

Abstract Submitted
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Design and Performance Analysis of a Y-shape Exhaust for a Microjet Engine MASOUD HOSEINI, PhD candidate, Iran Univ. of Science and Tech., ARASH TAHERI, PhD candidate, Sharif Univ. of Tech. — In this research, a y-shape exhaust has been designed for a microjet engine based on theoretical relations. The exhaust has been analyzed using 3-D flow simulation based on finite volume method using turbine exit boundary conditions. In modeling phase, heat transfer across the exhaust wall has been considered. For analysis, unstructured tetrahedral mesh and k-epsilon model for turbulent flow has been used. Finally, the designed exhaust has been experienced on a test bench. Thrust and EGT values in several RPMs has been stated and compared with original engine (without exhaust) to observe the exhaust effect on engine performance.

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