DOR: 24/1/97

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :		(11) International Publication Number:
F01D 5/00, B23P 6/00	A1	WO 96/00840
		(43) International Publication Date: 11 January 1996 (11.01.96)

(21) International Application Number: PCT/US95/08316

(22) International Filing Date: 30 June 1995 (30.06.95)

(30) Priority Data:
270,700 30 June 1994 (30.06.94) US

(71) Applicant: UNITED TECHNOLOGIES CORPORATION [US/US]; United Technologies Building, 1 Financial Plaza, Hartford, CT 06101 (US).

(72) Inventors: ROWE, Jon, G.; 18 Butternut Knoll, Middletown, CT 06457 (US). PIETRUSKA, Norman; 3 Partridge Lane, Durham, CT 06422 (US). PAWLACZYK, Richard, J.; 90 Maryon Street, Hartford, CT 06106 (US). WILCOX, Gilbert, B.; 30 Pleasant View Drive, Somers, CT 06071 (US).

(74) Agent: SOHL, Charles, E.; United Technologies Corporation, Pratt & Whitney, 400 Main Street, East Hartford, CT 06108 (US).

(81) Designated States: JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

9612137-1

(54) Title: TURBINE VANE FLOW AREA RESTORATION METHOD

(57) Abstract

The present invention relates to a method for refurbishing or restoring a turbine vane or other airfoil to restore a desired flow area. The method in one embodiment comprises the steps of: providing a plate to be used to restore the flow area on the airfoil; cutting the plate into a desired shape; machining a series of tapers into the cut plate so that the cut plate has a single region with a substantially uniform thickness; overlaying a surface of the airfoil with the pre-cut, pre-shaped plate so that the substantially uniform thickness region is positioned over that part of the airfoil where the flow area is to be restored; and attaching the pre-cut, pre-shaped plate to the airfoil. The refurbishment or restoration method further comprises heat treating the pre-cut, pre-shaped plate so that the plate softens and conforms to the shape of the airfoil surface.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	**GB**	United Kingdom	**MR**	Mauritania
AU	Australia	**GE**	Georgia	**MW**	Malawi
BB	Barbados	**GN**	Guinea	**NE**	Niger
BE	Belgium	**GR**	Greece	**NL**	Netherlands
BF	Burkina Faso	**HU**	Hungary	**NO**	Norway
BG	Bulgaria	**IE**	Ireland	**NZ**	New Zealand
BJ	Benin	**IT**	Italy	**PL**	Poland
BR	Brazil	**JP**	Japan	**PT**	Portugal
BY	Belarus	**KE**	Kenya	**RO**	Romania
CA	Canada	**KG**	Kyrgystan	**RU**	Russian Federation
CF	Central African Republic	**KP**	Democratic People's Republic of Korea	**SD**	Sudan
CG	Congo			**SE**	Sweden
CH	Switzerland	**KR**	Republic of Korea	**SI**	Slovenia
CI	Côte d'Ivoire	**KZ**	Kazakhstan	**SK**	Slovakia
CM	Cameroon	**LI**	Liechtenstein	**SN**	Senegal
CN	China	**LK**	Sri Lanka	**TD**	Chad
CS	Czechoslovakia	**LU**	Luxembourg	**TG**	Togo
CZ	Czech Republic	**LV**	Latvia	**TJ**	Tajikistan
DE	Germany	**MC**	Monaco	**TT**	Trinidad and Tobago
DK	Denmark	**MD**	Republic of Moldova	**UA**	Ukraine
ES	Spain	**MG**	Madagascar	**US**	United States of America
FI	Finland	**ML**	Mali	**UZ**	Uzbekistan
FR	France	**MN**	Mongolia	**VN**	Viet Nam
GA	Gabon				

0612137-1