 99 Last Survey 23 Sept 99  
 Reg. Book. 465 on the Iron S.S. "Hesperus" (Number of Visits 19)  
 Master S. J. Cotton Built at Amsterdam By whom built Murray & Fowler Tons Gross 908  
Net 561 When built 1875  
 Engines made at Amsterdam By whom made Gurley Bros & Co. when made 1875  
 Boilers made at London By whom made J. Stewart & Sons Ltd. when made 1899  
 Registered Horse Power 119 Owners Gen S. N. Co Port belonging to London  
 Nom. Horse Power as per Section 28 119 Is Refrigerating Machinery fitted No Is Electric Light fitted No

**ENGINES, &c.—Description of Engines**

Description of Engines			No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	Lgth. of stern bush
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under collars
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
In Engine Room			In Holds, &c.	
No. of bilge injections	sizes	Connected to condenser	Is a separate donkey suction fitted in Engine room & size	
Are all the bilge suction pipes fitted with roses			Are the roses in Engine room always accessible	
Are all connections with the sea direct on the skin of the ship			Are they Valves or Cocks	
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates			Are the discharge pipes above or below the deep water line	
Are they each fitted with a discharge valve always accessible on the plating of the vessel			Are the blow off cocks fitted with a spigot and brass covering plate	
What pipes are carried through the bunkers			How are they protected	
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times				
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges				
When were stern tube, propeller, screw shaft, and all connections examined in dry dock			Is the screw shaft tunnel watertight	
Is it fitted with a watertight door			worked from	

**BOILERS, &c.—** (Letter for record ✓) Total Heating Surface of Boilers 1600 ft<sup>2</sup> Is forced draft fitted No.

No. and Description of Boilers One. Inular. Working Pressure 130 lb Tested by hydraulic pressure to 260 lb

Date of test 13/9/99 Can each boiler be worked separately ✓ Area of fire grate in each boiler 64 ft<sup>2</sup> No. and Description of safety valves to each boiler 20 Exam'd Area of each valve ✓ Pressure to which they are adjusted ✓ Are they fitted with easing gear ✓

Smallest distance between boilers or uptakes and bunkers or woodwork ✓ Mean dia. of boilers 14.9 Length 10.3 Material of shell plates Steel

Thickness 1 Range of tensile strength 98 to 100 Are they welded or flanged No Descrip. of riveting: cir. seams Dep. Riv'd long. seams Dep. Riv'd

Diameter of rivet holes in long. seams 1/8 Pitch of rivets 6 7/8 Lap of plates or width of butt straps 17 1/2

Per centages of strength of longitudinal joint 84 Working pressure of shell by rules 136 lbs Size of manhole in shell 16 x 12

Size of compensating ring 30 x 26 x 1 No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 36"

Length of plain part 6-0 Thickness of plates 5/8 Description of longitudinal joint Dep Riv'd No. of strengthening rings Bottom

Working pressure of furnace by the rules 160 lb Combustion chamber plates: Material S. Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 9/16

Pitch of stays to ditto: Sides 9 x 9 Back 9 x 9 Top 9 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 135 lb

Material of stays S. Diameter at smallest part 1 1/32 Area supported by each stay 81 in<sup>2</sup> Working pressure by rules 140 lb End plates in steam space: Material S. Thickness 1/16 Pitch of stays 17 1/2 How are stays secured Dep Riv'd Working pressure by rules 134 lb Material of stays S.

Diameter at smallest part 2 5/16 Area supported by each stay 270 in<sup>2</sup> Working pressure by rules 136 lb Material of Front plates at bottom S.

Thickness 1/16 Material of Lower back plate S. Thickness 1/16 Greatest pitch of stays 12 Working pressure of plate by rules 140 lb

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates S. Thickness: Front 3/4 Back 3/4 Mean pitch of stays 9 x 9

Pitch across wide water spaces 13 1/8 Working pressures by rules 184 lb Girders to Chamber tops: Material S. Depth and thickness of girder at centre 7 x 1 1/2 Length as per rule 30 Distance apart 8 5/8 Number and pitch of Stays in each 2 x 9

Working pressure by rules 130 lb Superheater or Steam chest; how connected to boiler Final Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓

Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

If not stated whether, assumed to be as per rule.

61478 Ton

**DONKEY BOILER—** No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.

Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Thickness of furnace crown plates Stayed by Working pressure of shell by rules

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tube

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops -  
Total No. of visits

April, March 2 Visits, May 2<sup>nd</sup> 12<sup>th</sup>. June, July 5 Visits.  
~~XXXXXX~~ August 4 Visits - Sept. 5 Visits.  
18 Visits.

Is the approved plan of main boiler forwarded herewith

.. .. donkey .. ..

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Boiler has been constructed under special Survey. The material and workmanship are good and satisfactory. On completion this Boiler has been tested by water pressure to 260 lbs per square inch and found to be tight and sound at that pressure. The following mark is stamped on this Boiler viz: No 367 Lloyd's Test 260 lbs P. S. 13-9-99. Please see copy of Certificate in Damage Report Form attached herewith.

It is submitted that as this boiler is fitted in an unclassified vessel no further action need be taken

Amended  
28/9/99

for 3/11/99

As this vessel is not classed it is respectfully recommended that no further action be taken in this case.

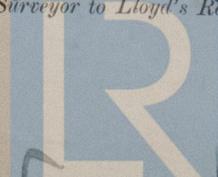
The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	H: H:	:	28/9 99
Donkey Boiler Fee .. .	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	27 10 18 99

D. Ritchie  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

Not for Commerce  
Unclassed Vessel



Lloyd's Register Foundation

Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or beyond the space for Committee's Minute.)