6th International Conference and Exhibition on
Mechanical & Aerospace Engineering
November 07-08, 2018 | Atlanta, USA

Meinhard T Schobeiri

Texas A&M University, USA

Advances in gas turbine aerodynamics, heat transfer and performance research

Gas turbines are engines within which the chemical energy of the fuel is converted either into mechanical energy for power generation or kinetic energy for producing propulsive force for aircraft. The conversion of the fuel energy into power or propulsive force requires an interaction of several components of the engine where aero-thermodynamic processes take place. Each process is associated with an entropy generation causing a depreciation in total pressure. As a result, the component efficiency deterioration reduces the gas turbine thermal efficiency. This, however, is the most important quantity for evaluating the overall aero-thermodynamics quality of the engine and is a measure for reducing the fuel consumption. High thermal efficiency not only reduces the fuel consumption but it also reduces the production of toxic exhaust emissions that are threatening the health and integrity of the global environment. Thus, investigating the impact of the individual parameters on thermal efficiency and its accurate prediction defines the framework of this talk. The presentation gives an overview of the gas turbine aerodynamics, performance and its dynamic behavior at the design and off-design operation conditions. A brief description of an ultra-high-efficiency gas turbine concludes the talk.

Biography

Meinhard T Schobeiri full Professor of Mechanical Engineering Department, Texas A&M University since 1987 May. Dr Ing (PdD), 1978, Technical University Darmstadt, Germany, Department of Mechanical Engineering. Dipl Ing (MS), 1970, Technical University Darmstadt, Germany, Department of Mechanical Engineering. Dipl-Vorprufung (BS), 1967, Technical University Darmstadt, Germany, Department of Mechanical Engineering.

tschobeiri@tamu.edu

Notes: