Title (en)
    COMBUSTION METHOD FOR A RECIPROCATING INTERNAL COMBUSTION ENGINE

Title (de)
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Title (fr)
    PROCÉDÉ DE COMBUSTION POUR UN MOTEUR ALTERNATIF À COMBUSTION INTERNE

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Abstract (en)
    [origin: WO2012010237A1] The invention relates to a combustion method, in particular for a four-stroke reciprocating internal combustion engine, wherein a pilot amount of fuel (e) is introduced before a main amount of the fuel (x) is introduced, intermediate products of the pilot amount of the fuel (f) are formed, the main amount of the fuel (x) is introduced during the compression phase (b) in such a way that complete ignition of the mixture of fresh gas and the intermediate products is suppressed and further intermediate products are formed until a monitored ignition of the mixture and of the further intermediate products occurs (c) and wherein the introduction of the main amount of the fuel (x) into the combustion chamber begins at a gas temperature in the combustion chamber between 700 K and 1000 K and the introduction of the main amount of the fuel (x) into the combustion chamber ends before the ignition top dead center (ZOT). By means of the combustion method according to the invention, the conflict of the goals of fuel consumption and NOx emissions in the lean combustion method (Otto and Diesel) can be resolved and thus future emissions regulations can be met without further reductions in fuel consumption.

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