Large Engine Technology Program: Task 22: Variable Geometry Concepts for Rich-Quench-Lean Combustors

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By -

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 136 pages. Dimensions: 9.7in. x 7.4in. x 0.3in.The objective of the task reported herein was to define, evaluate, and optimize variable geometry concepts suitable for use with a Rich-Quench-Lean (RQL) combustor. The specific intent was to identify approaches that would satisfy High Speed Civil Transport (HSCT) cycle operational requirements with regard to fuel-air ratio turndown capability, ignition, and stability margin without compromising the stringent emissions, performance, and reliability goals that this combustor would have to achieve. Four potential configurations were identified and three of these were refined and tested in a high-pressure modular RQL combustor rig. The tools used in the evolution of these concepts included models built with rapid fabrication techniques that were tested for airflow characteristics to confirm sizing and airflow management capability, spray patternation, and atomization characterization tests of these models and studies that were supported by Computational Fluid Dynamics analyses. Combustion tests were performed with each of the concepts at supersonic cruise conditions and at other critical conditions in the flight envelope, including the transition points of the variable geometry system, to identify performance, emissions, and operability impacts. Based upon the cold flow characterization,...

Reviews

I actually started looking over this publication. It really is rally interesting throgh studying period. Once you begin to read the book, it is extremely difficult to leave it before concluding.
-- Dana Hintz

Good electronic book and valuable one. It really is basic but unexpected situations in the 50 percent in the pdf. You wont really feel monotony at at any moment of your time (that's what catalogues are for concerning when you ask me).
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