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Secondary Air Systems in Gas Turbines

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Deadline for manuscript submissions:
closed (10 September 2021)

Message from the Guest Editors

The Guest Editors are inviting submissions to a Special Issue of Energies on the subject area of "Secondary Air Systems in Gas Turbines". In order to increase the cycle efficiency and specific work output of gas turbines, the turbine entry temperature (TET) is raised beyond the metallurgical limit of the engine components. Consequently, bleed air is taken from the compressor stages and used to cool the turbine. The intricate cooling pathways, seals, and metering devices are collectively known as the secondary air system (SAS). Effective use of the SAS is paramount: superfluous use of bleed air results in an uncompetitive engine design, whereas insufficient or ineffective cooling has a detrimental effect on engine life.

Keywords

- Secondary air systems
- Cavity flows
- Rotor–stator systems
- Ingress and Egress
- Mainstream gas path interactions
- Shaft sealing technologies
- Experimental measurement
- Computational fluid dynamics (CFD)

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Message from the Editor-in-Chief

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Journal Rank: CiteScore - Q1 (Control and Optimization)

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