

Title (en)  
PROCESS FOR FINDING THE MASS OF AIR ENTERING THE CYLINDERS OF AN INTERNAL COMBUSTION ENGINE WITH THE AID OF A MODEL

Title (de)  
VERFAHREN ZUM MODELLGESTÜTZTEN BESTIMMEN DER IN DIE ZYLINDER EINER BRENNKRAFTMASCHINE EINSTRÖMENDEN LUFTMASSE

Title (fr)  
PROCEDE POUR DETERMINER A L'AIDE D'UN MODELE LE VOLUME D'AIR ADMIS DANS LE CYLINDRE D'UN MOTEUR A COMBUSTION INTERNE

Publication  
**EP 0820559 B1 19990915 (DE)**

Application  
**EP 96909021 A 19960409**

Priority  
• DE 9600615 W 19960409  
• DE 19513601 A 19950410

Abstract (en)  
[origin: WO9632579A1] Calculating the mass of air actually flowing into the cylinder with the aid of an inlet pipe filling model which, from the factor angle of throttle valve aperture, environmental pressure and parameters representing the valve control, provides a load value on the basis of which the injection time is determined. In addition, this load value is used in predictions for estimating the load value at a time at least one sampling step later than the actual calculation of the injection time.

IPC 1-7  
**F02D 41/18**; **F02D 41/14**

IPC 8 full level  
**F02D 45/00** (2006.01); **F02D 41/04** (2006.01); **F02D 41/14** (2006.01); **F02D 41/18** (2006.01)

CPC (source: EP KR US)  
**F02D 41/1401** (2013.01 - EP US); **F02D 41/18** (2013.01 - KR); **F02D 41/182** (2013.01 - EP US); **F02D 2041/001** (2013.01 - EP US); **F02D 2041/1412** (2013.01 - EP US); **F02D 2041/1431** (2013.01 - EP US); **F02D 2041/1433** (2013.01 - EP US); **F02D 2200/0402** (2013.01 - EP US)

Cited by  
DE102013213871A1; DE102014209793A1; DE102013216073A1; DE102008014069A1; DE102008015909B3; DE102005046504A1; DE10227466B4; DE102014209793B4; DE10233945B4; EP1076166A3; DE102008014069B4; DE10222137B3; DE102013213871B4; DE102007022703B3; DE102013216073B4; DE102007060036B4; DE10220141A1; DE10220141B4; DE102005045925B4; DE102007060036A1; DE102006032493B3; DE102006010542B3; DE10234719B3; DE10224213C1; DE102015204155B3; DE102019211398A1; US8489307B2; US7546760B2; US6796293B2; WO2004016339A3; US9739217B2; WO2015176930A1; US10240546B2; US7077103B2; US8239088B2; US8224556B2; US9285786B2

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**WO 9632579 A1 19961017**; BR 9604813 A 19980609; CA 2217824 A1 19961017; CA 2217824 C 20060124; CN 1073205 C 20011017; CN 1181124 A 19980506; CZ 319497 A3 19990113; DE 59603079 D1 19991021; EP 0820559 A1 19980128; EP 0820559 B1 19990915; JP H11504093 A 19990406; KR 100413402 B1 20040428; KR 19980703458 A 19981105; US 5889205 A 19990330

DOCDB simple family (application)  
**DE 9600615 W 19960409**; BR 9604813 A 19960409; CA 2217824 A 19960409; CN 96193243 A 19960409; CZ 319497 A 19960409; DE 59603079 T 19960409; EP 96909021 A 19960409; JP 53063996 A 19960409; KR 19970706862 A 19970930; US 94916997 A 19971010