



Seal Investigations of an Active Clearance Control System Concept

By Bruce M. Steinetz

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 26 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. In an effort to improve upon current thermal active clearance control methods, a first generation, fast-acting mechanically actuated, active clearance control system has been designed and installed into a non-rotating test rig. In order to harvest the benefit of tighter blade tip clearances, low-leakage seals are required for the actuated carrier segments of the seal shroud to prevent excessive leakage of compressor discharge (P3) cooling air. The test rig was designed and fabricated to facilitate the evaluation of these types of seals, identify seal leakage sources, and test other active clearance control system concepts. The objective of this paper is to present both experimental and analytical investigations into the nature of the face-seal to seal-carrier interface. Finite element analyses were used to examine face seal contact pressures and edge-loading under multiple loading conditions, varied E-seal positions and two new face seal heights. The analyses indicated that moving the E-seal inward radially and reducing face seal height would lead to more uniform contact conditions between the face seal and the carriers. Lab testing confirmed that moving the balance diameter inward radially caused...



[READ ONLINE](#)
[9.49 MB]

Reviews

It is an remarkable pdf that I actually have actually read. It really is packed with knowledge and wisdom I am very happy to tell you that this is the finest ebook i actually have go through during my very own life and may be he very best book for actually.

-- Hailey Jast Jr.

It in a of my personal favorite ebook. It is probably the most awesome publication i have read through. You wont really feel monotony at anytime of the time (that's what catalogs are for regarding in the event you check with me).

-- Juliet Kertzmann