Title (en)

MULTI-BLADE FAN FOR CENTRIFUGAL BLOWER

Title (de)

LÜFTER MIT MEHREREN BLÄTTERN FÜR EIN ZENTRIFUGALGEBLÄSE

Title (fr)

VENTILATEUR À AUBES MULTIPLES POUR SOUFFLANTE CENTRIFUGE

Publication

EP 2503157 A1 20120926 (EN)

Application

EP 10831457 A 20101104

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Abstract (en)

Disclosed is a multi-blade fan for a centrifugal blower, the multi-blade fan having a plurality of annularly-disposed blades and being characterized in that at least the number of blades (Z), the inner/outer diameter ratio, which is defined as the ratio (D1/D2) between the diameter (D1) of the circle inscribing the blades and the diameter (D2) of the circle circumscribing the blades, the angle of inclination (a degrees) of each blade, which is defined as the angle between a line connecting the position of said blade on the inscribed circle and the position thereof on the circumscribed circle and a line extending radially from the center of the inscribed circle and passing through said position on the inscribed circle, and the tongue clearance ratio, which is defined as the ratio (S/D2) between the tongue clearance (S) and the diameter (D2); of the circumscribed circle are all within optimal ranges (30=Z=55; 0.72=D1/D2=0.86; 15==a=48; and 0.09=S/D2=0.15). Thus, it is possible to design a multi-blade fan for a centrifugal blower that produces little noise by determining the optimal ranges for parameters that were found to be effective and combining those optimal ranges for use.

IPC 8 full level

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Citation (search report)

See references of WO 2011062062A1

Cited by

FR3069896A1; FR3069895A1; US9885361B2; FR3074236A1; FR3074237A1; US10718351B2; WO2019102101A1; WO2019025710A1; EP2991206B1

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