

Title (en)
METHOD AND DEVICE FOR MEASURING THE INJECTION QUANTITY AND THE INJECTION RATE OF AN INJECTION VALVE FOR LIQUIDS

Title (de)
VERFAHREN UND VORRICHTUNG ZUR MESSUNG DER EINSPRITZMENGE UND DER EINSPRITZRATE EINES EINSPRITZVENTILS FÜR FLÜSSIGKEITEN

Title (fr)
PROCEDE ET DISPOSITIF DE MESURE DE LA QUANTITE D'INJECTION ET DU TAUX D'INJECTION D'UNE SOUPEPE D'INJECTION POUR DES LIQUIDES

Publication
EP 1954938 B2 20140827 (DE)

Application
EP 06807073 A 20061009

Priority
• EP 2006067181 W 20061009
• DE 102005056153 A 20051123

Abstract (en)
[origin: DE102005056153A1] Method involves injection of liquid by the injection valve (3) in the measuring volume (1). The method also involves measurement of the pressure in the measuring volume by means of the pressure sensor (20) during the injection and recording these measuring values. The speed of sound is determined in the measuring volume before and after the injection. The method involves determination of the injected test liquid quantity from the pressure measuring values and the speed of sound dependent on pressure. An independent claim is included for measuring the injection quantity and the injection rate of an injection valve for liquids.

IPC 8 full level
F02M 65/00 (2006.01)

CPC (source: EP)
F02M 65/001 (2013.01)

Citation (opposition)
Opponent :
• DE 10310114 A1 20040916 - BOSCH GMBH ROBERT [DE]
• Abschlussbericht FVV-Vorhaben Nr. 312, 362 und 418 "Einfluss der Kraftstoff-Hochdruckeinspritzung auf die Verbrennung in Dieselmotor.
• SAE Paper 2001-01-0527 "Measurement of the Rate of Multiple Fuel Injections with Diesel Fuel and DME.
• "Taschenbuch der Physik", Fachbuchverlag Leipzig, 1999, 16. Auflage.

Cited by
CN111946517A; DE102011081544A1

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

DOCDB simple family (publication)
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EP 1954938 B1 20100407; EP 1954938 B2 20140827; WO 2007060055 A1 20070531

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