

Title (en)

Systems and methods for adjusting clearances in turbines

Title (de)

Systeme und Verfahren zur Spaltanpassung in Turbinen

Title (fr)

Systèmes et procédés permettant de régler des dégagements dans des turbines

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Application

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Abstract (en)

Embodiments of the invention can provide systems and methods for adjusting clearances (108) in a turbine (102). According to one embodiment, there is disclosed a turbine system (102). The system may include one or more turbine blades (104), a turbine casing (106) encompassing the one or more turbine blades (104), a thermoelectric element (110) disposed at least partially about the turbine casing (106), a cooling system (307) in communication with the thermoelectric element (110), and a controller (112) in communication with the cooling system (307) and the thermoelectric element (110). The controller (112) may be operable to control the expansion or contraction of the turbine casing (106) by heating or cooling at least a portion of the turbine casing (106) with the thermoelectric element (110) and by adjusting the cooling system (307) such that a clearance (108) between the one or more turbine blades (104) and the turbine casing (106) is adjusted.

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