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## ATLAS DIESEL COMPANY LTD.

SELLING ORGANISATION IN THE BRITISH EMPIRE FOR:-  
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MADE BY A B ATLAS DIESEL, STOCKHOLM AND  
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Head Office & Works:  
BERESFORD AVENUE  
WEMBLEY, MIDDX  
(NEAREST STATION: STONEBRIDGE PARK)

LEASE QUOTE REF NO. 1671/251.  
HB/JBW.

YOUR REF NO. E.

8th September 1948.

Lloyds Register of Shipping,  
71 Fenchurch Street,  
London, E.C.3.

Dear Sirs,

Re:- M.V. "Mytongate". Engine No. 86024.

With reference to the critical speed investigation of the above installation, you may recall writing to the Goole Shipbuilding and Repairing Company Limited, a letter from which the following extract is taken:-

"As regards the torsional vibration characteristics of the shafting installation of this main machinery, we have to inform you that the same have been examined in conjunction with the Engine Builders' calculations, and that it is considered the stresses in the crankshaft due to the two node 10th order critical speed are excessive in view of its proximity to the service speed. In the circumstances it is suggested the flywheel be reduced with a view to bringing the two node natural frequency to approx. 3850 V.P.M., and thus placing the two node 10th order critical speed 10% above the service speed. We shall be glad to receive your comments on this matter".

On reading this extract, we asked our Stockholm Works to re-investigate the critical speed position, and in reply they stated that in calculating the inter shaft stress arising from the 5th order 1 Node critical, they used a modified Dorey formula, a copy of which was sent to the Shipbuilders,

(Continued).

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Foundation

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and later no doubt forwarded to your goodselves. It was apparent from the calculations based on this formula that to fit a lighter flywheel as suggested in your letter to the Shipbuilders, would create a 1 Node 6th order stress of unacceptable proportions, and the only conclusion we could draw was that in your critical speed calculations, you used a different edition of the formula to that employed by the Works, in which case we would be glad to have a copy with coefficients, at your earliest convenience. 5<sup>th</sup>

Thanking you in anticipation of your co-operation in this matter.

Yours faithfully,  
ATLAS DIESEL COMPANY LIMITED.  
Diesel Engine Department.

*G. F. Temple*  
(G.F.Temple).  
Sales Manager.



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