

Title (en)

Rheological control of the cooling of an engine

Title (de)

Rheologische Steuerung einer Motorkühlung

Title (fr)

Commande rhéologique d'un refroidissement de moteur

Publication

**EP 1630374 A1 20060301 (DE)**

Application

**EP 04104034 A 20040823**

Priority

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Abstract (en)

The engine is cooled by a rheological fluid which in its passive state has a lower thermal conductivity value than in its activated state. The rheological fluid in its passive state has a thermal conductivity value of about a third with regard to the thermal conductivity value of water, and in its active state has a value of somewhat more than three times the thermal conductivity value of water. The rheological fluid has a base substance of silicone oil and a thermal conductivity value range of 0.2 to 1.88 watts per metre kelvin.

IPC 8 full level

**F01P 3/00** (2006.01); **F01P 9/00** (2006.01)

CPC (source: EP)

**F01P 3/00** (2013.01); **F01P 9/00** (2013.01); **F01P 2003/001** (2013.01); **F01P 2003/006** (2013.01)

Citation (search report)

- [X] US 2078499 A 19370427 - FREDRIK LJUNGSTROM
- [X] US 2129846 A 19380913 - GUNTHER KNOCHENHAUER
- [A] EP 0842800 A1 19980520 - TOYODA AUTOMATIC LOOM WORKS [JP]
- [A] US 5638684 A 19970617 - SIEGEL ANDRE [DE], et al
- [A] WO 9304375 A1 19930304 - NCHIP INC [US]

Citation (examination)

- EVGUENIA V. KOROBKO, YULIA KOROBKO: "Thermophysical properties and rheological behavior of electrorheological fluids at different temperatures", 11 August 2003 (2003-08-11), Retrieved from the Internet <URL:http://spiedl.aip.org/vsearch/servlet/VerityServlet?KEY=PSISDG&smode=strresults&sort=rel&maxdisp=25&threshold=0&pjournals=PSISDG&possible1=3989&possible1zone=article&SMODE=strsearch&OUT [retrieved on 20100820]
- BURKE RONALD: "Question regarding thermal conductivity of motor oils", 16 May 2001 (2001-05-16), Retrieved from the Internet <URL:http://mailman.egr.msu.edu/mailman/public/thermal/2001-May/000412.html> [retrieved on 20100820]

Designated contracting state (EPC)

DE FR GB

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