

Title (en)
Self-priming centrifugal pump

Title (de)
Selbstansaugende Kreiselpumpe

Title (fr)
Pompe centrifuge autoamorçante

Publication
EP 0645541 B1 19970806 (DE)

Application
EP 94114953 A 19940922

Priority
DE 9314532 U 19930925

Abstract (en)
[origin: EP0645541A1] The centrifugal pump has a pump casing (1) with an inlet line (10) and a discharge line (5). Provided in the pump casing (1) is a pump chamber (2) which contains a pump impeller (3). The pump chamber is moreover connected to a propellant chamber (4) and, via the latter, to the discharge line (5). Arranged ahead of the pump impeller (3) is a jet-pump diffuser (6), the inlet of which is connected to the inlet line (10) and is acted upon by a primary nozzle (11). The inlet of the latter is connected to a feed passage (12) connected to the propellant chamber (4). A bypass line (13) leads from the inlet line (10) to the outlet of the diffuser (6), bypassing the inlet (9) of the latter, and contains a self-closing valve (13) which shuts off the bypass line (13) when air is drawn in and opens under the action of the negative pressure created by the diffuser (6) when the pump is delivering only liquid. This increases the intake and delivery rate since the liquid no longer has to pass only through the restricted diffuser inlet but can also flow through the bypass line. <IMAGE>

IPC 1-7
F04D 9/06

IPC 8 full level
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CPC (source: EP US)
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Cited by
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