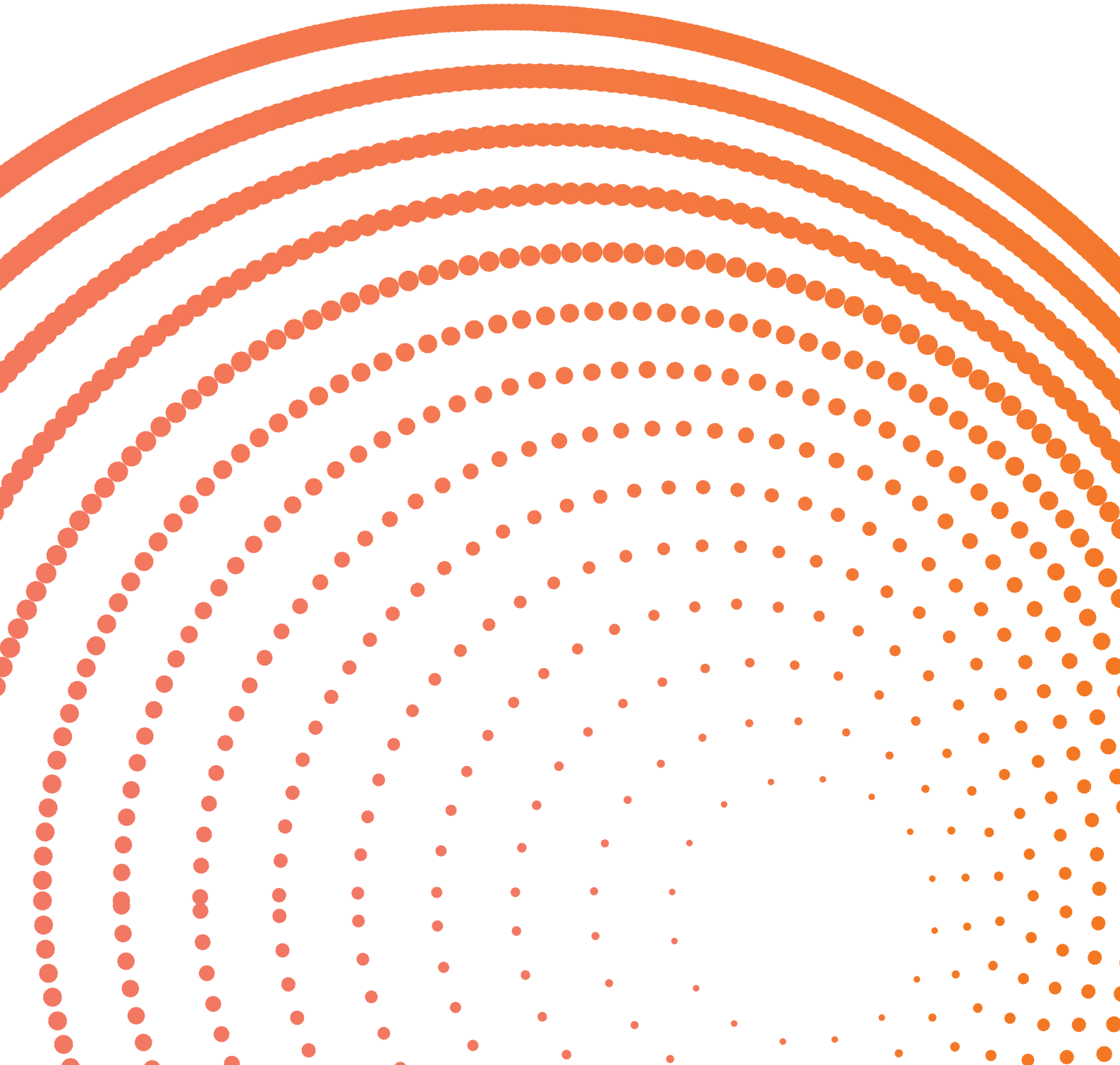
Ball MillSlicer

Ball Mill Fill Level Measurement

Instrumentation

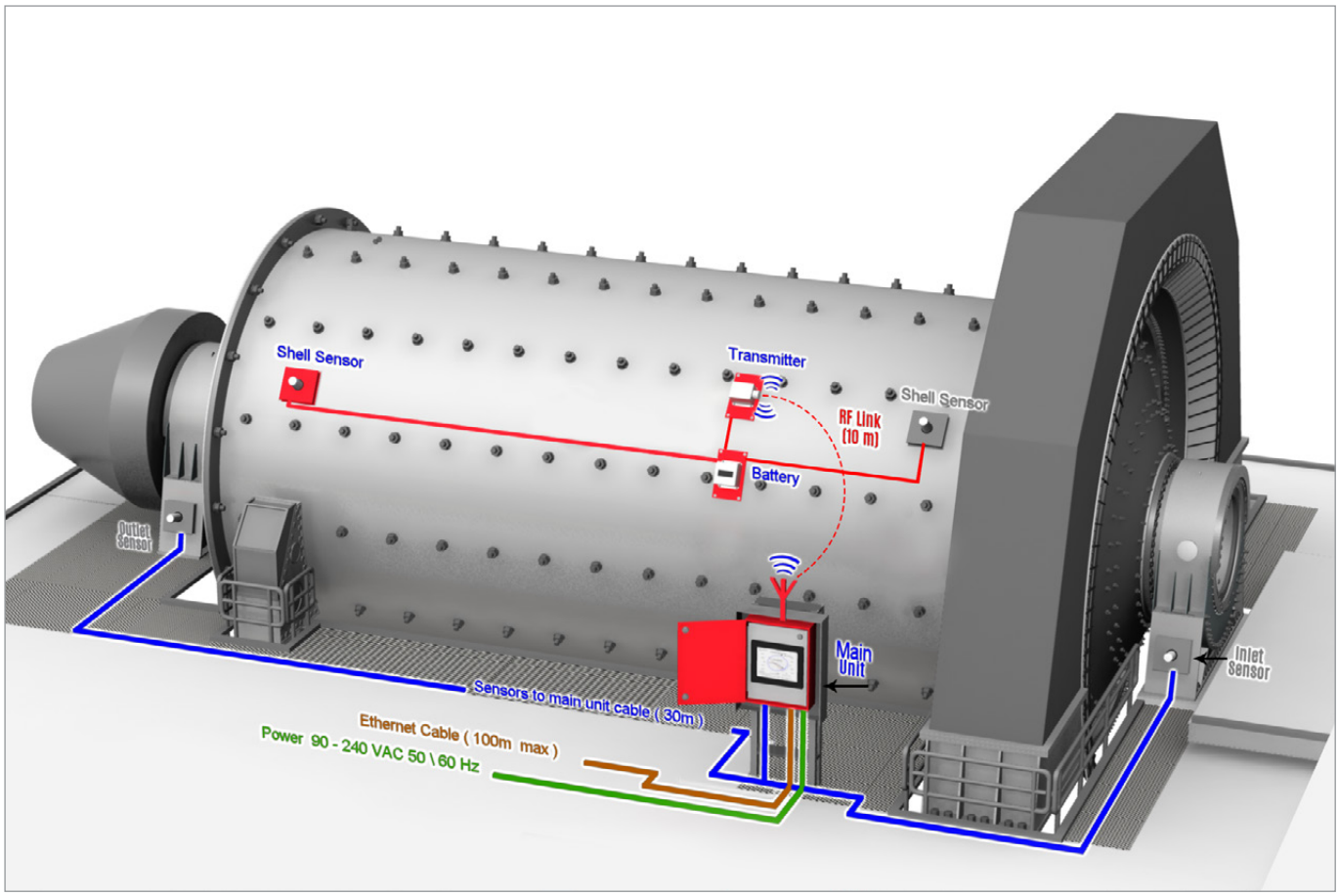
Milling



Ball MillSlicer Overview

The Ball MillSlicer utilises the latest in digital signal processing techniques available to provide an accurate of the change in the mill fill level (vectors). The system is made up of at least 1 shell sensor with wireless data transmission to main unit, and 2 wired inlet/outlet sensors. The signals may be used in an automated control loop or for improving manual control.

The vibration sensors are magnetically mounted to the metal bearing structure and to the mill shell. One vibration sensor cable is 10 metres (~30 ft.) long and the other is 30 metres (~100 ft.) long. All cables are shielded. The main unit requires AC power (100-220 VAC, 50/60 Hz) and has a Modbus TCP output that corresponds to each of the fill vectors for each of the sensors (shell, inlet & outlet).



Features

- High frequency indication of the mill fill level vectors that can be used to improve mill operation
- Zero crosstalk from adjacent (nearby) mills
- All digital system, no component drift, not affected by temperature, dust or dirt unlike typical microphone systems. Modbus TCP output
- 3x resolution when compared to microphone-based systems
- Fast and easy installation that typically can be performed in less than two hours
- A quick calibration procedure that can be performed in less than 5 minutes per sensor when the mill is operating under normal conditions. i.e. The mill is filled to a level that is used in normal 'day to day' production
- Signal sensitivity changes can be made very quickly without re-calibrating the unit.

Benefits

- **Optimised milling throughput**
  Controlling the mill fill level rather than bearing pressure increases milling capacity
- **Increase mill efficiency**
  Improve mill power utilisation by grinding optimally
- **Reduce opex**
  Reduce ball consumption/ton milled. Reduce liner wear by operating the mill at an optimal fill level.

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