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 News Release from: **Industrial Tomography Systems** | Subject: **Impedance tomography**  
 Edited by the Engineeringtalk Editorial Team on 10 July 2003

## Real-time bubble column control using tomography

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**Impedance tomography is a new and powerful tool for monitoring and controlling bubble hold-up and distribution in columns and stirred cells.**

Monitoring and controlling bubble hold-up and distribution in columns and stirred cells present challenges. Impedance tomography, according to Industrial Tomography Systems (ITS) of Manchester UK, is a new and powerful tool for meeting these challenges and could allow better control of mass transfer and reaction.

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A GBP 3.2 million DTI/Foresight Challenge project on tomography with ten UK industrial partners and three universities (Leeds, UMIST, Exeter) has just ended.

It saw installation of new tomography equipment in five manufacturing plants, including that of Imersys in Cornwall.

Now work has advanced into further applications.

"Tomography is one of the few methods that enables users to visualise complex processes", comments ITS Managing Director Ken Primrose.

"Our technology solutions and the instrumentation to control it are now in use in Europe, Australia and North America.

Work that ITS commissioned at the University of Leeds with Anglo American Professor Richard Williams and Dr Mi Wang is the first example of **real-time control** using electrical tomography, and of the application of a tomographic method to bubble and froth columns".

The work was reported at a recent SPIES meeting on process imaging control in Boston, USA, and more recently was featured at the 2nd World Congress in Industrial Process Tomography in Hanover.

The concept is already generating interest in the minerals industry and beyond.

"A key to the successful implementation of the method was the development of an integrated modular software for control functions and bespoke new algorithms for data interpretation", continues Primrose.

"For stirred vessels we also have a complementary imaging probe - Optomix - that can be integrated with a baffle to provide instantaneous axial and radial composition profiles.

Following success in recent industrial trials we will seek collaboration with original equipment manufacturers to implement these solutions for industrial use".

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