Title (en)

Fuel pump

Title (de)

Kraftstoffpumpe

Title (fr)

Pompe à carburant

Publication

EP 0563957 B1 19990922 (EN)

Application

EP 93105414 A 19930401

Priority

- JP 3540593 A 19930224
- JP 8246592 A 19920403

Abstract (en)

[origin: EP0563957A1] A Westco type fuel pump includes an impeller (32) which has a plurality of vane grooves (322) and a plurality of vane plates (323) provided alternately along its outer periphery. Each vane groove (322) is constituted by groove portions (322a, 322b) formed in both sides of the impeller (32), respectively, with a partition wall (321) provided between the groove portions (322a, 322b). The partition wall has an outer peripheral surface (3210) located radially inside an outer peripheral surfaces (3230) of each vane plate (323) and has a predetermined thickness in an axial direction of the impeller. As the impeller (32) rotates, two vortex flows of fuel are generated along bottom surfaces (3221, 3222) of the groove portions (322a, 322b) and then smoothly merge together at a position outside the outer peripheral surface (3210) of the partition wall, thereby reducing a flow dead zone (96) in a pump flow passage (33). When the impeller (32) is molded by using molds, deformation of the molded impeller is prevented due to the thickness of the outer peripheral surface (3210). Of the surfaces of the impeller (32), therefore, the surfaces of each vane groove remain as they are after the molding, while both sides of the impeller (32) and the outer peripheral surface (3230) of the vane plates (323) are ground. Thus, the impeller (32) able to surely achieve a high level of pump performance can be easily provided by resin molding. <IMAGE>

IPC 1-7

F04D 29/18; F04D 5/00; F02M 37/10

IPC 8 full level

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CPC (source: EP KR)

F02M 37/00 (2013.01 - KR); **F02M 37/048** (2013.01 - EP); **F04D 5/002** (2013.01 - EP); **F04D 29/188** (2013.01 - EP)

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