

P2+ ERT

Overview



Electrical Resistance Tomography

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

p2+

The p2+ launched in November 2009 is now replacing ITS's first instrument, the p2000. The new ERT unit, even more robust than its predecessor, offers new and improved capabilities for research and industrial processes. The instrument operates by taking data from an array of 16 electrodes in contact with the process media. These are either mounted on a baffle / dip-pipe or around the circumference of the pipe or vessel. These data are processed to provide a conductivity map of the sensing zone.

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

- Single modality (ERT)
- The instrument can be provided in 2 sizes - compact (1 or 2 planes) and full (expandable up to 8 planes).
- Units can be supplied as rack mounted to be fitted in cabinets and enclosures or as free standing units for laboratory use.
- Intrinsically safe module certified to EEx ia II C T6, available to operate linear and circular tomography systems in a hazardous environment.

Sensor Geometry:

- Linear
- Circular
- Channel
- Dual-Probe

Additional sensor geometries can easily be developed by our systems engineers

Applications:

- Batch mixing
- CFD Validation
- Crystallisation
- Filtration
- Fluidised Beds
- Hydrocyclones
- Hydrogenation
- Inline Mixing
- Level Detection
- Multiphase Flow
- Packed beds
- Polymerisation
- Scale Up

Industries:

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

Benefits to users are:

- Increased process understanding
- More effective process development
- Improved and more consistent product quality

