

## REPORT ON MACHINERY.

Port of Sunderland

Received at London Office

NO. 22 JULY 1889

Date, first Survey February 1889Last Survey July 11<sup>th</sup> 1889(Number of Visits 23)1276.33Tons 820.24Survey held at S. landS.S. "Ova"

on the

By whom built Shand & Slip Co. LtdWhen built 1889es made at S. landBy whom made The N. & M. Eng Co.when made 1889s made at S. landBy whom made The N. & M. Eng Co. Ltdwhen made 1889Registered Horse Power 130Owners Charles Frederick Henric Port belonging to London

INES, &amp;c.—

ption of Engines Tri compound 3 cranksNo. of Rev. per minute 65 Point of Cut off, High Pressure 6 P. Low Pressure 6Diameter of Cylinders 18 1/2" 30" 4 1/2" Length of Stroke 33" Diam. of Crank pin 9 1/2" size of Crank webs 15 x 5 1/2"Diameter of Screw shaft 9 1/2" Diam. of Tunnel shaft 8 3/4" Diam. of Crank shaft journals 9 1/2"Pitch of screw 12" 4" Pitch of screw 13 mean No. of blades 4 state whether moveable f total surface 42 fDiameter of Feed pumps 2 diameter of ditto 2 1/2" Stroke 33" Can one be overhauled while the other is at work yesDiameter of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 33" Can one be overhauled while the other is at work yesWhere do they pump from Bilges of all compartments, engine room, aft wellSize of Pumps (8 x 9) + (3 x 4 1/2) Where do they pump from Port Tank's sea bilgesAre the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yesAre they connected to condenser, or to circulating pump C.P.Are the pumps worked direct from crossheadsAre they Valves or Cocks bothAre the discharge pipes above or below the deep water line aboveAre the blow off cocks fitted with a spigot and brass covering plate yesHow are they protected ✓Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yesAre the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock when buildingIs the screw shaft tunnel watertight ✓ and fitted with a sluice door yes worked from top platformDescription of superheating apparatus or steam chest ✓Can the superheater be shut off and the boiler worked separately ✓Description of safety valves Spring No. to each boiler 2Area of each valve 8.3 sq Are they fitted with easing gear yes No. of safety valves to superheater ✓Smallest distance between boilers and bunkers or woodwork 9" Diameter of boilers 14 ftLength of boilers 10' 3" description of riveting of shell long. seams t. r. butt circum. seams d. r. lap Thickness of shell plates 18 1/2"Diameter of rivet holes 1 1/2" whether punched or drilled d. pitch of rivets 4" x 3 1/2" Lap of plating 16 1/2 strapsPercentage of strength of longitudinal joint 83.92% working pressure of shell by rules 152.3 size of manholes in shell 16" x 12"No. of Furnaces in each boiler 3Size of compensating rings 8" x 1 1/8"Outside diameter 3' 3" length, top 5' 9" bottom 6' 0" thickness of plates 3" description of joint ✓ if rings are fitted ✓Greatest length between rings ✓ working pressure of furnace by the rules 15 1/2 combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"Stays to ditto, sides 8' 1/2" back 8' 1/2" top 1/2" x 1 1/2" stays are fitted with nuts or riveted heads nuts working pressure of plating byDiameter of stays at smallest part 1.33 sq. in. working pressure of ditto by rules 17 1/4 end plates in steam space, thickness 1"Stays to ditto 15 3/8" x 15 1/16" how stays are secured nuts working pressure by rules 150 diameter of stays atSmallest part 2 3/8" working pressure by rules 150 Front plates at bottom, thickness 3/4" Back plates, thickness 1 1/16"Pitch of stays 11 1/2" working pressure by rules 150 Diameter of tubes 3 1/2" pitch of tubes 4 1/2" x thickness of tubeFront 1 1/2" back 3/4" how stayed stayed pitch of stays 9" width of water spaces 1 1/2"Description of longitudinal joint ✓ diam. of rivet holes ✓If stiffened with rings ✓Working pressure of shell by rules ✓ diameter of flue ✓ thickness of plates ✓ how stayed ✓End plates of superheater, or steam chest; thickness ✓Superheater or steam chest; how connected to boiler ✓Description of Furnaces yesSealing surface in ✓ by Rule 20 1/8



DONKEY BOILER— Description *Vertical 3 cross tubes*  
Made at *Galshead* by whom made *Clark Chapman & Co* when made *6/89* where fixed *Stoke Newington*  
Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *2873* fire grate area *19.5 sq* description  
valves *Spring* No. of safety valves *1* area of each *12.56 sq* fitted with easing gear *Yes* if steam from main boiler  
enter the donkey boiler *No* diameter of donkey boiler *6" 3"* length *12' 6"* description of riveting *lap double*  
Thickness of shell plates *9/16"* diameter of rivet holes *13/16"* whether punched or drilled *Sam* pitch of rivets *3 3/8"* lap of plating  
per centage of strength of joint *72.2%* thickness of crown plates *5"* stayed by *6 stays 1 5/8" dia*  
Diameter of furnace, top *4' 11"* bottom *5' 3"* length of furnace *5' 3"* thickness of plates *9/16"* description of joint *lap. S*  
Thickness of furnace crown plates *9/16"* stayed by *Same as crown* working pressure of shell by rule  
Working pressure of furnace by rule *80 US* diameter of uptake *15"* thickness of plates *3/8"* thickness of water tubes

SPARE GEAR. State the articles supplied:— *1 Set of coupling bolts & nuts. 1 Set of top and bottom end connecting rod bolts & nuts. 2 main bearing bolts & nuts. 1 Set of feed and helge pump valves. Spare propeller. m*  
*bolts assorted and iron of various sizes.*

The foregoing is a correct description,

*J. H. Drwin* Manufacturer. *Main engine & boiler*  
*The North Eastern Marine Engineering Co*  
*London*  
General Remarks (State quality of workmanship, opinions as to class, &c.)

*The machinery and boilers of this vessel have been constructed under special survey. The materials and workmanship are and efficient. The main steam pipes were tested to twice working pressure and found sound; the machinery and were tried under steam and in my opinion are in and safe working condition, eligible for the notification in the Register Book of L.M.C 7. 89.*

*Don submitted that this vessel is in compliance with L.M.C 7. 89 recorded*

*22. 7. 89*  
*Clark*

The amount of Entry Fee £ *2 : 0 : 0* received by me,  
Special £ *19 : 10 : 0*  
Donkey Boiler Fee £  
Certificate (if required) £ *19 July 1889*  
To be sent as per margin.

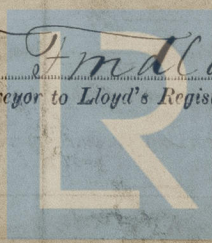
(Travelling Expenses, if any, £ )

Committee's Minute

*TUES 23 JULY 1889*

*+ dm 6/7/89*

*J. D. Findlay*  
Engineer Surveyor to Lloyd's Register of British & Foreign S



Lloyd's Register  
Foundation