Title (en)
REGULATION OF TRUE RUNNING FOR DIESEL ENGINES

Title (de)
RUNDLAUFREGELUNG FÜR DIESELMOTOREN

Title (fr)
REGULATION DE CONCENTRICITE POUR MOTEURS DIESEL

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Application
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Abstract (en)
[origin: WO0238936A1] The invention relates to a method for regulating true running. Particularly in the case of internal combustion engines which have many cylinders, the rotational speed proportions of the cylinders overlap in such a manner that, when viewing the rotational speed curve, it is no longer possible to make conclusions about the rotational speed proportions of the individual cylinders thus necessitating new evaluation methods. According to the invention, the contributions of the individual cylinders of the internal combustion engine to the rotational acceleration are determined on the basis of the behavior of the rotational speed of the crankshaft by individually deactivating the cylinders in succession. Using the rotational speed behavior curves that are obtained in such a manner, a pulse response spectrum (I) of a working cycle is formed at least for the harmonic of the 0.5<th> order. During normal operation, the rotational speed behavior of the crankshaft over the angle of each working cycle is then constantly recorded. The Fourier coefficients are appointed as resultant (R) of at least the harmonic of the 0.5<th> order by means of Fourier transformation. Correction factors for the injection quantities for equalizing the individual cylinders with regard to their rotational speed proportions are obtained by multiplying the components of resultants (R), said components being located in the direction of the pulse response vectors, with the pulse responses (I) and by adding them together.

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