

REPORT ON MACHINERY

No. 8982

TUE. JUN. 29. 1915

Received at London Office

Date of writing Report *22/6/15* at *Stockton-on-Tees* Port of *Middlesbrough*
 No. in Survey held at *Stockton-on-Tees* Date, First Survey *Sept. 2nd* Last Survey *June 18. 1915*
 Reg. Book. on the *Steel screw steamer Bilswood* (S.S. No. 501) Tons *49* Gross
 Master *Stockton* Built at *Stockton* By whom built *Messrs Popner & Sons* When built *1915*
 Engines made at *Stockton* By whom made *Messrs Blair & Co Ltd (No. 1816)* when made *1915*
 Boilers made at *Stockton* By whom made *Messrs Blair & Co Ltd* when made *1915*
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 *301* 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 *24-40-65* Length of Stroke *42* Revs. per minute *62* Dia. of Screw shaft *13.58* Material of *Iron*
 as per rule *13.58* as fitted *14.74* screw shaft
 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 *yes* 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 *5'-1"*
 Dia. of Tunnel shaft *11.84* Dia. of Crank shaft journals *12.43* Dia. of Crank pin *13.5* Size of Crank webs *24x8.5* Dia. of thrust shaft under
 as fitted *12.12* as fitted *13* collars *13.5* Dia. of screw *17'-0"* Pitch of Screw *16'-0"* No. of Blades *4* State whether moveable *no* Total surface *82 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 *4.5"* Stroke *30"* Can one be overhauled while the other is at work *yes*
 No. of Donkey Engines *2* Sizes of Pumps *9, 4, 10, 4x8* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *3 @ 3" and one @ 3.5" in boiler space* In Holds, &c. *2 @ 3" in each hold; tunnel with
 one @ 2.5"*
 No. of Bilge Injections *1* sizes *7"* 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 *yes*
 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 *suctions 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 *23.3.15* of Stern Tube *23.3.15* Screw shaft and Propeller *5.5.15*
 Is the Screw Shaft Tunnel watertight *see hull rpt* Is it fitted with a watertight door *yes* worked from *top platform*

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel *Messrs John Spencer & Sons*
 Total Heating Surface of Boilers *4690* 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 *26.3.15* No. of Certificate *5492*
 Can each boiler be worked separately *yes* Area of fire grate in each boiler *61.3 sq ft* No. and Description of Safety Valves to
 each boiler *2 direct spring* Area of each valve *7.07* Pressure to which they are adjusted *185* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *2'-0"* Mean dia. of boilers *15'-9"* Length *10'-6"* Material of shell plates *steel*
 Thickness *1.72* Range of tensile strength *29.5-33* 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 *1.6* Pitch of rivets *8.5* Lap of plates or width of butt straps *19.5 x 15*
 Per centages of strength of longitudinal joint rivets *93.0* Working pressure of shell by rules *187* Size of manhole in shell *16" x 12"*
 plate *85.23* Size of compensating ring *7.5 x 1.72* No. and Description of Furnaces in each boiler *3 Morrison* Material *steel* Outside diameter *46.5*
 Length of plain part top _____ bottom _____ Thickness of plates crown *9/16* Description of longitudinal joint *Weld* No. of strengthening rings _____
 Working pressure of furnace by the rules *188* Combustion chamber plates: Material *steel* Thickness: Sides *1/16* Back *1/16* Top *1/16* Bottom *1/16*
 Pitch of stays to ditto: Sides *8.5 x 10* Back *9.5 x 8.5* Top *10.5 x 8.5* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *187*
 Material of stays *steel* Diameter at smallest part *1.99* Area supported by each stay *86.2* Working pressure by rules *208* End plates in steam space _____
 Material *steel* Thickness *1.5* Pitch of stays *21 x 1.21* How are stays secured *nuts & washers* Working pressure by rules *185* Material of stays *steel*
 Diameter at smallest part *7.87* Area supported by each stay *441* Working pressure by rules *186* Material of Front plates at bottom *steel*
 Thickness *1.16* Material of Lower back plate *steel* Thickness *1.16* Greatest pitch of stays *14.5 x 8.5* Working pressure of plate by rules *366*
 Diameter of tubes *3.5* Pitch of tubes *4.5 x 4.5* Material of tube plates *steel* Thickness: Front *1.16* Back *1.16* Mean pitch of stays *11.52*
 Pitch across wide water spaces *14.5* Working pressures by rules *192* Girders to Chamber tops: Material *steel* Depth and
 thickness of girder at centre *7.5 x 1.5* Length as per rule *26.5* Distance apart *10.5* Number and pitch of stays in each *2 @ 8.5*
 Working pressure by rules *188* 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 _____

If not, state whether, and when, one will be sent



IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes, Indt Rpt N° 8859*

SPARE GEAR. State the articles supplied: - *Two each of con. rod top end & bottom end bolts & nuts 2 main bearing bolts and nuts; one set (7) coupling bolts and nuts; one set of feed and bilge pump valves; assorted bolts and nuts; iron of various sizes; one set each of HP & MP. piston ram bottom rings; one cast iron propeller, one tail end shaft and minor gear*

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

Geo Nettleship

Manufacturer.

SECRETARY

Dates of Survey while building { During progress of work in shops - - } *1914 Dec. 2. 7. 9. 14. 15. 14. 22. 1915 Jan 8. 11. 18. 19. 21. 25. 27. 29. Feb 2. 5. 6. 10. 11. 12. 15. 16. 18. 23. 25. Mar 1. 4. 5. 8. 10. 12.*
{ During erection on board vessel - - - } *15. 18. 19. 22. 23. 25. Apr 23. May 5. 10. 11. 14. 18. 24. 31. Jun 7. 16. 18.*
Total No. of visits *49* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - Cylinders *15. 12. 14* Slides *21. 1. 15* Covers *21. 1. 15* Pistons *21. 1. 15* Rods *21. 1. 15*
Connecting rods *25. 1. 15* Crank shaft *19. 1. 15* Thrust shaft *18. 1. 15* Tunnel shafts *18. 19. 21. 15* Screw shaft *18. 3. 15* Propeller *19. 3. 15*
Stern tube *23. 3. 15* Steam pipes tested *10. 5. 15* Engine and boiler seatings *23. 3. 15* Engines holding down bolts *11. 5. 15*
Completion of pumping arrangements *27. 5. 15* Boilers fixed *27. 5. 15* Engines tried under steam *27. 5. 15*
Main boiler safety valves adjusted *27. 5. 15* Thickness of adjusting washers *Port Blr SV - 1/32; Star Blr PV - 3/8; SV - 3/8*
Material of Crank shaft *Ing Steel* Identification Mark on Do. *6939* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *854.N*
Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *854.N* Material of Screw shafts *iron* Identification Marks on Do. *6939*
Material of Steam Pipes *Solid drawn copper (6 1/2 x 5/8 + 5 x 1/2)* Test pressure *400 lbs*

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. "Ellawood", Indt Rpt N° 8926*

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. The boilers and main steam pipes were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory. The machinery is now in a good and safe working condition and renders the vessel eligible in our opinion to have the notation of LMC-6.15 in the Register Book*

It is submitted that
this vessel is eligible for
THE RECORD + LMC 6.15.

The amount of Entry Fee ... £ *31. 0. 0* When applied for, *25/6/1915*
Special ... £ *35. 1. 9*
Donkey Boiler Fee ... £ *✓*
Travelling Expenses (if any) £ *28/6/1915*

Wm Morrison & Miller
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *FRI. JUL. 2-1915*

Assigned *+ LMC 6.15*

MACHINERY CERTIFICATE
WRITTEN



© 2020 Lloyd's Register Foundation