

Title (en)  
PRESSURE GRADIENT CONTROLLED ROTARY HYDRAULIC MACHINE

Publication  
**EP 0029356 B1 19850522 (EN)**

Application  
**EP 80304096 A 19801114**

Priority  
US 9588379 A 19791119

Abstract (en)  
[origin: EP0029356A1] A pressure gradient controlled rotary hydraulic machine (10) includes a housing (11) having a low pressure port (4) on one side, a high pressure port (3) on the opposite side, and a pair of meshed gears (14, 15) rotatably mounted in the housing between the two ports. A pressure gradient control is provided for regulating the pressure differential across a portion of the gears, the pressure gradient control comprising a fluid passageway (24) adjacent the teeth (30) of the gears (14, 15), spaced from both the high pressure and low pressure ports, isolated from direct fluid communication with the two ports, and in fluid communication with the interdental spaces of the gears. The fluid passageway (24) may be provided for in the housing of the machine or, preferably, in a pair of wear plates (20) that are disposed at opposite end faces of the gears (14, 15). The preferred fluid passageway (24) is formed by a chamfer adjacent to the tips of the gear teeth (30) along the peripheral portion of the wear plate (20).

IPC 1-7  
**F04C 2/18**; **F04C 15/00**

IPC 8 full level  
**F04C 2/18** (2006.01); **F04C 2/08** (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP)  
**F04C 2/086** (2013.01); **F04C 15/0042** (2013.01)

Cited by  
GB2312476B; CN108425838A; EP0802326A1; DE19713907A1; US5730589A

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0029356 A1 19810527**; **EP 0029356 B1 19850522**; BR 8007522 A 19810602; CA 1162106 A 19840214; DE 3070679 D1 19850627; JP S5675990 A 19810623

DOCDB simple family (application)  
**EP 80304096 A 19801114**; BR 8007522 A 19801118; CA 362982 A 19801022; DE 3070679 T 19801114; JP 15130580 A 19801028