

Title (en)  
CONTROL OF AN ELECTRICALLY HEATED PRE-HEATING DEVICE FOR COLD-STARTING INTERNAL COMBUSTION ENGINES

Title (de)  
STEUERUNG EINER ELEKTRISCH BEHEIZTEN VORW RMEINRICHTUNG F&Uu ml;R DEN KALTSTART VON VERBRENNUNGSMOTOREN

Title (fr)  
COMMANDE D'UN DISPOSITIF DE PRECHAUFFAGE CHAUFFE ELECTRIQUEMENT POUR LE DEMARRAGE A FROID DE MOTEURS A COMBUSTION INTERNE

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Application  
**EP 04763239 A 20040715**

Priority  
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Abstract (en)  
[origin: WO2005012719A1] The invention relates to a method for pre-heating the suction air of an internal combustion engine (8) during the preliminary heating phase or the starting phase by means of at least one electrically heatable heating element (12) in the suction line (10) of the internal combustion engine. The heating power of a control appliance (13) of the engine electronics is controlled according to the operating data of the internal combustion engine. The inventive method is characterised in that: during the pre-heating phase (1,2,3), a current is applied (1) to the heating element (12) until the heating element reaches its nominal temperature; once the nominal temperature has been reached, a post-heating phase (2,3) takes place until the starting phase, in which the heating element (12) is maintained at a constant temperature with a small amount of power; and during the starting phase, the heating element (12) is switched off during a first time interval (4a), and is switched back on again during a second time interval (4b) in which the speed of the internal combustion engine (8) is increased to the starting speed.

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