

Title (en)  
TRANSONIC WING DESIGN PROCEDURE.

Title (de)  
ENTWURFVERFAHREN EINES FLÜGELS FÜR GESCHWINDIGKEITEN NAHE DER SCHALLGRENZE.

Title (fr)  
METHODE DE CONCEPTION D'UNE AILE TRANSONIQUE.

Publication  
**EP 0271561 A4 19891027 (EN)**

Application  
**EP 87904423 A 19870529**

Priority  
US 86939886 A 19860602

Abstract (en)  
[origin: WO8707576A1] The conventional steps of defining performance requirements of an aircraft wing and conducting general sizing of the wing are followed by the new steps of determining the aerodynamic sweep angle of the wing with respect to an actual location of a shock wave on the wing. A two dimensional Mach number for the wing airfoil is calculated by multiplying the three dimensional Mach number by the cosine of the aerodynamic sweep angle. A two dimensional lift coefficient for the wing airfoil is calculated by dividing the three dimensional lift coefficient by the square of the cosine of the aerodynamic sweep angle. Airfoil shape in two dimensions is determined on the basis of the two dimensional Mach number and the two dimensional lift coefficient. The shape of the wing in three dimensions is then defined by placing the airfoil in the wing along an arc constructed by skewed chord lines perpendicular to local sweep lines of the wing at a series of locations along a chord of the wing.

IPC 1-7  
**B64C 3/00**

IPC 8 full level  
**B64C 3/10** (2006.01); **B64C 3/00** (2006.01)

CPC (source: EP)  
**B64C 3/00** (2013.01)

Citation (search report)

- No further relevant documents have been disclosed.
- See references of WO 8707576A1

Cited by  
CN107391891A

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**WO 8707576 A1 19871217**; EP 0271561 A1 19880622; EP 0271561 A4 19891027; JP H01500742 A 19890316

DOCDB simple family (application)  
**US 8701249 W 19870529**; EP 87904423 A 19870529; JP 50407387 A 19870529