

# REPORT ON MACHINERY.

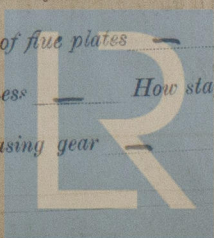
Port of *Middlesbrough*

NOV 5 1901

No. in Survey held at *Stockton* Date, first Survey *23 Nov. 1900* Last Survey *4<sup>th</sup> Nov. 1901*  
 Reg. Book. *S. S. "Melobesia."* (Number of Visits)  
 on the *Gorgiglia* Built at *Thornaby* By whom built *Craig Taylor & Co* Tons { Gross *2874.6*  
 Engines made at *Stockton* By whom made *Blair & Hay Ltd* when made *1901.* Net *1838.4.*  
 Boilers made at *Stockton* By whom made *Blair & Hay Ltd* when made *1901.*  
 Registered Horse Power Owners *Figi di Luige Infour* Port belonging to *Genoa.*  
 Com. Horse Power as per Section 28 *248.* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Triple Expansion about* No. of Cylinders *3.* No. of Cranks *3.*  
 Dia. of Cylinders *23 1/2, 39 & 64* Length of Stroke *42* Revs. per minute *58* Dia. of Screw shaft as per rule *13.8* Lgth. of stern bush *56"*  
 Dia. of Tunnel shaft as per rule *11.2* Dia. of Crank shaft journals as per rule *11.28* Dia. of Crank pin *13 1/4* Size of Crank webs *20 1/2 x 8 1/2* Dia. of thrust shaft under  
 as fitted *12 1/4* as fitted *12 3/4* Dia. of screw *17'-0"* Pitch of screw *16'-6"* No. of blades *4.* State whether moored *Yes* Total surface *78 sq. ft*  
 No. of Feed pumps *2.* Diameter of ditto *3"* Stroke *30"* Can one be overhauled while the other is at work *Yes*  
 No. of Bilge pumps *2.* Diameter of ditto *4 1/2"* Stroke *30"* Can one be overhauled while the other is at work *Yes*  
 No. of Donkey Engines *2.* Sizes of Pumps *B. 9"x10" F. 4"x8"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room *Three: Centre 3 1/2" wings 3" dia. In Holds, &c. Fore, main and aft holds*  
*two in each 3" dia. Hold and tunnel well 3 1/2" dia.*  
 No. of bilge injections *1* sizes *6 1/4"* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 4"*  
 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*  
 That 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 *On Works* Is the screw shaft tunnel watertight *See ship Rep*  
 Is it fitted with a watertight door *Yes* worked from *upper platform.*

BOILERS, &c.— (Letter for record *(S)*) Total Heating Surface of Boilers *4345 sq. ft* Is forced draft fitted *No*  
 No. and Description of Boilers *2. S. E. Multitubular* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*  
 Date of test *7.10.01* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *61 1/2"* No. and Description of safety valves to  
 each boiler *2 d. a. Spring* Area of each valve *8.29* Pressure to which they are adjusted *165 lbs* Are they fitted with easing gear *Yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *20" outside* Mean dia. of boilers *15'-3"* Length *10'-6"* Material of shell plates *S.*  
 Thickness *1 3/16"* Range of tensile strength *27-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *d. r. b.* long. seams *d. butt str.*  
 Diameter of rivet holes in long. seams *1 1/4"* Pitch of rivets *8 1/4" & 4 1/8"* Lap of plates *8"* Width of butt straps *6 1/2" & 18 3/4"*  
 Percentages of strength of longitudinal joint rivets *93.* Working pressure of shell by rules *166.5 lbs* Size of manhole in shell *17 x 13"*  
 plate *84.8* Size of compensating ring *31 x 27 x 1 3/16* No. and Description of Furnaces in each boiler *3 Corrugated* Material *S.* Outside diameter *46"*  
 Length of plain part top *6'-8"* Thickness of plates crown *17/32* Description of longitudinal joint *weld* No. of strengthening rings  
 bottom *17/32* Working pressure of furnace by the rules *177 lbs* Combustion chamber plates: Material *S.* Thickness: Sides *11/16"* Back *11/16"* Top *11/16"* Bottom *1"*  
 Pitch of stays to ditto: Sides *9 1/2 x 9 1/2"* Back *9 1/2 x 9 1/2"* Top *9 1/2 x 9 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *176 lbs*  
 Material of stays *S.* Diameter at smallest part *1 9/16"* Area supported by each stay *92.6* Working pressure by rules *186 lbs* End plates in steam space:  
 Material *S.* Thickness *1 5/32"* Pitch of stays *20 x 19* How are stays secured *d. nuts* Working pressure by rules *166 lbs* Material of stays *S.*  
 Diameter at smallest part *2 7/8"* Area supported by each stay *380* Working pressure by rules *170 lbs* Material of Front plates at bottom *S.*  
 Thickness *1"* Material of Lower back plate *S.* Thickness *1 1/8"* Greatest pitch of stays *14"* Working pressure of plate by rules *275 lbs*  
 Diameter of tubes *3 1/2"* Pitch of tubes *4 1/2 x 4 7/8"* Material of tube plates *S.* Thickness: Front *1"* Back *1 3/16"* Mean pitch of stays *9 5/8"*  
 Pitch across wide water spaces *14"* Working pressures by rules *195 lbs* Girders to Chamber tops: Material *S.* Depth and  
 Thickness of girder at centre *7" x 15 1/8"* Length as per rule *26 1/4"* Distance apart *9 1/2"* Number and pitch of Stays in each *2. 9 1/2"*  
 Working pressure by rules *188 lbs* 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  
 plates — 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 —



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DONKEY BOILER— No. 1. Description *Cyl. Multitubular 2 plain fur.*  
Made at *Stockton* By whom made *Piley Bros* When made *8.10.01* Where fixed *Stockholm*  
Working pressure *130 lb* tested by hydraulic pressure to *260 lb* No. of Certificate *2597* Fire grate area *22"* Description of safety valves *d. out of.*  
No. of safety valves *2* Area of each *4.91* Pressure to which they are adjusted *80 lb* If fitted with easing gear *yes* If steam from main boilers can  
enter the donkey boiler *no* Dia. of donkey boiler *8' 6"* Length *8' 0"* Material of shell plates *S* Thickness *2 1/32* Range of tensile  
strength *24.32* Descrip. of riveting long. seams *d. butt str.* Dia. of rivet holes *15/16* Whether punched or drilled *dr.* Pitch of rivets *4"*  
Lap of plating *9 1/2* Butte centage of strength of joint Rivets *78* Thickness of shell *end 13 1/2* *no more wanted* Radius of do. *Pitch* of Stays to do *15.14"*  
Dia. of stays *2 1/2* Diameter of furnace Top *32"* Bottom *28"* Length of furnace *5' 10"* Thickness of furnace plates *9/16* Description of  
joint *weld* Thickness of furnace crown plates *17/32* Stayed by *12 rivets S.S. 6 to 8 p. pitch* Working pressure of shell by rules *134 lb*  
Working pressure of furnace by rules *150 lb* Diameter of uptake *3"* Thickness of uptake plates *13/16* Thickness of water tubes *5/16*

SPARE GEAR. State the articles supplied:— *Top and bottom end bolts and nuts. Main bearing  
floupling bolts and nuts. Feed & donkey pump valves. — 1/3 crankshaft  
tail shaft and propeller complete. —*

The foregoing is a correct description,  
For BLAIR & CO., LIMITED Manufacturers of Engines and Main boilers. —

*Walter Borne*  
Dates During progress of work in shops — SECRETARY. — 1900— Nov. 23. 28 Dec. 4 11 18 21 — 1901— Jan. 5 9. 22. 26. 31 Feb. 4. 8. 15. 21. 27 Mar. 5. 11  
of Survey During erection on board vessel — 28 April 2. 18. 29 May 7. 13. 20. 30 June 4. 6. 12. 21. 28 July 4. 10. 17. 20. 29 Aug  
while building 6. 12. 16 Sep. 5. 10. 12. 17. 20. 24. 25. 26. 27 Oct. 2. 3. 7. 8. 9. 11. 15. 16. 17. 19. 24. 25 Nov. 4  
Total No. of visits *61* Is the approved plan of main boiler forwarded herewith *Blair's*  
*no plans retained for dup.*

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

Material of screw shaft *Scrap iron* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no*  
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 — If two liners are fitted, is the shaft lapped or protected between the liners *yes*.

These engines and boilers have been built and tested as  
required by the Society's Rules for Special Survey and are  
of good workmanship and materials, they have been  
well fitted and secured on board and on completion tried  
under steam at moorings with satisfactory results. —

The vessel's machinery is now in my opinion in a good  
and efficient working condition and eligible to the  
notation of: *L.M.C. 11.01.* —

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 11.01

*SB pressure for Register*  
*Book - 130 lb.*

The amount of Entry Fee. £ *2* : - : When applied for,  
Special .. £ *33* 18 : : *4. 11. 1901*  
Donkey Boiler Fee £ : : When received, *APB*  
Travelling Expenses (if any) £ : : *4. 11. 1901*

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

Committee's Minute

TUES. NOV 5 1901

Assigned

*+ L.M.C. 11.01*



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