Title (en)

Process for manufacturing a hollow turbine blade and device used for on-going hot twisting

Title (de)

Verfahren zur Herstellung einer hohlen Turbinschaufel und Anlage zum laufenden Warmverwinden

Title (fr)

Procédé de fabrication d'une aube creuse de turbomachine et équipement de vrillage évolutif à chaud utilisé

Publication

EP 0824981 B1 20010502 (FR)

Application

EP 97401954 A 19970820

Priority

FR 9610352 A 19960822

Abstract (en)

[origin: EP0824981A1] The procedure consists of forging, machining and welding components made by a computer-aided system, followed by inflation under pressure and superplastic moulding. The required twist in the blade, made from a titanium alloy such as TA6V, is produced by heating the blade to 700 deg C and applying a torsion to it through rotary bars (5) acting on yokes previously attached to the blade. The twisting process can be applied to the individual components of the blade or to assembled blades and uses a cylindrical electric furnace (2) with slits (24) for the bars. The furnace is surrounded by a circular frame (6), and jaws (3, 4) hold the two ends of the blade while it is being twisted.

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B21D 53/78; B21D 11/14

IPC 8 full level

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CPC (source: EP US)

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