Title (en)

METHOD FOR ANALYZING THE NOISE OF AN INTERNAL COMBUSTION ENGINE

Title (de)

VERFAHREN ZUR ANALYSE EINES GERÄUSCHES EINER BRENNKRAFTMASCHINE

Title (fr)

PROCEDE D'ANALYSE D'UN BRUIT D'UN MOTEUR A COMBUSTION INTERNE

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Application

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Abstract (en)

[origin: WO2007062447A2] The invention relates to a method for quantitatively analyzing a noise of an internal combustion engine, especially a diesel engine. According to said method, a signal progression is determined over a predefined recording period, the determined signal is subjected to bandpass filtering in the time domain, and an envelope curve for the bandpass-filtered signal is formed for at least one frequency band. The subjectively perceived nuisance of noise containing impulses is measured objectively by carrying out the following steps: temporal masking according to human auditory perception is taken into account in the envelope curve; the remaining degree of modulation in each frequency band is calculated after taking into account temporal masking; level-dependent masking is calculated for each of all other frequency bands; the remaining audible degrees of modulation are calculated for all frequency bands; the audible degrees of modulation are weighted with a frequency-dependent weighting function; and a noise index is created based on the weighted modulation frequency spectrum.

IPC 8 full level

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