

Title (en)
REGENERATIVE PUMP FOR TRANSFERRING A FUEL

Publication
EP 0133497 B1 19910710 (DE)

Application
EP 84108575 A 19840720

Priority
DE 3327922 A 19830803

Abstract (en)
[origin: EP0133497A2] A regenerative pump is proposed which serves in particular for conveying fuel to a fuel supply system for internal combustion engines. The pump comprises an impeller (1) which is rotatably mounted in a pump housing (3), the outer circumferential area of which impeller has blades forming blade grooves (21). A first characteristic geometric feature for obtaining optimum pump dimensions is the value $R_m = SL$ which should lie within a range of 0.4 to 2 mm. At the same time, S signifies the cross-sectional area enclosed between the conveying channel wall (22, 24) and the impeller circumference (5, 6, 7, 8) and L signifies the circumferential length (5, 6, 7, 8) of the impeller (1) dipped into the conveying channel (2). A second characteristic geometric feature $R_s = B/E$ and a third characteristic geometric feature $R_a = A_2/A_1$ of the pump should lie within a range of 0.5 to 1.5. Here, B is the axial width of the impeller (1), E is the radial blade height of the impeller (1), A₁ is the sum of the two partial surfaces of the cross-sectional area S extending to the side of the impeller (1) and A₂ is the remaining partial area of the cross-sectional area S. <IMAGE>

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F04D 5/00

IPC 8 full level
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Cited by
EP0563957A1; EP0577180A1; EP0296952A1; FR2616853A1; GB2218748A; GB2218748B

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