

REPORT ON MACHINERY.

15275

Port of Sunderland

Received at London Office

MON 18 NOV 1889

No. 15275

No. in Survey held at S. land

Date, first Survey 11th April 89

Last Survey 4th Nov 89

18 89.

Reg. Book.

(Number of Visits 3H)

1897-24

on the

"S. S. County Derry"

Tons 1164.36

Master A. Hall

Built at S. land

By whom built S. P. Austin & Son

When built 1889

Engines made at S. land

By whom made N. E. M. Eng. Co. Ld

when made 1889

Boilers made at S. land

By whom made N. E. M. Eng. Co. Ld

when made 1889

Registered Horse Power 160

Owners The County Derry S.S. Co. Ld Port belonging to Belfast

ENGINES, &c.—

Description of Engines Tri compound (Triple expansion) 3 or 4 cyls.

Diameter of Cylinders 20" 32" 53" Length of Stroke 36" No. of Rev. per minute 70 Point of Cut off, High Pressure 6 1/2 Low Pressure 6

Diameter of Screw shaft 10 1/2" Diam. of Tunnel shaft 9 3/4" Diam. of Crank shaft journals 10 1/2" Diam. of Crank pin 10 1/2" size of Crank webs 12" x 4"

Diameter of screw 13" - 6" Pitch of screw 13" - 3" No. of blades 4 state whether moveable f total surface 44 f

No. of Feed pumps 2 diameter of ditto 2 1/2" Stroke 36" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 36" Can one be overhauled while the other is at work yes

Where do they pump from bilges of all comp. after well.

No. of Donkey Engines 2 Size of Pumps 13 1/2" x 9 1/2" x 5 1/2" x 3 1/2" Where do they pump from B. D. Tanks bilges. after well sea. 7th Sea hotwell. tanks & bilges

Are 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

No. of bilge injections 1 and sizes 4" dia. Are they connected to condenser, or to circulating pump C. D.

How are the pumps worked direct by crossheads.

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the discharge pipes above or below the deep water line above

Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers none How are they protected —

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock when building

Is the screw shaft tunnel watertight — and fitted with a sluice door yes worked from top platform of engine room

OILERS, &c.—

Number of Boilers 2 Description Cylindrical, multi. Whether Steel or Iron excepting tubes

Working Pressure 160 Ws Tested by hydraulic pressure to 320 Ws Date of test 6th Sept. 1889.

Description of superheating apparatus or steam chest none

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately —

No. of square feet of fire grate surface in each boiler 36 f Description of safety valves Spring No. to each boiler 2

Area of each valve 7.06 sq Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 9" Diameter of boilers 11' 9"

Length of boilers 10' 3" description of riveting of shell long. seams treb riv. butt circum. seams d. r. lap Thickness of shell plates 1 3/8"

Diameter of rivet holes 1" whether punched or drilled d pitch of rivets 6 1/2" & 3 1/4" Lap of plating 1 1/2"

Per centage of strength of longitudinal joint 82.6 working pressure of shell by rules 163 Ws size of manholes in shell 16" x 12"

Size of compensating rings 8" x 1" No. of Furnaces in each boiler 2

Outside diameter 3' length, top 6' 3" bottom 6' 4" thickness of plates 5" description of joint — if rings are fitted —

Greatest length between rings — working pressure of furnace by the rules 166 combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"

Pitch of stays to ditto, sides 7 1/2" x 7 1/2" back 7 1/2" x 7 1/2" top 7 1/2" x 7 1/2" stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 178 Diameter of stays at smallest part 1.33 area working pressure of ditto by rules 195 end plates in steam space, thickness 1 1/16"

Pitch of stays to ditto 1' 3 1/8" x 1' 3 1/8" how stays are secured d. nuts working pressure by rules 160 Ws diameter of stays at smallest part 2 3/8" working pressure by rules 159 Front plates at bottom, thickness 3/4" Back plates, thickness 7/8"

Greatest pitch of stays 11 1/2" working pressure by rules 160 Diameter of tubes 3 1/4" pitch of tubes 4 1/2" thickness of tube plates, front 1 3/16" back 3/4" how stayed Sty tubes pitch of stays 9" width of water spaces 1 1/4"

Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

Pitch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —

Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —

Superheater or steam chest; how connected to boiler —

1261 f of heating surface in each boiler

Description of furnaces ribbed furnace

Lloyd's Register Foundation

SLD966-0134

DONKEY BOILER— Description *Vertical with 4 cross water tubes*
 Made at *Stockton* by whom made *J. Sudron & Co* when made *1889* where fixed *Stoke hole*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs*. No. of Certificate *1954* fire grate area _____ description of safety
 valves *spring* No. of safety valves *2* area of each *7.06 sq* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6" 6"* length *14" 0* description of riveting *long. lap. double*
 Thickness of shell plates *13/32* diameter of rivet holes *13/16* whether punched or drilled *φ* pitch of rivets *2 1/4"* lap of plating *4 1/2"*
 per centage of strength of joint *70.4* thickness of crown plates *13/32* stayed by *6 stays of 1 1/2" eff diam.*
 Diameter of furnace, top *5" 4"* bottom *5" 10 1/2"* length of furnace *6" 4"* thickness of plates *19/32* description of joint *lap single riv.*
 Thickness of furnace crown plates *9/16* stayed by *same as shell crown plates.* working pressure of shell by rules *79 lbs*
 Working pressure of furnace by rules *85 lbs* diameter of uptake *15"* thickness of plates *7/16* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *2. Connecting rod top & bottom end bolts & nuts.*
2 main bearing bolts. 1 set of coupling bolts & nuts. 1 set of feed
and bilge pump valves. 6 spare boiler tubes, nuts & bolts asso.
iron of various sizes.

The foregoing is a correct description,
 J. H. Munn Manufacturer. Main Engines & Boilers

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery and boilers of this vessel have been constructed
under special survey of good workmanship and materials
The main steam pipes were tested to twice the working pressure
the engines and boilers have been tried under steam &
safety valves adjusted to retain 165 lbs. In my opinion the
condition of this vessel is in good order and safe working condition eligible
for the nonification in the Register to rot of +L.M.C. 11-89

[Large handwritten signature]

It is submitted that this vessel
is eligible to have +L.M.C. 11-89
recorded W.A.
18-11-89

The amount of Entry Fee .. £ *2 : 0 : 0* received by me,
 Special .. £ *24 : 0 : 0*
 Donkey Boiler Fee .. £ _____
 Certificate (if required) .. £ _____ *11th Nov. 1889.*

J. J. Findlay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

(Travelling Expenses, if any, £ _____)
 Committee's Minute _____ **TUES 19 NOV 1889**
+ L.M.C. 11/89

