

REPORT ON MACHINERY.

Port of Newcastle

FRIDAY 1 FEB 1895

Received at London Office

No. in Survey held at Newcastle Date, first Survey 2 Mar. 1894 Last Survey 16 Jan. 1895
Reg. Book. Suppl. (Number of Visits 55)

15 on the S.S. "Dowgate" Master Hillis Built at Kallsund By whom built Swan & Hunter When built 1895
Tons { Gross 2899
Net 1869

Engines made at Kallsund By whom made North Eastern Marine Eng^{rs} when made 1895
Boilers made at Kallsund By whom made North Eastern Marine Eng^{rs} when made 1895

Registered Horse Power 300 Owners A. W. Dillon Port belonging to London
Nom. Horse Power as per Section 28 252

ENGINES, &c.— Description of Engines Triple Expansion No. of Cylinders 3
 Diameter of Cylinders 23-38-61" Length of Stroke 39" Revolutions per minute 60 Diameter of Screw shaft as per rule 10 3/4"
 Diameter of Tunnel shaft as fitted 10 3/4" Diameter of Crank shaft journals 1 1/4" Diameter of Crank pin 1 1/4" Size of Crank webs 7 1/2" x 2 1/2"
 Diameter of screw 16' 0" Pitch of screw 16' 0" No. of blades 4 State whether moveable no Total surface 75 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 8x9 Balant, 4x6 Fed No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two wing 2 1/2" One Centre 3 1/2" In Holds, &c. Two Fore Hold 3" Two Main Hold 3" One aft well 3 1/2" One Tunnel well 2 1/2"
 No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pumps no pumps a separate donkey suction fitted in Engine room of size 3 1/2"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 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 and all boiler mountings accessible at all times yes
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Nov 1894 Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 4080 sq ft
 No. and Description of Boilers Two mult. single ended Working Pressure 160 lb Tested by hydraulic pressure to 320 lb
 Date of test 1.11.94 Can each boiler be worked separately yes Area of fire grate in each boiler 48.75 sq ft No. and Description of safety valves to each boiler 2, spring
 Area of each valve 7.07 Pressure to which they are adjusted 165 lb Are they fitted with easing gear yes
 Length 10' 0" Material of shell plates Stal Thickness 1 3/8" Description of riveting: circum. seams Lap double long. seams D. B. tubular
 Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 84.9 Working pressure of shell by rules 171 lb Size of manhole in shell 16 x 12 plate 85.8
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 plain Material Stal Outside diameter 40 1/2"
 Length of plain part top 6' 0" bottom 5' 4" Thickness of plates top 3/4" bottom 3/4" Description of longitudinal joint D. B. strap No. of strengthening rings 1
 Working pressure of furnace by the rules 163 lb Combustion chamber plates: Material Stal Thickness: Sides 1 9/32" Back 5/8" Top 1 9/32" Bottom 3 5/32"
 Pitch of stays to ditto: Sides 8 3/4" Back 9 1/8" Top 8 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 162 lb
 Material of stays Stal Diameter at smallest part 1 3/4" x 1 5/8" Area supported by each stay 7439 sq in Working pressure by rules 161 lb End plates in steam space: Material Stal Thickness 1 3/8" Pitch of stays 22 1/2" x 2 3/4" How are stays secured on plates Working pressure by rules 162 lb Material of stays Stal
 Diameter at smallest part 3 1/2" Area supported by each stay 5119 sq in Working pressure by rules 172 lb Material of Front plates at bottom Stal Thickness 3/4" Material of Lower back plate Stal Thickness 3/4" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 185 lb
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Stal Thickness: Front 3/4" Back 3/4" Mean pitch of stays 11 1/4"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 190 lb Girders to Chamber tops: Material Stal Depth and thickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 31" Distance apart 7 1/2" Number and pitch of Stays in each 2-8 3/4"
 Working pressure by rules 207 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately yes
 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 ✓

DONKEY BOILER— Description *Vertical with 4 X tubes.*
 Made at *Stockton* By whom made *Riley Bros* When made *28.6.94* Where fixed *Stokehole*
 Working pressure *80 lbs* tested by hydraulic pressure to *160* No. of Certificate *883* Fire grate area *25 sq ft* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *4.91* Pressure to which they are adjusted *85 lbs* If fitted with casing gear *Yes* If steam from main boilers
 enter the donkey boiler *No* Diameter of donkey boiler *7' 0"* Length *15' 0"* Material of shell plates *Steel* Thickness
 Description of riveting long. seams *Lap double* Diameter of rivet holes *3/8"* Whether punched or drilled *punched* Pitch of rivets
 Lap of plating *4 1/4"* Per centage of strength of joint Rivets *74.7* Thickness of shell crown plates *9/16"* Radius of do. *5' 0"* No. of Stays to do.
 Dia. of stays. *1 1/2"* Diameter of furnace Top *5' 5"* Bottom *6' 0 1/4"* Length of furnace *5' 8"* Thickness of furnace plates *5/8"* Description
 joint *Lap single* Thickness of furnace crown plates *9/16"* Stayed by *same as shell crown* Working pressure of shell by rules *80*
 Working pressure of furnace by rules *81 lbs* Diameter of uptake *17"* Thickness of uptake plates *7/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *2 Top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set for bilge pump valves, 1 propeller, Bolt & nut assorted.*

The foregoing is a correct description,
 FOR AND ON BEHALF OF THE NORTH EASTERN
 MARINE ENGINEERING COMPANY, LIMITED. Manufacturer.

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

The main steam pipes have been tested by hydraulic pressure to 320 lbs & found in order.

The engines & boilers of this vessel have been built under special survey, and of good quality of workmanship. They have been tried under steam, safety-valves adjusted, & found to work well. The machinery is now eligible in our opinion to have the notation + L.M.C. 195 in the Register Book.

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C. 195

A.R.R.
2.2.95

Newcastle Office

Certificate (if required) to be sent to
 The amount of Entry Fee. £ 2 : 0 :
 Special £ 32 : 12 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 29.1.18.95
 When received, 31.1.18.95

R. F. Morton & A. Stoddart
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 5 FEB 1895**
 Assigned *+ L.M.C. 195*

* * * These particulars	
Signal Letters (a)	
Official Number	
104, 834	
No., Date, and Place	
Whether British or Foreign Built.	
British	
Number of Decks	
Number of Masts	
Rigged	
Stern	
Build	
Galleries	
Head	
Framework and d	
vessel	
Number of Bulkheads	
Number of water tanks and their capacities	
Total to quarter ton at side amidships	
No. of Engines	Description
Three	Triple expansion surface condensing
	Boiler
	Number
	Iron or Steel
	Pressure when
GROSS TONNAGE	
Under Tonnage Decks	
Closed-in spaces above	
Space or spaces	
Poop	
Forecastle	
decks	
Other closed-in spaces	
Short	
Excess	
Machinery	
Gross Tonnage	
Deductions, as per	
Register	
Name of Master	
No. of Owners	
Name, Residence, and	
Dawson	
41 B.	
Henry W.	
Dated 18th Feb	