

Title (en)

High pressure turbine elastic clearance control system and method

Title (de)

System und Verfahren zur elastischen Spaltkontrolle von Hochdruckturbinen

Title (fr)

Système et procédé de réglage élastique du jeu d'extrémité d'une turbine à haute pression

Publication

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Application

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Priority

US 42821903 A 20030502

Abstract (en)

A system and method for achieving clearance control for a high-pressure turbine by means of casing mechanical deflection. An active clearance control system is provided to act on a blade (14) that rotates near a shroud (16). The shroud (16) is attached to a case (24) at a shroud supporting location, or shroud hanger (22). A clearance (18) is required between a tip of the blade (14) and the shroud (16). The blade (14) tip and shroud (16) are surrounded with an elastic case (24). This case (24) can deflect radially in response not only to thermal expansion, but also to a difference in pressures acting on the inner and outer diameters of the case (24). <IMAGE>

IPC 1-7

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IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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