Product Sheet

INDUSTRIAL TOMOGRAPHY SYSTEMS plc

m3000 Dual Modality Tomography

Electrical Capacitance Tomography:

Parameter	Permittivity
Process Environment	Dry (air/oil)
Typical Processes	Powder flow; fluidized beds
Sensor	External
Reference	Dual (max; min)
Also sensitive to	Moisture

Electrical Resistance Tomography

Parameter:	Conductivity
Process Environment :	Conducting (solutions)
Typical Processes:	Mixing, flow of slurries
Sensor:	Internal
Reference:	Single (mean)
Also sensitive to:	Temperature

m3000

The m3000 instrument is the only commercial tomography system that provides dual capacitance and resistance modality. This allows users to visualize multi-component systems such as air / oil / water in real time. Using its dual modality function, the m3000 can monitor processes which move from conducting to non-conducting in the continuous medium.

In contrast to many systems-based measurement techniques, tomography sensors are able to rapidly sense throughout a volume. Thus providing a dynamic picture of what is going on inside a pipe or vessel, e.g. whether a system is homogeneous.

Product Characteristics

m3000c (ECT)

- Max 24 electrodes arranged in 1,2,3 planes

m3000 dual (ECT & ERT)

- Max 24 electrodes arranged in 1,2,3 planes
- Max 32 electrodes arranged in 1,2,4 planes

Sensor Geometry:

- Circular

Applications

- CFD Validation
- Extrusion
- Filtration
- Fluidised Beds
- Multiphase flow characterisation
- Packed Beds
- Pneumatic Conveying

Industries:

- Biotech
- Chemicals
- Environmental
- FMCG
- Mining
- Nuclear
- Petrochemicals
- Pharmaceuticals
- Pulp & Paper
- Others...

Benefits to users are:

- Measurement of multiphase flow
- Increased process understanding
- More effective process development
- Improved and more consistent product quality

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