

Title (en)

VORTEX FLOW BLOWER AND METHOD OF MANUFACTURING THE SAME

Publication

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Application

EP 90102729 A 19900212

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Abstract (en)

[origin: EP0383238A2] The present invention relates to a vortex flow blower used as an air source to be incorporated into general industrial machines. The vortex flow blower according to the present invention is characterized in that the shape of the blade (5) in its impeller (1) is three dimensionally formed such that at least the inner portion of the blade (5) can be adapted to the three dimensional internal flow. According to the present invention, the aerodynamic performance can be significantly improved and the size of a vortex flow blower can be reduced. Furthermore, an impeller (1) having three dimensionally shaped blades (5) is manufactured by independently manufacturing the shroud (11) and the blades (5) and coupling them, so that the impeller (1) of a complicated shape can be readily manufactured. Furthermore, since the blade (5) can be made of a thin and light material, the secondary moment of inertia of the impeller can be reduced.

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Citation (search report)

- [X] US 3951567 A 19760420 - ROHS ULRICH
- [Y] US 3095820 A 19630702 - SANBORN DANIEL S, et al
- [X] DE 8808920 U1 19880908
- [A] DE 1703329 A1 19720309 - WEBASTO WERK BAIER KG W
- [X] DE 2361851 A1 19740711 - HITACHI LTD
- [A] DE 3128625 A1 19820318 - HITACHI LTD [JP]
- [A] DE 2400496 A1 19740711 - BRITISH GAS CORP
- [X] DE 892498 C 19531008 - SIEMENS AG
- [Y] DE 3605852 A1 19870827 - GEBHARDT GMBH WILHELM [DE]
- [Y] GB 983687 A 19650217 - AMETEK INC
- [Y] GB 733578 A 19550713 - IND FAN & HEATER COMPANY LTD
- [Y] GB 718751 A 19541117 - ROWLAND RODWAY
- [Y] DE 3520218 A1 19851212 - HITACHI LTD [JP]
- [Y] DE 309096 C
- [Y] GB 1155049 A 19690611 - BUDD CO [US]
- [Y] US 3147541 A 19640908 - HATHAWAY CHARLES A
- [Y] FR 2145915 A5 19730223 - EBERSPAECHER J

Cited by

EP0506974A4; CN108479201A; EP0612923A1; US5628615A; DE19955955A1; EP4209679A1; WO9710440A1; US10273960B2; US12000411B2

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