

Title (en)

METHOD FOR CONTROLLING A MECHANICALLY CONTROLLABLE COOLANT PUMP FOR AN INTERNAL COMBUSTION ENGINE

Title (de)

VERFAHREN ZUR REGELUNG EINER MECHANISCH REGELBAREN KÜHLMITTELPUMPE FÜR EINE VERBRENNUNGSKRAFTMASCHINE

Title (fr)

PROCÉDÉ DE RÉGLAGE D'UNE POMPE À LIQUIDE DE REFROIDISSEMENT RÉGLABLE MÉCANIQUEMENT POUR UN MOTEUR À COMBUSTION INTERNE

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Application

EP 16787373 A 20161019

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Abstract (en)

[origin: WO2017076648A1] Methods are known for controlling a mechanically controllable coolant pump for an internal combustion engine, wherein coolant is conveyed by means of a coolant pump impeller (20) into a conveying channel (12) surrounding the coolant pump impeller (20) and to a pump outlet (30), wherein the conveying is dependent upon the position of an adjustable control slide (54), by means of which a through-flow cross-section of an annular gap (58) between an outlet (60) of the coolant pump impeller (20) and the surrounding conveying channel (12) is controlled, and wherein for reduction of the coolant volume flow conveyed to the pump outlet (30) by decreasing the through-flow cross-section a first pressure chamber (70) on a first axial side of the control slide (54) is filled with a pressurised coolant. In order to guarantee a short heating time while ensuring a sufficient cooling, according to the invention, in order to increase the coolant volume flow conveyed to the pump outlet (30) by enlarging the through-flow cross-section, a second pressure chamber (72) on a side of the control slide (54) axially opposite the first side is filled with pressurised coolant, and when the internal combustion engine is switched off the control slide (54) is moved into a defined position, depending upon the coolant temperature, in which the control slide (54) remains until starting of the engine.

IPC 8 full level

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