

Title (en)
Cross flow fan impeller

Title (de)
Laufad für Querstromlüfter

Title (fr)
Roue pour une soufflante à courant traversal

Publication
EP 0785362 A1 19970723 (EN)

Application
EP 96307582 A 19961018

Priority
JP 644796 A 19960118

Abstract (en)
To reduce its rotational noise in a particular frequency band, the cross flow fan impeller (4) comprises a plurality of division plates (3) perpendicular to the rotational axis and a plurality of blades (1) provided between each pair of division plates (3). The angular location (θ_k) of the blades is varied cyclically based on a specific equation. <IMAGE>

IPC 1-7
F04D 29/28; F04D 29/66

IPC 8 full level
F04D 17/04 (2006.01); **F04D 29/28** (2006.01); **F04D 29/30** (2006.01); **F04D 29/66** (2006.01)

CPC (source: EP KR)
F04D 17/04 (2013.01 - EP KR); **F04D 29/283** (2013.01 - EP); **F04D 29/666** (2013.01 - EP)

Citation (applicant)
JP S6017296 A 19850129 - MATSUSHITA ELECTRIC IND CO LTD

Citation (search report)
• [XY] US 5266007 A 19931130 - BUSHNELL PETER R [US], et al
• [Y] DE 2322734 A1 19741121 - BUDERUS EISENWERK
• [A] DE 4421604 C1 19950413 - SIEMENS AG [DE]
• [AD] US 4538963 A 19850903 - SUGIO TAKASHI [JP], et al
• [A] R.C. MELLIN: "Controlling the Tonal Characteristics of the Aerodynamic Noise Generated by Fan Rotors.", TRANSACTIONS A.S.M.E; JOURNAL OF ENGINEERING FOR BASIC ENGINEERING., vol. 92d, no. 1, March 1970 (1970-03-01), pages 143 - 154, XP002030072

Cited by
EP0947708A3; CN105020176A; ES2184571A1; EP2696078A1; US11644045B2; US9605541B2; WO2004029463A1; US9995316B2;
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Designated contracting state (EPC)
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EP 0785362 A1 19970723; EP 0785362 B1 20021211; AU 680173 B1 19970717; CN 1076448 C 20011219; CN 1164619 A 19971112;
DE 69625322 D1 20030123; DE 69625322 T2 20030116; ES 2191080 T3 20030901; HK 1000496 A1 20030425; JP 3484854 B2 20040106;
JP H09195979 A 19970729; KR 100216104 B1 19990816; KR 970059509 A 19970812

DOCDB simple family (application)
EP 96307582 A 19961018; AU 7055796 A 19961101; CN 97102053 A 19970115; DE 69625322 T 19961018; ES 96307582 T 19961018;
HK 97101945 A 19971017; JP 644796 A 19960118; KR 19970000872 A 19970114