

FROTH-ITOMETER PACKAGE



INDUSTRIAL TOMOGRAPHY SYSTEMS PLC

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PRODUCT BROCHURE

Monitor froth flotation in real-time...

Froth flotation is a key process in the global mining industry, and whilst traditional level detection techniques are available to track this, froth flotation can present significant measurement challenges.

To overcome this, ITS has developed the FROTH-ITOMETER package to meet the requirements of the most demanding applications.

Our FROTH-ITOMETER package works using a specially designed dip probe (pictured left), which is both robust (with no moving parts) and can be made from a variety of chemically and physically durable materials in order to fit the requirements of your existing flotation tank. The probe contains a set of electrodes distributed across its whole length, and these electrodes measure the electrical conductivity of their surroundings in real time using a small AC current.

Our state-of-the-art software takes these conductivity measurements and produces a volumetric distribution map complete with the location of any observable interfaces between components.

Featuring an auto-calibration function (which responds to changing background conditions) and a completely customisable probe design (which can be built from millimetres to meters in scale), the ITS FROTH-ITOMETER Package is a valuable tool for use in process research and optimisation.



Figure 1: Range of FROTH-ITOMETER Probes

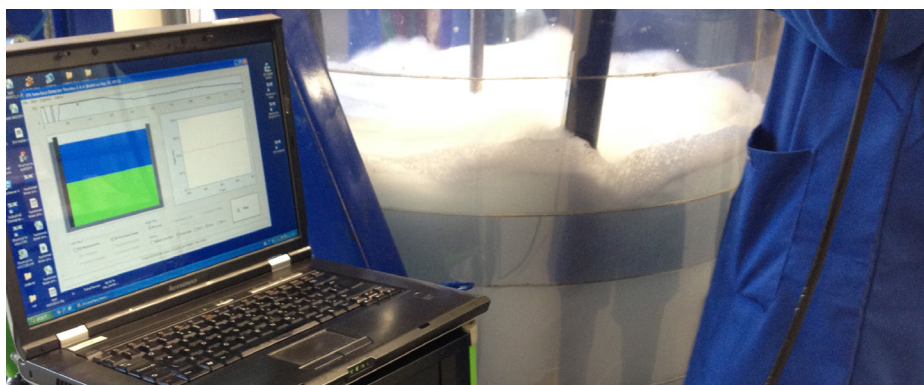


Figure 2: FROTH-ITOMETER probe installed in flotation tank

TAILORED TO YOUR REQUIREMENTS

Froth flotation probes can be built from millimetres to meters in scale, making the FROTH-ITOMETER package suited to application ranging in scale from production and pilot plants, to R&D projects.

What's more, the sensor can be fabricated with materials resistant to chemicals or high radiation fields, with the additional option for intrinsically safe operation (certified to ATEX standard EEx ia IIC T6).

A VERSATILE TOOL

The FROTH-ITOMETER works with any system where the components have a measurable difference in electrical conductivity: Aqueous/organic separations, mass transfer applications, solid settling, slurry separations, foam detection, fill height monitoring, and more.

As such, the ITS FROTH-ITOMETER is being used in a range of froth flotation and separation applications across the mining industry. ITS can provide advice on system suitability for particular processes, commissioning and technical support as required.

KEY BENEFITS

- ✓ Real-time data
- ✓ Understand dynamics of pulp behaviour for improved efficiency
- ✓ Scalable for R&D, Pilot, Production
- ✓ Robust with no moving part
- ✓ ATEX rated

PACKAGE INCLUDES

- ➔ Custom-built froth flotation dip probe sensor (see example of size range on previous page)
- ➔ Data acquisition system (see below left)
- ➔ User-friendly tomography software (see below)
- ➔ Optional technical support from ITS's team of specialist engineers



Figure 3: p2+ tomography instrument

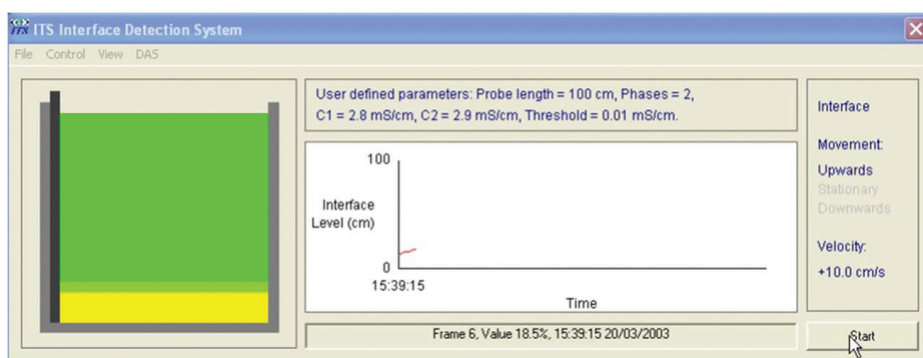
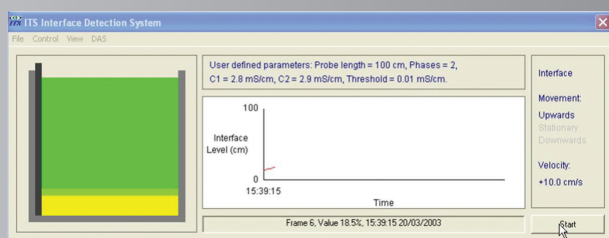


Figure 4: FROTH-ITOMETER software interface

FROTH-ITOMETER: SYSTEM SPECIFICATIONS

ITS tomography systems are comprised of a sensor that interfaces with your process, instrumentation, software, and technical support from our dedicated team of engineers.

SOFTWARE



SENSOR



INSTRUMENTATION



p2+ ERT instrument

TECHNICAL SUPPORT



For a detailed technical specification of this system, or to learn more about how it can enhance your processes, please [email us](#), [enquire online](#), or call +44 (0) 161 832 9297