

# REPORT ON MACHINERY.

Received at London Office

Date of writing Report 23<sup>rd</sup> May 1918 When handed in at Local Office 28/5/18 Port of West Hartlepool  
 No. in Survey held at West Hartlepool Date, First Survey 23<sup>rd</sup> Feb/15 Last Survey 16<sup>th</sup> May 1918  
 Reg. Book. on the steel Twin screw steamer "DUQUESA" (Number of Visits)  
 Master G. Jarvis Built at West Hartlepool By whom built Senior St & S. Co. Ld. Tons { Gross 8650.99  
 Engines made at Hartlepool By whom made Richardson, Westgarth & Co. Ld. when made 1918 Net 5400.38  
 Boilers made at Hartlepool By whom made Richardson, Westgarth & Co. Ld. when made 1918  
 Registered Horse Power Owners Furness Moulder Argentine Lines Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 899 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

# RETAIN

ENGINES, &c. — Description of Engines Two sets of Triple Expansion No. of Cylinders 6 Three No. of Cranks Three  
 Dia. of Cylinders 25-4 1/2-40 Length of Stroke 48 Revs. per minute 86 Dia. of Screw shaft as per rule 14 3/4 Material of screw shaft steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes  
 If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes  
 If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 6-0 3/4  
 Dia. of Tunnel shaft as per rule 13.19 Dia. of Crank shaft journals as per rule 13.85 Dia. of Crank pin 14 5/8 Size of Crank webs 9 1/2 x 22 Dia. of thrust shaft under collars 14 3/4 Dia. of screw 16-9 Pitch of Screw 18-0 No. of Blades four State whether moveable yes Total surface 88 sq ft  
 No. of Feed pumps Two Diameter of ditto 11 1/2 Stroke 24 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two Diameter of ditto 5 1/2 Stroke 24 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines Three Sizes of Pumps General Service 6 1/2 x 10 duplex No. and size of Suctions connected to both Bilge and Donkey pumps Two 10 x 10 duplex  
 In Engine Room Port 3/2, Starboard 3/2, Centre 3/2, Two Main Eng. 3/2 direct, Tunnel 1/2 In Holds, &c. Two in each Hold 3/2  
 No. of Bilge Injections Two sizes 10 Connected to condenser or to circulating pump to condenser Is a separate Donkey Suction fitted in Engine room & size Two 3/2  
 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 none  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Port  
 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  
 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  
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c. — (Letter for record S) Manufacturers of Steel J. Spencer & Sons, Ld. & Bright, Lee & Co. Ld.  
 Total Heating Surface of Boilers 16396 sq ft Is Forced Draft fitted yes No. and Description of Boilers Single End 4 Cor. Furnace, 4 Cor. Main  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 13/11/16 No. of Certificate 3445  
 Can each boiler be worked separately yes Area of fire grate in each boiler 79.45 sq ft No. and Description of Safety Valves to each boiler Two, direct spring Area of each valve 14.18 sq in Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 24 Mean dia. of boilers 14.9 3/8 Length 12-0 Material of shell plates steel  
 Thickness 1 1/2 Range of tensile strength 31 3/4 to 35 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double & triple  
 long. seams BBB - TR Diameter of rivet holes in long. seams 1 5/8 Pitch of rivets 10 3/8 Lap of plates or width of butt straps 23 3/8  
 Per centages of strength of longitudinal joint rivets 92.3% Working pressure of shell by rules 234 lbs Size of manhole in shell 16 1/2 x 13  
 Size of compensating ring 8 3/4 x 1 19/32 No. and Description of Furnaces in each boiler 4 - Brighten Material steel Outside diameter 47 3/4  
 Length of plain part top — bottom — Thickness of plates 3 1/2 Description of longitudinal joint weld No. of strengthening rings —  
 Working pressure of furnace by the rules 224 lbs Combustion chamber plates: Material steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 3/32  
 Pitch of stays to ditto: Sides 8 x 8 1/8 Back 8 3/8 x 7 1/8 Top 8 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202 lbs  
 Material of stays steel Area at smallest part 1760 Area supported by each stay 8 3/8 x 7 1/8 Working pressure by rules 212 lbs End plates in steam space: Material steel Thickness 1 5/16 Pitch of stays 20 1/2 x 18 1/4 How are stays secured on + on W Working pressure by rules 207 lbs Material of stays steel  
 Area at smallest part 8.48 Area supported by each stay 18 1/2 x 20 Working pressure by rules 241 lbs Material of Front plates at bottom steel  
 Thickness 1 Material of Lower back plate steel Thickness 3/32 Greatest pitch of stays 13 1/2 x 7 1/8 Working pressure of plate by rules 201 lbs  
 Diameter of tubes 2 3/4 Pitch of tubes 4 1/2 x 3 7/8 Material of tube plates steel Thickness: Front 1 Back 4/8 Mean pitch of stays 9 3/8  
 Pitch across wide water spaces 13 3/4 Working pressures by rules 203 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 3/4 x 1 3/4 Length as per rule 34 3/8 Distance apart 8 3/4 Number and pitch of stays in each Three 7 1/2  
 Working pressure by rules 204 lbs Steam dome: description of joint to shell — % of strength of joint —  
 Diameter — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —  
 Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type — Date of Approval of Plan — Tested by Hydraulic Pressure to —  
 Date of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —  
 Diameter of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —

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