

# REPORT ON MACHINERY.

Port of **NEWCASTLE-ON-TYNE**

THUR, 29 DEC 1898

Survey held at **South Shields**

Date, first Survey **8th Aug 22nd Nov**

Last Survey **Dec 16th 1898**

(Number of Visits)

on the **Steam Trawler "Doreen"**

Tons **139**

Built at **S. Shields**

By whom built **J. T. Eltringham & Co.**

When built **1898**

made at **S. Shields**

By whom made **L. J. Gray**

when made **1898**

made at **S. Shields**

By whom made **J. T. Eltringham & Co.**

when made **1898**

rated Horse Power **47**

Owners **Wearmouth Dock Co**

Port belonging to **Sunderland**

Horse Power as per Section 28 **59**

Is Electric Light fitted **No.**

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

Number of Cylinders **2** No. of Cranks **2**

Diameter of Cylinders **16" 34"** Length of Stroke **22"** Revolutions per minute **106** Diameter of Screw shaft **6 3/4"**

Diameter of Tunnel shaft **6 3/4"** Diameter of Crank shaft journals **6 3/8"** Diameter of Crank pin **6 3/8"** Size of Crank webs **9 3/4" x 4 1/4"**

Diameter of screw **8-0"** Pitch of screw **11-6"** No. of blades **4** State whether moveable **No** Total surface **195**

No. of Feed pumps **1** Diameter of ditto **2 3/8"** Stroke **11"** Can one be overhauled while the other is at work **✓**

No. of Bilge pumps **1** Diameter of ditto **3"** Stroke **11"** Can one be overhauled while the other is at work **✓**

No. of Donkey Engines **1** Sizes of Pumps **4 1/2" x 2 3/4" x 4** No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room **Two, 2' dia.** In Holds, &c. **Two in fore hold + one in after**

No. of bilge injections **1** sizes **3"** Connected to condenser, or to circulating pump **No** Is a separate donkey suction fitted in Engine room & size **4 1/2" 2"**

Are all the bilge suction pipes fitted with roses **No** Are the roses in Engine room always accessible **No** Are the sluices on Engine room bulkheads always accessible **No**

Are all connections with the sea direct on the skin of the ship **No** Are they Valves or Cocks **Both**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **No** Are the discharge pipes above or below the deep water line **Below**

Are they each fitted with a discharge valve always accessible on the plating of the vessel **No** Are the blow off cocks fitted with a spigot and brass covering plate **No**

How are they protected **✓**

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times **No**

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges **No**

When were stern tube, propeller, screw shaft, and all connections examined in dry dock **No** Is the screw shaft tunnel watertight **No**

Is it fitted with a watertight door **✓** worked from **✓**

**BOILERS, &c.—** (Letter for record **5**) Total Heating Surface of Boilers **9559** Is forced draft fitted **No**

No. and Description of Boilers **Two cylindrical simple vertical** Working Pressure **120 lbs** Tested by hydraulic pressure to **240 lbs**

Date of test **27/10/98** Can each boiler be worked separately **✓** Area of fire grate in each boiler **31 1/2** No. and Description of safety valves to **2**

Each boiler **2 spring valves** Area of each valve **5-930"** Pressure to which they are adjusted **125 lbs** Are they fitted **✓**

With easing gear **No** Smallest distance between boilers or uptakes and bunkers or woodwork **10"** Mean diameter of boilers **10-5"**

Length **10-0"** Material of shell plates **S** Thickness **25/32"** Description of riveting: circum. seams **Lap double** long. seams **Lap single**

Diameter of rivet holes in long. seams **1 1/4"** Pitch of rivets **5"** Lap of plates **8 3/4"**

Percentage of strength of longitudinal joint **75** Working pressure of shell by rules **122** Size of manhole in shell **12 x 16**

Size of compensating ring **7 x 25/32"** No. and Description of Furnaces in each boiler **2 Plain** Material **S** Outside diameter **39"**

Length of plain part **6-9"** Thickness of plates **25/32"** Description of longitudinal joint **Lap single** No. of strengthening rings **✓**

Working pressure of furnace by the rules **123** Combustion chamber plates: Material **S** Thickness: Sides **16** Back **19/32** Top **19/32** Bottom **22/32**

Pitch of stays to ditto: Sides **9 1/2** Back **10** Top **10** If stays are fitted with nuts or riveted heads **No** Working pressure by rules **121**

Material of stays **S** Diameter at smallest part **1 1/2"** Area supported by each stay **590"** Working pressure by rules **125** End plates in steam space: **S**

Material **S** Thickness **1"** Pitch of stays **19 1/4"** How are stays secured **On 1st** Working pressure by rules **121** Material of stays **S**

Diameter at smallest part **2 1/2"** Area supported by each stay **2740"** Working pressure by rules **126** Material of Front plates at bottom **S**

Thickness **27/32** Material of Lower back plate **S** Thickness **25/32** Greatest pitch of stays **13 1/2"** Working pressure of plate by rules **120**

Diameter of tubes **3 1/2"** Pitch of tubes **4 3/4" x 4 5/8"** Material of tube plates **S** Thickness: Front **1** Back **25/32** Mean pitch of stays **14 1/2"**

Pitch across wide water spaces **14 1/2"** Working pressures by rules **129** Girders to Chamber tops: Material **✓** Depth and **✓**

Thickness of girder at centre **✓** Length as per rule **✓** Distance apart **✓** Number and pitch of Stays in each **✓**

Working pressure by rules **✓** Superheater or Steam chest; how connected to boiler **Nick** Can the superheater be shut off and the boiler worked **✓**

separately **No** Diameter **3-0"** Length **45"** Thickness of shell plates **3/8"** Material **S** Description of longitudinal joint **Lap double** Diam. of rivet **✓**

holes **2 3/8"** Pitch of rivets **3"** Working pressure of shell by rules **151** Diameter of flue **✓** Material of flue plates **✓** Thickness **✓**

If stiffened with rings **✓** Distance between rings **✓** Working pressure by rules **✓** End plates: Thickness **3/16** How stayed **Dist. & 2022**

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



