DENSITY MEASUREMENT

Reliable Density Measurement. Even in the Toughest Process Conditions.

THE MEASUREMENT SOLUTION

Ronan's non-contact radiometric systems continuously measure density, specific gravity and percent solids in liquids and slurries—even when abrasion, corrosion, high temperatures, pressure or changing process conditions make conventional measurement difficult.

HOW IT WORKS

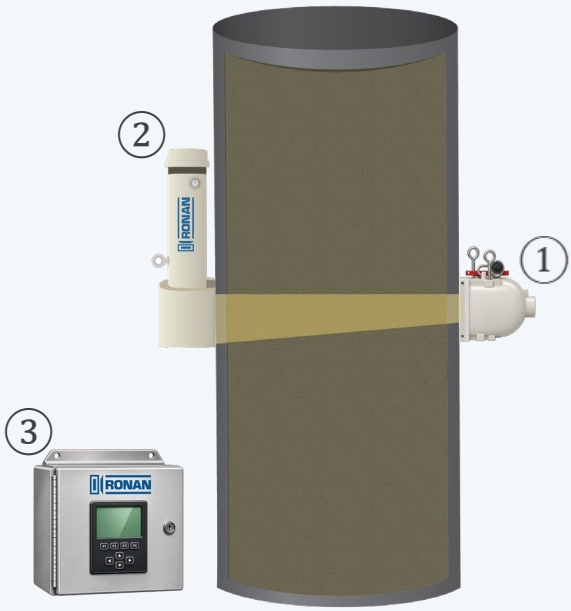
Ronan's density measurement system uses three coordinated components to measure process density through a pipe or vessel wall without direct contact.

1. Source Holder
Directs a controlled beam of gamma energy through the process material across a defined measurement path.

2. Detector
Measures changes in radiation intensity as variations in material density affect the energy reaching the detector.

3. Microprocessor / Transmitter
Converts the detector signal into continuous density, specific gravity or percent-solids readings for process control.

Density Measurement



KEY BENEFITS

Reliable in Harsh Conditions
External components avoid direct exposure to abrasive, corrosive and high-temperature process materials.

Reduced Maintenance
No wetted density probes, intrusive components or bypass lines requiring routine maintenance.

Continuous Process Monitoring
Real-time density and solids measurements support more consistent process control.

Flexible Measurement Outputs
Provides density, specific gravity, percent solids or other selected engineering units.

DENSITY MEASUREMENT

BUILT AROUND YOUR PROCESS

Configured around pipe or vessel geometry, wall thickness, material characteristics, density range and operating conditions.

ELECTRONICS FEATURES & CAPABILITIES

- Stable density readings through X96 microprocessor signal processing
- Simplified setup with push-button calibration
- Improved process monitoring with empty-pipe detection
- Flexible measurement in density, specific gravity or percent solids
- Configurable outputs for process monitoring and control

INDUSTRIES & APPLICATIONS

INDUSTRIES

- Mining and Aggregates
- Dredging
- Pulp and Paper
- Chemical Processing
- Food and Beverage Processing
- Refining, Oil and Gas

APPLICATIONS

- Slurry density and percent-solids monitoring
- Mining and mineral processing lines
- Dredging and slurry transport
- Chemical process liquids
- Pulp, liquor and paper-processing streams
- Abrasive and corrosive fluid applications

ENGINEERED FOR YOUR PROCESS

Accurate density measurement requires understanding the process. Ronan engineers evaluate pipe dimensions, wall thickness, density range, material properties, buildup and operating conditions to configure a system for your specific needs.

From initial application review through commissioning, startup and ongoing support, Ronan works with your team to deliver dependable density measurement.

EXPLORE THE COMPLETE SOLUTION

◄ Scan for applications, technical resources and to contact a Ronan engineer.

ronan.com/measurement-systems/density-measurement/