

Title (en)
DOUBLE WORM SYSTEM

Title (de)
ZWILLINGSSCHRAUBENSATZ

Title (fr)
SYSTEME A VIS JUMEELES

Publication
EP 0865575 B1 20021204 (DE)

Application
EP 96920676 A 19960708

Priority
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Abstract (en)
[origin: US6139297A] PCT No. PCT/CH96/00250 Sec. 371 Date Feb. 8, 1999 Sec. 102(e) Date Feb. 8, 1999 PCT Filed Jul. 8, 1996 PCT Pub. No. WO97/21925 PCT Pub. Date Jun. 19, 1997 In prior art designs, single-flight cast double worms with angles of contact >720 DEG with large balance hollows at both ends and worm lengths of whole multiples of the pitch operate in the medium rotation speed ranges (DIFFERENCE 3000 min DIFFERENCE 1) without imbalance. The desired use of special uncastable materials and the manufacturing complexity and the necessary dimensional stability even for extreme profile geometries pose additional problems in balancing which are solved by the present invention. Here, it is possible, by varying the angle of contact of the worm and any balance hollows and/or by altering the contour of the worms in the medium engagement region, to reduce the size of the balance hollows, sometimes to "zero", and with the possible use of additional masses. Besides the advantage of simple raw component manufacture, worms balanced in this way also permit the use of special materials and extreme worm geometries for fitting in pumps used in the chemical, medical and food sectors.

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• FR 1500160 A 19671103
• FR 2668209 A1 19920424 - HITACHI KOKI KK [JP]
• EP 0472933 B1 19970102 - MATSUSHITA ELECTRIC IND CO LTD [JP]

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WO 9721925 A1 19970619; AT E229127 T1 20021215; AU 6186196 A 19970703; AU 719268 B2 20000504; CA 2240168 A1 19970619; CA 2240168 C 20071127; CN 1083536 C 20020424; CN 1207794 A 19990210; CZ 177298 A3 20000315; CZ 289289 B6 20011212; DE 59609957 D1 20030116; DK 0865575 T3 20030324; DK 0865575 T4 20070402; EP 0865575 A1 19980923; EP 0865575 B1 20021204; EP 0865575 B2 20061129; EP 0865575 B9 20030502; EP 0865575 B9 20070606; ES 2186785 T3 20030516; JP 2000501809 A 20000215; JP 3330955 B2 20021007; KR 100384925 B1 20030821; KR 19990072036 A 19990927; NO 982674 D0 19980610; NO 982674 L 19980807; PT 865575 E 20030430; SK 78098 A3 19990211; US 6139297 A 20001031

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