

TRANSLATION:

From the Director of the Ecole Centrale des  
Arts & Manufactures.

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To:- M. Andrade,  
Managing Director,  
Cie. Auxiliaire de Navigation,  
5, Avenue du Coq,  
P A R I S.

Dear Sir,

I have taken note of the letter from the North of  
Ireland Shipbuilding Co. Ltd., dated 21st September 1923, and  
that of <sup>Dr</sup> Mr. Milton of Lloyds Register dated 31st July 1923.

With regard to the subject to which these letters  
refer, I make the following observations, of which the principal  
part is to be found <sup>already</sup> in my report on the results of the tests:-

(1) The fact that another tank steamer built at the same  
time does not show any corrosion, is absolutely <sup>of</sup> no significance:  
the steel employed in the latter, <sup>although</sup> it is of the same origin, may  
nevertheless be the product of different ingot castings, producing  
a metal which has been correctly treated. (page 6 of my report,  
19th line).

(2) The fact that paint forms <sup>good</sup> protection cannot excuse  
the bad quality of the metal which it protects. (page 6 of my  
report, 25th line).

(3) It has been stated in my report that the specimens  
of steel were too small to enable me to make an analysis for  
carbon. (page 2, 16th line).



(4) It has already been stated that the micrographic research for carbon gives about 0.2%. (Page 3, 16th line).

(5) The examination by Chemical analysis certainly leads a competent expert to decide that there has been insufficient de-oxydation of the metal. (page 2 of my report, 25th line).

(6) The chemical analysis gives the minimum contents of impurities, and not the proportions of the contents, which is an important point in regard to corrosion. (Page 2 of my report, 26th line and following)

(7) The structure "almost normal" of the surface, does not exclude the possibility of an oxide in proportion relatively weak. (page 4 of my report, 22nd line and following).

(8) The "certain segregations" are nevertheless plainly visible to the naked eye, on the full sized photograph No. 11. The impurities visible to the microscope consist of sulphur, of which the appearance is reproduced in micrographic figure 3, full size.

(9) A micrographic enlargement of 200 diameters does not merit the qualification of "considerable".



(10) The formation of a copper deposit, especially on the edges, does not display a complete absence of oxide in solution (see paragraph 7).

(11) It is truly surprising to read the expression "there is nothing in the report which leads one to suppose that (Dr. Milton) "the quality of steel is bad", presuming he has examined, even in an entirely superficial manner, the micrographic figures 3 & 11.

(12) The absence of paint on certain areas after the launching of the ship, is insufficient to explain the corrosions of such marked depth. (Report of the inspection of M. Gournot, page 12, 10th line and following).

We are, dear Sir,

Yours faithfully,

(SGD)

Directeur de l'Ecole Centrale des Arts  
et Manufactures.

Professeur au Conservatoire National  
des Arts et Metiers.

President de la Societe des Ingenieurs  
Civils de France.



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