

# REPORT ON MACHINERY

No. 10625  
MAR 26 1920

Received at London Office

Date of writing Report 10 When handed in at Local Office 20.3.20 Port of MIDDLESBRO  
 No. in Survey held at Stockton-on-Tees Date, First Survey 11<sup>th</sup> April 1919 Last Survey 15<sup>th</sup> March 1920  
 Reg. Book. on the Steel Screw Steamer TIBERTON (S.S.N. 679) (Number of Visits 76)  
 Master Built at Stockton By whom built Richardson Duck & Co When built 1920  
 Engines made at Stockton By whom made Messrs Blair & Co Ltd (N. 1908) when made 1920  
 Boilers made at Stockton By whom made Messrs Blair & Co Ltd when made 1920  
 Registered Horse Power Owners Messrs R. Chapman & Son Port belonging to Newcastle  
 Nom. Horse Power as per Section 28 397 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c. — Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 26-44-73 Length of Stroke 48 Revs. per minute 77 Dia. of Screw shaft as per rule 14.7 as fitted 15.5 Material of screw shaft iron  
 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 in one 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 tight fit If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush  
 Dia. of Tunnel shaft as per rule 13.83 as fitted 13.12 Dia. of Crank shaft journals as per rule 14.5 as fitted 14.2 Dia. of Crank pin 14.5 Size of Crank webs 28 x 9 Dia. of thrust shaft under collars 14.5 Dia. of screw 17.6 Pitch of Screw 17.6 No. of Blades 4 State whether moveable no Total surface 97 1/2  
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 3 Sizes of Pumps 10 1/2 x 14 x 24 2 @ 9 1/2 x 7 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4 @ 3 1/2 In Holds, &c. 2 @ 3 1/2 in each hold except aftermost where one @ 3 1/2 Tunnel with one @ 3  
 No. of Bilge Injections 1 sizes 13 Connected to centrifugal circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 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 none  
 Are all connections with the sea direct on the skin of the ship yes; Main & donkey 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 suction to forward holds How are they protected wood ceiling  
 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  
 Dates of examination of completion of fitting of Sea Connections 13.1.20 of Stern Tube 13.1.20 Screw shaft and Propeller 27.1.20  
 Is the Screw Shaft Tunnel watertight yes, see hull P. 41 Is it fitted with a watertight door yes worked from top platform

OILERS, &c. — (Letter for record (S) 5) Manufacturers of Steel Messrs John Spencer & Son Ltd 2 S.B.  
 Total Heating Surface of Boilers 6066 Is Forced Draft fitted no No. and Description of Boilers 2 Single ended  
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 5.12.19 No. of Certificate 6061  
 Can each boiler be worked separately yes Area of fire grate in each boiler 68.5 No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 9.62 Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" Mean dia. of boilers 16'-9" Length 11'-6" Material of shell plates steel  
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2-R lap long. seams 2-B-3 Riv Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 20 1/2 x 1 1/2  
 Per centages of strength of longitudinal joint rivets 89.0 Working pressure of shell by rules 183 Size of manhole in shell 16 x 12  
 Size of compensating ring 7 5/8 x 1 1/2 No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 49 1/2  
 Length of plain part top Thickness of plates crown 12" bottom 32" Description of longitudinal joint Weld No. of strengthening rings  
 Working pressure of furnace by the rules 190 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 3/2"  
 Pitch of stays to ditto: Sides 8 1/4 x 10 1/2 Back 9 3/8 x 9 3/8 Top 9 1/2 x 9 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 185  
 Material of stays steel Area Diameter at smallest part 1.99 Area supported by each stay 87.87 Working pressure by rules 204 End plates in steam space  
 Material Steel Thickness 1 1/2" Pitch of stays 19 1/4 x 22 1/2 How are stays secured nuts & washers Working pressure by rules 184 Material of stays steel  
 Diameter at smallest part 7.85 Area supported by each stay 45.5 Working pressure by rules 180 Material of Front plates at bottom steel  
 Thickness 1" Material of Lower back plate steel Thickness 1 1/2" Greatest pitch of stays 15 1/2 x 9 3/8 Working pressure of plate by rules 271  
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/8 x 4 3/8 Material of tube plates steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays 9 5/8  
 Pitch across wide water spaces 14 1/2 Working pressures by rules 181 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 x 2 Length as per rule 32 Distance apart 9 1/2 Number and pitch of stays in each 2 @ 9 1/2  
 Working pressure by rules 197 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  
 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

Forecastle 40  
 Water Caps  
 Tons  
 168  
 274  
 410  
 1. Nov. 4-5-7-13-19-21  
 1917-2-4-5-10-17-19  
 al No. of Visits 70

W433-0060

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied: - *Two each of connecting rod top end, bottom end and main bearing bolts and nuts; 3 crank shaft + 3 tunnel shaft coupling bolts and nuts; One set each of feed and bilge pump valves; 3 each of main and donkey check valves; one set each of H.P. M.P. ram bottom piston rings; assorted bolts and nuts, iron of various sizes, one cast iron propeller and minor gear as per specification; also ingot steel tail end shaft*

The foregoing is a correct description,  
FOR BLAIR & CO. LIMITED.

*Geo. Wattship*  
COMMERCIAL MANAGER & SECRETARY

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - - *1919*  
During erection on board vessel - - -  
Total No. of visits *76*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders *3.7.19* Slides *31.7.19* Covers *3.7.19* Pistons *3.7.19* Rods *15.7.19*  
Connecting rods *31.7.19* Crank shaft *11.7.19* Thrust shaft *11.4.19* Tunnel shafts *3.7.19* *iron-steel* Screw shaft *23.1.20* Propeller *7.1.20*  
Stern tube *15.12.19* Steam pipes tested *4.28/19* Engine and boiler seatings *19.1.20* Engines holding down bolts *4.2.20*  
Completion of pumping arrangements *3.3.20* Boilers fixed *3.3.20* Engines tried under steam *3.3.20*  
Main boiler safety valves adjusted *3.3.20* Thickness of adjusting washers *P. Blr 5/8; Star Blr 5/16 B*  
Material of Crank shaft *Ing Steel* Identification Mark on Do. *7182* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *7182*  
Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *7182* Material of Screw shafts *steel - span* Identification Marks on Do. *7182*  
Material of Steam Pipes *Lap welded steel* Test pressure *540*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *S.S. Peterton, Indt Pkt No 10545*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good and on completion the engines, boilers and auxiliaries were examined under steam and all found satisfactory. The machinery is now in a good and safe working condition and renders the vessel eligible in my opinion to have the notation of LMC-3-20 in the Register Book*

It is submitted that  
this vessel is eligible for  
**THE RECORD** *+ LMC-3-20*

*J.W.D.*  
*26/3/20*  
*A.P.R.*

Note: - This vessel is fitted with "Wireless" but not Electric Light

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ *116-2-2* : : 25.3.1920  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When received, *27.3.20*

*Wm Morrison*  
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *TUE. MAR. 30 1920*

Assigned *L.M.C. 3.20*

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

CERTIFICATE WRITTEN



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