

Title (en)

Method for closed-loop control of timing of combustion in an internal combustion engine

Title (de)

Verfahren zum Steuern des Verbrennungszeitpunkts in einer Brennkraftmaschine

Title (fr)

Méthode de commande boucle fermée du délai de démarrage dans un moteur à combustion interne

Publication

EP 1905994 A1 20080402 (EN)

Application

EP 06425629 A 20060913

Priority

EP 06425629 A 20060913

Abstract (en)

Described herein is a method for closed-loop control of timing of combustion in an internal-combustion engine (1), in particular a diesel engine, comprising: determination of a characteristic quantity of the combustion cycle (\dot{N} MFB 50%) in a cylinder (4) of the engine (1); and closed-loop control of timing of combustion of the engine (1) on the basis of said characteristic quantity of the combustion cycle (\dot{N} MFB 50%) and of a target value (\dot{N} TARG) of the characteristic quantity (\dot{N} MFB50%-TARG) said method being characterized in that determining said characteristic quantity (\dot{N} MFB 50%) comprises: determining the values of pressure ($P [i]$) inside the cylinder (4) during at least part of the combustion cycle in the cylinder (4) itself, said pressure values ($P [i]$) being determined at successive and equally spaced instants in time; measuring the times ($\#t [j]$) taken by the drive shaft of said engine (1) to cover successive angular distances ($\#\dot{N}$) of constant width; and determining said characteristic quantity (\dot{N} MFB 50%) on the basis of said pressure values ($P [i]$) and of said angular travel times ($\#t [j]$).

IPC 8 full level

F02D 41/30 (2006.01); **F02D 35/02** (2006.01)

CPC (source: EP)

F02D 35/023 (2013.01); **F02D 35/028** (2013.01); **F02D 41/3005** (2013.01)

Citation (search report)

- [X] US 2004084024 A1 20040506 - MALACZYNSKI GERARD WLADYSLAW [US], et al
- [X] WO 02095191 A2 20021128 - RICARDO CONSULTING ENG [GB], et al
- [X] US 2004084025 A1 20040506 - ZHU GUOMING G [US], et al

Cited by

CN103201482A; WO2012065788A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1905994 A1 20080402; EP 1905994 B1 20141105

DOCDB simple family (application)

EP 06425629 A 20060913