

Title (en)

BALANCED ROLLER VANE PUMP HAVING REDUCED PRESSURE PULSES

Publication

EP 0200294 A3 19870805 (EN)

Application

EP 86300936 A 19860212

Priority

US 70545285 A 19850225

Abstract (en)

[origin: EP0200294A2] A balanced rotary pump is disclosed of the type including a pumping element (17) having a rotor member (25) defining a plurality of slots (27). Each of the slots receives a radially displaceable roller vane member (29). The pumping chamber is defined by a pair of inlet arc surfaces and a pair of discharge arc surfaces (65) of progressively decreasing radius. Each of the slots (27) includes a driving surface (73), each of which includes a substantial surface portion (77) or ended at a negative angle relative to a radial line. The engagement of each of the roller vane members (29) and its respective negative surface portion (77) is effective to act to reduce slightly the net radially outward force acting on the roller vane member, to reduce bouncing thereof as the roller vane member passes from the inlet arc surface to the discharge arc surface. The result is improved engagement of the roller vane member and the adjacent cam surface, reduced leakage past the vane member, and a reduction in pressure pulses and noise.

IPC 1-7

F04C 2/344

IPC 8 full level

F04C 2/30 (2006.01); **F04C 2/344** (2006.01)

CPC (source: EP KR)

F04C 2/3447 (2013.01 - EP); **F04D 29/66** (2013.01 - KR)

Citation (search report)

- GB 2118247 A 19831026 - EATON CORP
- FR 1244019 A 19601021
- FR 1120012 A 19560628 - CAMBI IDRAULICI BADALINI

Cited by

GB2201734A; GB2201734B; WO03042539A1; WO0020760A1; WO0188378A1; EP1760316A2

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