

Cement Mixer Fill Monitoring

Customer:
UK Cement Company

Complete

KEY VALUE PROPOSITION

An IWPT pressure transmitters installed in the hydraulic lines of the rotating drum on cement mixers sent the hydraulic pressure measured to an IWR-PORT and HMI in the cement fill control cabin. Used to control the amount of cement loaded

MARKET ASSESSMENT

Addressed market

- Smart Factory – Cement manufacture and distribution

Customer segment

- Aggregates
- Quarrying and Cement

Value proposition

- Prevents overloading of the hydraulic system
- Easy and quick to deploy a wireless system
- Delivers log of cement loaded, protects hydraulic system and prolongs the life of the hydraulic components

TECHNICAL ASSESSMENT

Technical requirements for use case

- Wireless IWPT sensors send data to Local Receiver & HMI
- Accuracy of <0.25% FSD and battery life > 5 years

Existing technology building blocks

- IWPT Wireless Pressure Sensors
- IWR-PORT outputs Modbus RTU registers to a local HMI reading load as a 0-100% figure.

Technical development needed

- None required

Internal and external capabilities

- Internal – Existing range of IWPT wireless sensors
- External – Reading of IWR-PORT Modbus registers using an HMI loaded with standard Modbus drivers

KEY CHALLENGES

1. This was a straightforward application for existing IWPT transmitters and the IWR-PORT Receiver

KEY OPPORTUNITIES

1. A standard application which demonstrates and is typical of the many potential use cases for the IWT system

NEXT STEPS

1. Roll out the system to other fleets of Cement Mixers
2. Approach System Integrators and offer the system as a standard off the shelf solution for cement manufacturers and distributors
3. Consider other hydraulic pressure monitoring applications



Key highlights of the project

- Used standard IWPT Wireless Pressure sensors
- IWR-PORT outputs data to a standard industry HMI using Modbus RTU register read commands