

27<sup>th</sup> April 1917

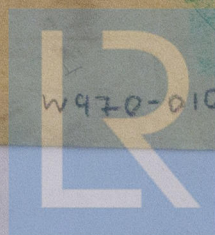
The Secretary  
London

S.S. "Ashleaf"

Sir,

With reference to instructions received re the above vessel I beg to state that I attended on board on the 14<sup>th</sup> instant & subsequent dates and have to report as follows

The machinery was supplied and fitted on board by Messrs Blair & Co of Stockton after which an official trial of four (4) hours duration was made during which trial the engines, I am informed, worked smoothly & well showing no sign of heating. The oil used on this trial was supplied by the engine builders. The vessel started on a voyage



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W970-0108 1/6

Lloyd's Register  
Foundation



Tonnage { Gross 2408  
Net 2146  
Registered Horse Power 1432  
No. of Main Boilers 2  
No. of Deck Boilers 1  
Steam Pressure in Main Boilers 10

Vessel built at Stockton  
Engines made at Stockton  
Boilers, when made (Main) 1914  
Owners Lane & Macandrew & Co

By whom Blair & Co  
(Donkey) 1917  
Port London  
Voyage

Particulars of Classification  
precisely as in Register

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Voyage for Trinidad about the  
10th January 1917 and after the  
first few days the engines gave  
trouble through heating and wearing  
of the metal in the Main bearing  
Bushes, Crank Pin Bushes and  
eccentric straps.

The metal in these bearings bushes  
& straps was Imp<sup>m</sup> Blair's standard  
mixture known as "Silver Bright"  
which has always given good results.  
The composition of this metal was  
given as Tin 80% Antimony 10%  
Copper 7% and Lead 3%, a piece  
of this metal has been analysed and  
gives practically the above percentages.  
The analysis is appended.

The analysis is appended.  
Before reaching port water had  
to be very liberally run over  
all the above bearings & straps.

The oil used on this voyage  
was supplied by the Admiralty.

At Trinidad the machinery  
was opened out and the alignment



No. of Main Boilers  
No. of Deck Boilers  
Steam Pressure—  
in Main Boilers

100 1/2

Boilers, when made (Main) 1918  
Owners Lane & Macandrew & Co  
Surveyed Afloat or in Dry Dock  
(State name of Dock.)

Port London  
Commercial

(Donkey) 1918  
Voyage  
Particulars of Classification  
precisely as in Re

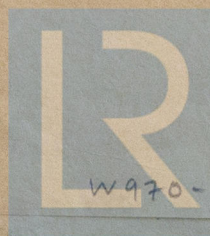
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alignment of crank shaft tested, it was found that the main bearing bushes had worn down as follows  $HL \frac{7}{32}$ " -  $ML \frac{1}{8}$ " -  $LL \frac{1}{100}$ ". The crank shaft was lifted and all the Main Bearings and crank pin bushes were refilled with Babbitts metal, the composition of this metal was not known. After refilling the bushes the shaft was relined to the original gauges  $+ \frac{1}{1000}$ " of an inch, this extra amount being allowed for the shaft finding its working bearing surface.

The slide valves, I was informed, had been lifted  $\frac{7}{16}$ " to allow for the wear. The guide plates which were found to be worn  $\frac{1}{8}$ " were also relined. The eccentric straps which were filled or lined with Manganese white metal were not refilled at this time.

On the homeward voyage after the above work was completed



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Surveyor to Lloyd's

Assigned

As now

W. H. Adams 24/5/19



Registered Horse Power 22  
No. of Main Boilers 2  
No. of Donkey Boilers 1  
Steam Pressure in Main Boilers 160 lb

Engines made at Stockton  
Boilers, when made (Main) 1914  
Owners Lane & Macandrew & Co  
Surveyed Afloat or in Dry Dock Lane Commercial

By whom Blair & Co  
(Donkey)  
Port London  
Particulars of

Completed the machinery worked smoothly and with an entire absence of heating. The oil which was used on this homeward voyage was obtained at Trinidad and was stated to be "Vacuum No 1"

At my visit here the engine bearings and crank pin bushes, Valve gear, Eccentrics and pump link bushes and crosshead journals were opened out and were examined by me, they were found to be tight and generally in good condition with some very slight discolourations in one or two of the bearing journals, the No 1 and 2 journals (counting from forward) and the MP crank pin had been filed up at Trinidad. The line of the shafting was tested with the gauges made at Trinidad and the shaft



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Assigned  
Chris Adam 24/6/17  
Moro 24/6/17

As now



shaft was found to have only gone down about  $3\frac{1}{2}$ " this drop would be equal to the amount the shaft required to find its working surface.

The journals of the pump crosshead were found on examination to have worn oval about  $\frac{1}{32}$ ".

I am informed the outward voyage occupied about twenty days.

In view of the wear ~~which~~ which had taken place in the different bearings & bushes during the outward voyage and of the satisfactory running of the engines since I am of opinion that the oil used in the outward voyage was unsuitable, this oil may be suitable where forced lubrication is fitted but for engines working under ordinary conditions as in the merchant marine is entirely unsatisfactory

Samples



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No. of Donkey Boilers 1  
Steam Pressure— 180 lbs  
in Main Boilers  
in Donkey Boilers 180 lbs

Owners Lane & MacAndrew & Co Port London  
Is Surveied Afloat or in Dry Dock Lane Commercial  
(State name of Dock.)  
Particulars precisely

...raft was found to have only  
...down ...  
...the ...  
samples of the two sils viz. the  
oil supplied by the Admiralty  
and that supplied at Trinidad  
have been tested for viscosity  
also a sample of the patent  
metal originally fitted in the  
bearings by Messrs Blair & Co has  
been analysed, the results being  
attached.

I am, Sir,  
Yours faithfully  
Thomas Blair & Co



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Assigned  
As now