



## **ISSYS Awarded New Patent for a Resonant Tube Viscosity Sensing Device**

Ypsilanti, Michigan, June 21<sup>st</sup>, 2006 –Integrated Sensing Systems, Inc. (ISSYS) announced that the U.S. Patent Office has granted it a utility patent (US 7,059,176) entitled “Resonant Tube Viscosity Sensing Device.”

This patent covers a method and device for assessing the viscosity of a fluid using a microfluidic chip. Its 39 granted claims include methods of fabricating, designing and packaging the new sensor and combining its output with the other sensory outputs such as mass flow rate, density and temperature. The patent also covers the integration of this sensor directly onto an engine to monitor the oil or lubricant quality for vehicle applications (both automotive and military usage). This application offers a smaller more cost effective means of sensing automotive oil quality, which can reduce oil consumption and prevent engine wear. The patent builds on ISSYS’ previous microfluidic patents in this area such as US Patents 6,477,901, 6,647,778 and 6,935,010.

An important contribution of this patent is the fact that it is the next step in achieving a comprehensive fluidic analysis system for industrial and vehicle applications. ISSYS’ technology is now offering a single microchip sensor capable of multiple sensing functions, including temperature, density, flow, and viscosity.

Dr. Douglas Sparks, ISSYS Executive Vice President stated that, “This new patent and technology has applications to broaden ISSYS’ laboratory test equipment and industrial product lines. Spillover into automotive and trucking applications gives this technology the potential to be a high-volume sensing product used in millions of vehicles. A MEMS (MicroElectroMechanical Systems) sensor that can monitor the viscosity, density, temperature and mass flow of motor oil is truly unique and offers a way to advance the state-of-the-art in oil quality sensing.”

### **Company Background:**

ISSYS is a leader in advanced micromachining technologies for medical devices, microfluidic and scientific analytical sensing applications used in the development of density and flow meters, drug infusion pumps and wireless, implantable sensing systems. Founded in 1995 by world-renowned leaders in MEMS sensing technology, ISSYS operates an “everything under one roof” multi-million-dollar, state-of-the-art MEMS fabrication facility located near Ann Arbor, Michigan. For more company, product and service information, please visit <http://www.mems-issys.com/>.

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