

REPORT ON MACHINERY 7640

3 AUG. 81

Port of *West Hartlepool*

Received at London Office

To. *4640*
No. in Survey held at *Hartlepool & Middlesbrough* Date, first Survey *14th Jan 7* Last Survey *16th Aug 1889*
(Number of Visits *19*) Tons *1534.19*

on the *Screw Steamer "Daylight"*
Master *D. Morgan* Built at *Middlesbrough* By whom built *Messrs. W. & C. Dixon & Co.* When built *1889.*

Engines made at *Hartlepool* By whom made *Messrs. J. Richardson & Sons* when made *1889.*

Boilers made at *Hartlepool* By whom made *Messrs. J. Richardson & Sons* when made *1889.*

Have Power By Rule *219*
Registered Horse Power *200* Owners *John Wood* Port belonging to *West Hartlepool*

GINES, &c.—
Description of Engines *Inverted, Triple Expansion, 3 Cylinders & 3 Cranks*

Number of Cylinders *22, 35, 59* Length of Stroke *39* No. of Rev. per minute *65* Point of Cut off, High Pressure *.5* Low Pressure *.6*

Number of Screw shaft *10 1/2* Diam. of Tunnel shaft *10 3/8* Diam. of Crank shaft journals *10 1/2* Diam. of Crank pin *10 1/2* size of Crank webs *16 1/2 x 7 1/4*

Number of screw *16.0* Pitch of screw *15.6* No. of blades *4* state whether moveable *no* total surface *7399. ft*

Feed pumps *2* diameter of ditto *3 1/4* Stroke *23* Can one be overhauled while the other is at work *yes.*

Bilge pumps *2* diameter of ditto *3 1/4* Stroke *23* Can one be overhauled while the other is at work *yes.*

do they pump from *Engine room, after well & sea.*

Donkey Engines *2* Size of Pumps *(8 1/2 x 7) (3 1/2 x 7)* Where do they pump from *(Sea, ballast tanks, engine room bilges) (Sea, hold, all bilges, & main bilges)*

Are the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*

Are bilge injections *no* and sizes *4 1/2* Are they connected to condenser, or to circulating pump *Circulating pump*

Are the pumps worked *By levers from the low pressure piston rod crosshead*

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 *below*

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*

Are all pipes carried through the bunkers *none* How are they protected *none*

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 *18th June 1889.*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Top platform of engine room.*

BOILERS, &c.—
Number of Boilers *Two* Description *Cyl. Mult. Single Ended* Whether Steel or Iron *Steel*

Working Pressure *160 lb.* Tested by hydraulic pressure to *320 lb.* Date of test *30th April 1889.*

Description of superheating apparatus or steam chest *none* Heating Surface *3330 sq. ft.*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *no superheater*

No. of square feet of fire grate surface in each boiler *47.7* Description of safety valves *Spring* No. to each boiler *2*

Area of each valve *5.94* 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 *on woodwork 8* Diameter of boilers *13.8*

Length of boilers *9.4* description of riveting of shell long. seams *double butt strap* circum. seams *double lap* Thickness of shell plates *1 1/16*

Diameter of rivet holes *1 1/16* whether punched or drilled *drilled* pitch of rivets *8, 2 rows 4* Lap of plating *9 3/4*

Percentage of strength of longitudinal joint *85.1* working pressure of shell by rules *160 lb.* size of manholes in shell *none*

No. of Furnaces in each boiler *3*

Size of compensating rings

Outside diameter *3.4* length, top *6.9* bottom *7.3* thickness of plates *32* description of joint *welded* if rings are fitted *no*

Greatest length between rings *—* working pressure of furnace by the rules *162 lb.* combustion chamber plating, thickness, sides *5/8* back *5/8* top *5/8*

Pitch of stays to ditto, sides *8 1/2 x 8* back *8 1/2 x 8* top *8 x 8* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *166 lb.* Diameter of stays at smallest part *1 3/8* working pressure of ditto by rules *174 lb.* end plates in steam space, thickness *1 1/16*

Pitch of stays to ditto *15 3/4 x 15 3/4* how stays are secured *double nuts & washers* working pressure by rules *163 lb.* diameter of stays at smallest part *2 3/8* working pressure by rules *160 lb.* Front plates at bottom, thickness *3/4* Back plates, thickness *1 1/16*

Greatest pitch of stays *11 1/4* working pressure by rules *160 lb.* Diameter of tubes *3 1/2* pitch of tubes *4 1/2 x 4 3/8* thickness of tube plates, front *1 1/16* back *1 1/16* how stayed *stay tubes* pitch of stays *9 x 8 3/4* 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

57471-0200

Lloyd's Register Foundation

DONKEY BOILER— Description *Vertical, Cylindrical, 6 Cross tubes*
Made at *Gateshead* by whom made *Clarke Chapman & Co* when made *25.6.89* where fixed *In stockhole*
Working pressure *90 lb.* tested by hydraulic pressure to *180 lb.* No. of Certificate *2892* fire grate area *22 sq. ft* description of safety
valves *Spring* No. of safety valves *2* area of each *4.97* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *yes* diameter of donkey boiler *6.6* length *13.0* description of riveting *double riv lap*
Thickness of shell plates *15/32* diameter of rivet holes *7/8* whether punched or drilled *drilled* pitch of rivets *3 3/16* lap of plating *4 1/4*
per centage of strength of joint *71* thickness of crown plates *19/32* stayed by *6 stays 1 3/4 effective dia.*
Diameter of furnace, top *5.2* bottom *5.6 1/4* length of furnace *6.0* thickness of plates *15/8* description of joint *single riv lap*
Thickness of furnace crown plates *9/16* stayed by *6 stays 1 3/4 effective dia* working pressure of shell by rules *91 lb*
Working pressure of furnace by rules *90 lb.* diameter of uptake *15* thickness of plates *7/16* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *One propeller, A set of bolts & nuts for a
connecting rod, main bearing, and shaft coupling, One set
of valves for a feed and bilge pump, Bolts & nuts ass^d, Iron ass^d
One set of L.P. piston springs.*

The foregoing is a correct description,

I. Kirkham Don Manufacturer of Engines & main boilers.

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

*main steam pipes tested by hydraulic pressure to 320 lb. per
square inch and found tight
The engines and boilers of this vessel have been constructed
under Special Survey and of a good quality of workmanship
they have been tried under steam, the safety valves adjusted
and found to work well, and are now in safe and efficient
working condition and eligible, in my opinion, to have
L.M.C. 8.89. recorded in the Register of this Society.*

*It is submitted that this
vessel is eligible to have
+ L.M.C. 8.89 recorded*

Hd

30.8.89

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,

Special .. £ 30 : 0 : 0

Donkey Boiler Fee .. £ : : :

Certificate (if required) .. £ : : : 29.8.1889

To be sent as per margin.

(Travelling Expenses) if any, £

Committee's Minute

TUES 3 SEPT 1889

+ L.M.C. 8.89

G. Stoddart
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

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