

## REPORT ON MACHINERY.

No. 50156

Port of *Newcastle*

Received at London Office

10

No. in Survey held at *Newcastle* Date, first Survey *Sep. 20* Last Survey *28<sup>th</sup> Feb. 1906*  
Reg. Book. *S/S "Enosis"* (Number of Visits *27*) Gross *3409*  
on the *Newcastle* Tons Net *2200*  
Master Built at *Newcastle* By whom built *Swan Hunter & Co. Ltd.* When built *1906*  
Engines made at *Newcastle* By whom made *H. & M. Eng. Co. Ltd.* when made *1906*  
Boilers made at *"* By whom made *"* when made *1906*  
Registered Horse Power Owners *Guangeli Ambatiello* Port belonging to *Agostoli*  
Nom. Horse Power as per Section 28 *314* Is Refrigerating Machinery fitted *No.* Is Electric Light fitted *No.*

ENGINES, &c.—Description of Engines *Tri. C.P.D.* No. of Cylinders *3* No. of Cranks *3*  
Dia. of Cylinders *23 1/2 39 66* Length of Stroke *45* Revs. per minute *65* Dia. of Screw shaft *13 1/2* as per rule *14* as fitted *14* Material of *I.*  
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 *✓* If two  
liners are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *5 ft.*  
Dia. of Tunnel shaft *11 9/16* as per rule *12 5/16* as fitted *12 3/4* Dia. of Crank shaft journals *12 3/4* as fitted *12 3/4* Dia. of Crank pin *12 3/4* Size of Crank webs *24 1/2 x 8 1/2* Dia. of thrust shaft under  
collars *12 3/4* Dia. of screw *16 9* Pitch of screw *16 9* No. of blades *4* State whether moveable *f* Total surface *89*  
No. of Feed pumps *2* ✓ Diameter of ditto *3 1/4* Stroke *2 1/4* Can one be overhauled while the other is at work *Yes*  
No. of Bilge pumps *2* ✓ Diameter of ditto *3 1/2* Stroke *2 1/4* Can one be overhauled while the other is at work *Yes*  
No. of Donkey Engines *2* ✓ Sizes of Pumps *8 x 8 x 8 1/2 6 x 4 1/2 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *4 of 3 1/2* ✓ In Holds, &c. *2 of 3 1/2 in each*  
Tunnel *2 1/4*  
No. of bilge injections *1* sizes *4* ✓ Connected to condenser, or to circulating pump *C.P.* Is a separate donkey suction fitted in Engine room & size *400 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  
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 *new vessel* Is the screw shaft tunnel watertight *Yes*  
Is it fitted with a watertight door *Yes* worked from *top platform*

BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *11874* sq. ft. Is forced draft fitted *No.*  
No. and Description of Boilers *2 Cylind. Multitubular* Working Pressure *180 lb* Tested by hydraulic pressure to *360*  
Date of test *2.2.06* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *65* sq. ft. No. and Description of safety valves to  
each boiler *2 Spring* Area of each valve *8.29* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *Yes*  
Smallest distance between boilers or uptakes and bunkers or woodwork *18* Mean dia. of boilers *15' 9 1/2* Length *10' 6"* Material of shell plates *S*  
Thickness *1 1/4* Range of tensile strength *29-32* Are they welded or flanged *ends* Descrip. of riveting: cir. seams *2. n lap long. seams 2. butt.*  
Diameter of rivet holes in long. seams *1 1/32* Pitch of rivets *8 1/16* Lap of plates or width of butt straps *18 1/2*  
Per centages of strength of longitudinal joint rivets *85.8* Working pressure of shell by rules *183 lb* Size of manhole in shell *16" x 12"*  
Size of compensating ring *flanged* No. and Description of Furnaces in each boiler *2 Bag (3)* Material *S* Outside diameter *4' 2 1/2*  
Length of plain part *9* Thickness of plates *1 1/2* crown *1 1/2* bottom *1 1/2* Description of longitudinal joint *reed* No. of strengthening rings *-*  
Working pressure of furnace by the rules *185* Combustion chamber plates: Material *C* Thickness: Sides *1/16* Back *1/16* Top *1/16* Bottom *1 1/2*  
Pitch of stays to ditto: Sides *9 1/8 x 9 1/8* Back *10 1/8 x 8 1/8* Top *9 1/8 x 9 1/8* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *180*  
Material of stays *S* Diameter at smallest part *1 1/2* Area supported by each stay *88 1/2* Working pressure by rules *181 1/2* End plates in steam space:  
Material *S* Thickness *1 1/32* Pitch of stays *18 1/8 x 18 1/8* How are stays secured *d. nuts* Working pressure by rules *184* Material of stays *S*  
Diameter at smallest part *2 1/8* Area supported by each stay *33 1/4* Working pressure by rules *180* Material of Front plates at bottom *S*  
Thickness *3 1/2* Material of Lower back plate *S* Thickness *8* Greatest pitch of stays *14 1/2* Working pressure of plate by rules *203*  
Diameter of tubes *3 1/4* Pitch of tubes *4 1/2 x 4 1/2* Material of tube plates *S* Thickness: Front *3/16* Back *3/16* Mean pitch of stays *8 1/4*  
Pitch across wide water spaces *14 1/2* Working pressures by rules *182* Girders to Chamber tops: Material *S* Depth and  
thickness of girder at centre *8 1/2 x 12* Length as per rule *29 1/2* Distance apart *9 3/8* Number and pitch of Stays in each *20 9 1/8*  
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*  
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*



DONKEY BOILER— No. 1 Description *Cylindrical. Report attached.*

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can

enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile

strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_

Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of

joint \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:— *1 set Connecting rod bolts and nuts. 2 main bearing bolts and nuts. 1 set of coupling bolts and nuts. 1 set of feed and bilge pump valves propeller. nuts bolts and assorted iron*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

*J. J. Harrison*  
ASSIST. SECRETARY.  
Dates of Survey while building { During progress of work in shops - - - 1905. Sep. 20. 21. 25. Oct. 9. 12. 16. Nov. 3. 16. 22. Dec. 1. 7. 1906. Jan. 5. 24. 25. 29. 31. Feb. 1. 3. 5. 6. 7. 13. 14. 17. 19  
During erection on board vessel - - - 2. 28  
Total No. of visits 27

Is the approved plan of main boiler forwarded herewith 428

" " " donkey " " " 428

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

*Machinery and boiler constructed under special survey. Materials and workmanship good and efficient. Engines and boilers examined under steam and found satisfactory. In my opinion this vessel is now eligible for the record of L.M.C. 2/06.*

It is submitted that  
this vessel is eligible for  
THE RECORD L.M.C. 2.06.

*A.S.*  
5.3.06  
*M.S.*  
5.3.06

The amount of Entry Fee. £ 3 : : : When applied for, - 2 MAR 1906  
Special . . . £ 35 : 17 : :  
Donkey Boiler Fee . . . £ : : : : When received, 5.3.06  
Travelling Expenses (if any) £ : : : :  
*Committee's Minute*

*J. J. Lindley*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUES. 13 MAR 1906

Assigned

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation