

Geared Turbofan with Water Alcohol Technology

Authors : Abhinav Purohit, Shruthi S. Pradeep

Abstract : In today's world, aviation industries are using turbofan engines (permutation of turboprop and turbojet) which meet the obligatory requirements to be fuel competent and to produce enough thrust to propel an aircraft. But one can imagine increasing the work output of this particular machine by reducing the input power. In striving to improve technologies, especially to augment the efficiency of the engine with some adaptations, which can be crooked to new concepts by introducing a step change in the turbofan engine development. One hopeful concept is, to de-couple the fan with the help of reduction gear box in a two spool shaft engine from the rest of the machinery to get more work output with maximum efficiency by reducing the load on the turbine shaft. By adapting this configuration we can get an additional degree of freedom to better optimize each component at different speeds. Since the components are running at different speeds we can get hold of preferable efficiency. Introducing water alcohol mixture to this concept would really help to get better results.

Keywords : emissions, fuel consumption, more power, turbofan

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