

# WEIGHT RADIOMETRIC MEASUREMENT

Ronan Measurements Division supplies the process control industry with leading-edge Radiometric Measurement Systems that provide non-contact measurement solutions for the harshest environments.

## RONAN'S WEIGHT RADIOMETRIC MEASUREMENT SYSTEM

### Application

In harsh industrial settings such as mining, power stations and cement plants, where process material to be weighed is extremely heavy, dirty, and causes high vibration on conveyors, plants must employ a weight system that is rugged and reliable and can be installed in limited space, all while keeping overall cost of ownership down.

### Problem

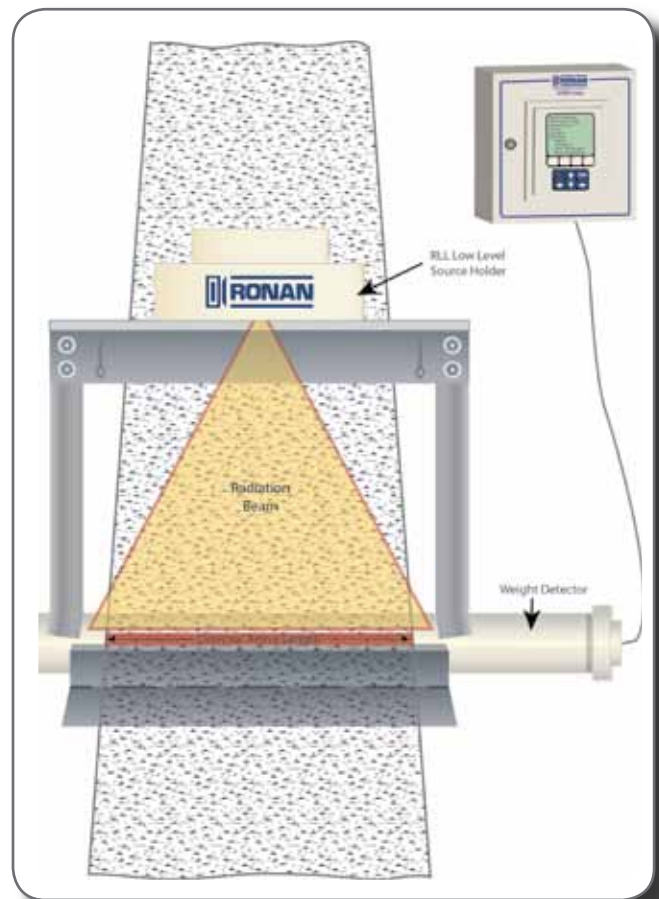
Weight scales that come into direct contact with conveyors can require frequent maintenance because they are exposed to continual excessive weight, vibration, and dust build-up from the process material. In addition, installation requires the conveyor to be shut down and, in some cases, disassembled. Lost production time for unscheduled maintenance, expensive repairs including the need for specialist recalibration, and high cost of installation add up to high overall cost of ownership.

### Solution

Radiometric Measurement is a highly reliable and low maintenance technique for weighing bulk materials on virtually any conveying method including: belt, screw, drag chain, and metal plate conveyors. The measurement system does not come into direct contact with the process material so it is not affected by belt misalignment, changes in belt tension, high vibration, or hostile conditions such as dust and dirt build-up, abrasive, corrosive, or toxic materials, or extreme temperature. The system is mounted externally around the conveyor, without the need for heavy supports and braces, and can be customized to fit into small areas, or even around other equipment near the conveyor which cannot be moved.

### Summary

The Ronan Weight Radiometric Measurement System is reliable and accurate, even in the harshest environments. Overall cost of ownership is low because installation and maintenance costs are minimized. Productivity and throughput are increased by reducing downtime for installation and repairs. The system can be customized to provide accurate measurement for virtually any application in any area.



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### **RLL Low-Level Source**

Ronan is the only manufacturer to offer the revolutionary Radiation Low-Level (RLL) Source Holder. The RLL uses up to 100 times less gamma energy than comparable gauges, and is the only source holder recognized by the NRC to be so safe that it does not require the stringent documentation, training or handling procedures of other systems. The gauge can be relocated by your personnel, without a licensed person present. The System, using the RLL Source, can accurately measure pipes up to 16" with no reduction in accuracy. (Licensed Sources are available for applications with larger pipes.)



#### **Other features of the RLL:**

- Source lasts as long as standard installation
- Generally licensed device, reduces paperwork and cost
- Does not require wipe testing, saving you time and money
- Does not require on-off shutter checks, or radiation surveys
- No RSO, radiation training or factory assistance is required to install or move devices

### **Scintillation Detector**

Ronan pioneered the use of solid crystal scintillation detectors more than 20 years ago, and now has an installed base in the thousands across a wide variety of applications worldwide. Ronan employs two types of crystals, Scintillating Plastic Crystals for standard applications and Sodium Iodide scintillating crystals for ultra low-level fields. Scintillation Detectors provide efficient detection, enabling the use of lower-level sources. Ion Chamber detectors are also available for extremely high vibration applications.



### **X96S Radiometric Transmitter**

The X96S Radiometric Transmitter features the fastest processor in the industry. The modular design allows for low cost expansion of outputs and measurement variables. Calibration and configuration is in a simplified format and can be achieved locally through push buttons, by using the liquid crystal graphic display, or remotely through industry standard protocols. The X96S is compatible with all models of Ronan detectors.

#### **Other features of the X96S:**

- 4 – 20 outputs with HART
  - Mass Flow
  - Percent Solids
  - Volumetric Flow
- Local and/or remote eight line display
- Flexible, modular design permits customization
- State of the art dynamic filtering
- Isolated digital and analog I/O, software settable
- NEMA-4, 4X enclosure or rack-mount chassis

