Abstract

A flowmeter is a device used to measure the flow rate or quantity of a gas or liquid in a pipe. In the modern world, flowmeters are used in thousands of ways across all industries. The various technologies used to measure and control flow can be either simple as in the earlier uses but more often are complex. Microelectromechanical Systems (MEMS) has been identified as one of the most promising technologies for the 21st Century due to wide range of applications in various industries. The MEMS flowmeters offers several advantages over traditional meters...
such as wide turn- down rate, direct mass flow sensing, high accu-
rac, very low power consumption, low pressure loss etc. The Design, fabrication, and response characteristics of few of the MEMS flow sensors were presented with introduction of MEMS technology, finally the comparison between conventional flowmeters and MEMS flowmeters. Also it includes a short analysis of future opportunities of MEMS flowsensors for industrial application.

References

- Version 2 EE IIT, Kharagpur, Module 2 measurement systems, lesson 7 flow measurement.
- Wolfson School of Mechanical and Manufacturing Engineering Loughborough University, MEMS Recent Developments, Future Directions, Dec. 2007.
- Wolfson School of Mechanical and Manufacturing Engineering, An Introduction to MEMS (Micro-electromechanical Systems), Jan 2002.
Comparative Study of Conventional and Mems Flow Meters

- Dougsparks, MEMS based coriolis fluid monitoring, ext-ending the lower end of density and flowrate measurement, technology spotligh, Sept. 2006.

Index Terms


Computer Science

Applied Sciences

Keywords

Flowmeters  Mems  Mems Based  Flowmeters