# Consideration of Gas Flow in Exhaust System

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**ABSTRACT**

The knowledge of the velocity fluctuations associated with acoustic pressure oscillation in the exhaust system of internal combustion engines may represent a powerful aid in the design of such system, from the point of view of both engine performance improvement an exhaust noise abatement.

We report a numerical study on hot gas exhaust flow. The behavior of the hot gas has been studied based on measured gas Temperature and numerical simulation.

The first part of the document presents the methodology which is based on the numerical finite-element solution of the governing differential conservation equation of mass, momentum, energy and turbulent modeling (k-e) which yield variations of the velocity, pressure, temperature of gas flow in the exhaust.

The remainder of the document compare this results by experimental results which we got in the lab. The results reported in this article provide guidance for the optimum structure of the exhaust chamber.

**Keywords:**

exhaust flow, turbulent, numerical, velocity fluctuations

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