

# REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

Received at London Office WED. 7 AUG 1895

No. in Survey held at WEST HARTLEPOOL Date, first Survey 3<sup>rd</sup> January Last Survey 2<sup>nd</sup> August 1895  
 Reg. Book. S.S. Lady Turner (Number of Visits 64)  
 on the S.S. Lady Turner Tons { Gross 3158  
 Net 2042  
 Master Superthorpe Built at WEST HARTLEPOOL By whom built Turner & Co When built 1895  
 Engines made at Hartlepool By whom made J. Richardson & Son Ltd when made 1895  
 Boilers made at do By whom made do when made 1895  
 Registered Horse Power 300 Owners George S. Coram Esq Port belonging to London  
 Nom. Horse Power as per Section 28 299

ENGINES, &c. — Description of Engines Triple expansion No. of Cylinders Three  
 Diameter of Cylinders 24. 40. 66 Length of Stroke 45 Revolutions per minute 60 Diameter of Screw shaft 11.65  
 as per rule 11.96 as fitted 12.5  
 Diameter of Tunnel shaft 11.5 Diameter of Crank shaft journals 12.5 Diameter of Crank pin 12.5 Size of Crank webs 8 x 19  
 as fitted 11.5  
 Diameter of screw 16.9 Pitch of screw 17.3 No. of blades 4 State whether moveable No Total surface 75 sq  
 Vo. of Feed pumps 2 Diameter of ditto 3 Stroke 27 Can one be overhauled while the other is at work Yes  
 Vo. of Bilge pumps 2 Diameter of ditto 3.5 Stroke 27 Can one be overhauled while the other is at work Yes  
 Vo. of Donkey Engines 2 Sizes of Pumps 2.5 x 7.5 8.5 x 7 No. and size of Suctions connected to both Bilge and Donkey pumps  
 in Engine Room Two 3" Two 3.5" Bilge injection 6" In Holds, &c. Two hold one 3.5" Main hold one 3.5"  
After hold one 3.5" Aftermost hold one 3.5" After well one 2.5"  
 Vo. of bilge injections 1 sizes 4.5 Connected to condenser, or to circulating pump Pump Is a separate donkey suction fitted in Engine room & size Yes 3.5  
 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 None  
 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 Never Is the screw shaft tunnel watertight Yes  
 Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c. — (Letter for record 181) Total Heating Surface of Boilers 4600  
 No. and Description of Boilers Two Single ended Working Pressure 160 Tested by hydraulic pressure to 320  
 Date of test 18.5.95 Can each boiler be worked separately Yes Area of fire grate in each boiler 52.4 No. and Description of safety valves to  
 each boiler Two Spring Area of each valve 7.06 Pressure to which they are adjusted 165 Are they fitted  
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 1.9 Mean diameter of boilers 15.9  
 length 10.6 Material of shell plates Steel Thickness 1.4 Description of riveting: circum. seams Lap double long. seams A.B. Straps  
 Diameter of rivet holes in long. seams 1.4 Pitch of rivets 8.5 Lap of plates or width of butt straps 19.5 Straps  
 rivets 85.9 Working pressure of shell by rules 162.6 Size of manhole in shell 16 x 12  
 plate 85.39  
 Percentages of strength of longitudinal joint - No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 4.0 1/4  
 size of compensating ring -  
 length of flue part top 6.3 Thickness of plates crown 1.4 Description of longitudinal joint Welded No. of strengthening rings -  
 bottom 6.6 bottom 1.2  
 Working pressure of furnace by the rules 169 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 3/8  
 Pitch of stays to ditto: Sides 8 3/4 Back 8 3/4 Top 8 3/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 176  
 Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 740 Working pressure by rules 160 End plates in steam space:  
 Material Steel Thickness 1 1/8 Pitch of stays 19.14 How are stays secured By nuts Working pressure by rules 166 Material of stays Steel  
 Diameter at smallest part 2 3/4 Area supported by each stay 3230 Working pressure by rules 165 Material of Front plates at bottom Steel  
 Thickness 1 3/16 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 169  
 Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 Material of tube plates Steel Thickness: Front 3 1/2 Back 3/4 Mean pitch of stays 9 1/2  
 Pitch across wide water spaces 14 1/2 Working pressures by rules 160 Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 8 3/4 x 1 3/4 Length as per rule 2.8 Distance apart 8 3/4 Number and pitch of Stays in each 3-Pitch 7  
 Working pressure by rules 189 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately - 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 -  
 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 six crop tubes*  
 Made at *Stockton* By whom made *J. Hudson & Co. Ltd.* When made *1894* Where fixed *Stokehold*  
 Working pressure *80* tested by hydraulic pressure to *100* No. of Certificate *946* Fire grate area *28.5* Description of safety valves *Spring*  
 No. of safety valves *2* Area of each *5.94* Pressure to which they are adjusted *80 1/2* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *4.0* Length *14.0* Material of shell plates *Steel* Thickness *15/32*  
 Description of riveting long. seams *Lap double* Diameter of rivet holes *13/16* Whether, punched or drilled *Punched* Pitch of rivets *2 3/4*  
 Lap of plating *4 1/4* Per centage of strength of joint Rivets *68.5* Plates *70.4* Thickness of shell crown plates *3/16* Radius of do. *5.9* No. of Stays to do. *7*  
 Dia. of stays *1 3/4* Diameter of furnace Top *5.3* Bottom *6.4 1/2* Length of furnace *6.0* Thickness of furnace plates *21/32* Description of joints *Lap Single* Thickness of furnace crown plates *5/8* Stayed by *Same as shell* Working pressure of shell by rules *82 1/2*  
 Working pressure of furnace by rules *82 1/2* Diameter of uptake *14 1/4* Thickness of uptake plates *7/16* Thickness of water tubes *3/8*

**SPARE GEAR.** State the articles supplied:— *Propeller, 2 main bearing bolts & nuts, 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 set of shaft coupling bolts & nuts, 1 set of feed valves, 1 set of tilge valves, piston springs, nuts, bolts, & iron assorted.*

The foregoing is a correct description,  
 For THOMAS RICHARDSON & SONS, LIMITED,  
*W. Richardson* Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been specially surveyed during construction the material and workmanship good and renders the vessel eligible in our opinion to have the Record L.M.C. 8.95 in the Register Book of the Society.*)

It is submitted that  
 this vessel is eligible for  
 THE RECORD, + L.M.C. 8.95  
*A R S K*  
*9.8.95*

*Richard Sims*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The Surveys are requested not to write on or below the space for Committee's Minute.

Certificate (if required) to be sent to		MACHINERY CERTIFICATE WRITTEN.	
The amount of Entry Fee..	£ 2. : :	When applied for,	3. 8. 18. 95.
Special .. .. .	£ 34. 19. :	When received,	5. 8. 18. 05.
Donkey Boiler Fee .. .	£ : : :		
Travelling Expenses (if any) £	: : :		

Committee's Minute *FRI. 9 AUG 1895*  
 Assigned *+ L.M.C. 8.95*

