عنوان مقاله:

A Semi-Empirical Model to Predict Diesel Engine Combustion Parameters

محل انتشار:

ششمین همایش موتورهای درونسوز (سال: 1388)

تعداد صفحات اصل مقاله: 4

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خلاصه مقاله:

To carry out the investigation, the cylinder pressure model was developed based on the parameters on engine: a) position of crankshaft; b) engine load; c) engine speed; d) fuel injection time. This is first model of its type that has taken in account the maximum number of parameters involved. The accuracy of model was proved comparing the test results. The average error of the cylinder pressure, the average radical of thesquare of the error of the cylinder pressure and the average error of maximum pressure was calculated respectively 1.85%, 3.32, 0.66 (percent of maximum pressure), in which all the figures are accurate. This model was compared with the existing model (by Conolly & Yagle); the two models are similar in terms of the pressure relating the square of time and the exponential of time. This model seems to be applicable to other diesel engines. The results of the equation along with experimental results were compared and described by Fourier series that are indicative ofcylinder pressure level .between them

کلمات کلیدی:

cylinder pressure model, parameters on engine, diesel engine