

Title (en)

A mounting disc for turbine or compressor blades

Title (de)

Montagescheibe für Turbinen- oder Verdichterschaufel

Title (fr)

Disque de montage pour des aubes de turbine ou compresseur

Publication

**EP 1882813 A3 20130904 (EN)**

Application

**EP 07252734 A 20070707**

Priority

GB 0614972 A 20060728

Abstract (en)

[origin: EP1882813A2] Mounting discs (20, 30, 40, 50) are used in gas turbine engines to present turbine or compressor blades. These discs (20, 30, 40, 50) incorporate a bore or cob end 31, 41, 51 which in turn previously had a flat end face surface. Such flat end face surfaces are weight efficient but can lead to reduced component life and a limitation with regard to rotational speed due to Von-Mises stresses. By providing a deviation (39, 49, 59, 69) in the end face from a flat aspect, a reduction in axial stress is achieved with a marginal increase in hoop stress but with a net result that there is a reduction in the general operational Von-Mises stresses and therefore improvement in disc life or potential rotation speed capacity or both.

IPC 8 full level

**F01D 5/02** (2006.01); **F01D 5/30** (2006.01)

CPC (source: EP US)

**F01D 5/02** (2013.01 - EP US); **F01D 5/30** (2013.01 - EP US); **F05D 2250/711** (2013.01 - EP US)

Citation (search report)

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- [XJ] DEM'YANUSHKO I V ET AL: "OPTIMAL DESIGN OF ROTATING DISKS", RUSSIAN ENGINEERING RESEARCH, ALLERTON PRESS, NEW YORK, NY, US, vol. 16, no. 7, 1 January 1996 (1996-01-01), pages 7 - 13, XP000699743, ISSN: 1068-798X

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Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

**EP 07252734 A 20070707**; GB 0614972 A 20060728; US 87887807 A 20070727