

FROM 24 APR 89  
OR.

# REPORT ON MACHINERY. 34305

Port of **LIVERPOOL.**

Received at London Office 13

No. **34305** Survey held at **Liverpool** Date, first Survey **Jan 19** Last Survey **April 1889**  
y. Book. (Number of Vials **18**) Tons **625**  
on the **Iron Screw Steamer "Neva"** When built **1865-9**  
ater **J. A. Hindle** Built at **Cumbria** By whom built **J. B. Davall & Co**  
gines made at **Hull** By whom made **Camp & Co. Hull** when made **1873**  
ilers made at **Liverpool** By whom made **D. Hollar & Sons** when made **1889**  
gistered Horse Power **90** Owners **W. H. Platt & Co** Port belonging to **Liverpool**

**GINES, &c.**  
Triple expansion, direct acting, surface condensing  
meter of Cylinders **15-22-38** Length of Stroke **30** No. of Rev. per minute **62** Point of Cut off, High Pressure  $\frac{1}{2}$  Low Pressure  $\frac{1}{2}$   
meter of Screw shaft **8-7** Diam. of Tunnel shaft **8-7** Diam. of Crank shaft journals **8-7** Diam. of Crank pin **8** size of Crank webs **58 x 11-1/2**  
meter of screw **10-0** Pitch of screw **13-0** No. of blades **4** state whether moveable **No** total surface **36 sq ft**  
of Feed pumps **2** diameter of ditto **2** Stroke **16** Can one be overhauled while the other is at work **Yes**  
of Dilge pumps **2** diameter of ditto **3-1/2** Stroke **16** Can one be overhauled while the other is at work **Yes**  
ere do they pump from **Engine room bilges. Fore, Main & After Holds**  
of Donkey Engines **One** Size of Pumps **5" x 6"** Where do they pump from **Engine room bilges.**  
**All holds, and sea**  
e all the bilge suction pipes fitted with roses **Yes** Are the roses always accessible **Yes** Are the sluices on Engine room bulkheads always accessible **Yes**  
of bilge injectors **1** and sizes **4-1/2** Are they connected to condenser, or to circulating pump **Circulating pump**  
is are the pumps worked **Levers from piston and cross heads**  
all connections with the sea direct on the side of the ship **Yes** Are they Valves or Cocks **Both**  
e they fixed sufficiently high on the ship's side to be seen without lifting the aloft-hold plates **Yes** Are the discharge pipes above or below the deep water line **Below**  
e they each fitted with a discharge catch always accessible on the plating of the vessel **Yes** Are the blow off cocks fitted with a cap and brass covering plate **Yes**  
at pipes are carried through the bunkers **None** How are they protected **By a cap and brass covering plate**  
e all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times **Yes**  
e the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges **Yes**  
en were stern tube, propeller, screw shaft, and all connections examined in dry dock **March 1889**  
the screw shaft tunnel watertight and fitted with a sluice door worked from **C.A. down from top platform**

**ELLERS, &c.**  
umber of Boilers **One** Description **Cylindrical & Multitubular** Whether Steel or Iron **Steel**  
orking Pressure **150 lb** Tested by hydraulic pressure to **300 lb** Date of test **8-3-89**  
cription of superheating apparatus or steam chest **None**  
each boiler be worked separately **Can the superheater be shut off and the boiler worked separately**  
of square feet of fire grate surface in each boiler **44 sq ft** Description of safety valves **Spring** No. to each boiler **Two**  
a of each valve **7-07** Are they fitted with casing gear **Yes** No. of safety valves to superheater **2** area of each valve **12-6**  
e they fitted with casing gear **Smallest distance between boilers and bunkers or woodwork**  
gth of boilers **10-0** description of riveting of shell long. seams **Double butt strap** circum. seams **Double butt strap** Thickness of shell plates **1-3/4**  
meter of rivet holes **1-1/2** whether punched or drilled **Drilled** pitch of rivets **6-3/4 x 3-3/8** Lap of plating **15-3/4 strap**  
centage of strength of longitudinal joint **84-26** working pressure of shell by rules **150 lb** size of manholes in shell **16 x 12**  
e of compensating rings **6 x 1-3/4** No. of Furnaces in each boiler **3**  
aide diameter **3-2** length, top **6-6** bottom **6-6** thickness of plates  $\frac{1}{2}$  description of joint **Welded** if rings are fitted **No**  
eatest length between rings **1-1/2** working pressure of furnace by the rules **157 lb** combustion chamber plating, thickness, sides  $\frac{1}{2}$  back  $\frac{1}{2}$  top  $\frac{1}{2}$   
ch of stays to ditto, sides **7-80** back **7-80** top **7-80** If stays are fitted with nuts or riveted heads **None** working pressure of plating by  
rules **157 lb** Diameter of stays at smallest part **1-6** working pressure of ditto by rules **161 lb** and plates in steam space, thickness **1-3/4 double**  
ch of stays to ditto **14-57 x 14** how stays are secured **Butt & Washer** working pressure by rules **161 lb** diameter of stays at  
smallest part **2** working pressure by rules **150 lb** Front plates at bottom, thickness  $\frac{1}{2}$  Back plates, thickness  $\frac{1}{2}$   
eatest pitch of stays **10 x 7** working pressure by rules **157 lb** Diameter of tubes **3-3/4** pitch of tubes **4-1/2 x 4-1/2** thickness of tube  
plates, front  $\frac{1}{2}$  back  $\frac{1}{2}$  how stayed **Stay tubes** pitch of stays **9 x 9** width of water spaces **1-1/2** diam. of rivet holes **1-1/2**  
meter of Superheater or Steam chest **None** length **1-1/2** thickness of plates **1-1/2** description of longitudinal joint **None** If stayed with rings **None**  
ch of rivets **1-1/2** working pressure of shell by rules **157 lb** diameter of flue **1-1/2** thickness of plates **1-1/2**  
stance between rings **1-1/2** working pressure by rules **157 lb** end plates of superheater, or steam chest, thickness **1-1/2** how stayed **None**  
Superheater or steam chest; how connected to boiler **None**

LIV 584-0021

## DONKEY BOILER—

Description

Vertical Cochran's Patent

Made at Birkenhead by whom made Cochranwhen made 1882 where fitted Stoke Newington

Working pressure 50 lb tested by hydraulic pressure to 200 lb No. of Certificate 629 fire grate area 12 sq ft description of safety valves Spring No. of safety valves One area of each 7 sq in if fitted with easing gear No if steam from main boilers can enter the donkey boiler No diameter of donkey boiler 5'-0" length 11'-0" description of riveting Lap & butt

Thickness of shell plates 1/2" diameter of rivet holes 3/4" whether punched or drilled Yes pitch of rivets 2" lay of plating 4

per centage of strength of joint 70 thickness of crown plates 1/2" stayed by Hemphreys

Diameter of furnace, top 14'-2" bottom 14'-2" length of furnace 2'-6" thickness of plates 7/16" description of joint Lap & butt

Thickness of furnace crown plates 1/2" stayed by Butt working pressure of shell by rules 150 lb

Working pressure of furnace by rules 50 lb diameter of uptake 1'-0" thickness of plates 1/2" thickness of water tubes 1/2"

SPARE GEAR. State the articles supplied:

Propeller, connection and bolts, crimping bolts &c

The foregoing is a correct description,

Manufacturer.

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

A new main boiler has been made and fitted on board this vessel, and engine converted from the ordinary compound type, to triple expansion. All the various parts of the engine have been overhauled and placed in good working order.

Engine and boiler tested under steam and found satisfactory, and in my opinion they are in good order and safe working condition and eligible for the notification L.M.C. 4.88, + N.B. 89, in the Register Book.

It is submitted that the vessel is eligible to have L.M.C. 4.89, + N.B. 89, recorded.

W.A.  
27. 4. 89.

The amount of Entry Fee . . . £

Special . . . £

Donkey Boiler Fee . . . £

Certificate (if required) . . . £

To be sent to per margin

(Travelling Expenses, if any, £)

Committee's Minute

received by

10/10

15/6/1889

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C. A. Milner  
Engine Surveyor to Lloyd's Register of British & Foreign Shipping.  
FOUR LONDON

A.I. 1 Record Sixth Survey 89.  
P.H.C (Red) 4.88 + N.B. 89.

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