



Signal Analysis Lab

Safeguard against the unseen

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"Signal Analysis Lab's dust monitoring system, Arpuro, is a game-changer for our HSE monitoring. The system is easy to install, user-friendly, and requires minimal maintenance. It guides us to make the right decisions regarding dust reduction and detecting airborne dust leakages."

Ketil Nystrøm · HSE Manager

Elkem Tana · One of the world's largest quartzite mines



THE ISSUES WITH AIRBORNE DUST

Airborne dust causes a variety of problems, yet it is difficult to monitor and harder to resolve. Associated health problems with airborne dust include COPD and silicosis, and lapses in HSE commitments entail severe legal consequences. An inability to monitor leads to an inability to enforce.

THE ARPURO SYSTEM

Combining both a sensor and a platform, the Arpuro system allows for accurate and continuous monitoring of dust levels and real-time visualisation of dust levels on the platform.

READY

Arpuro is self-cleaning and transfers data wirelessly. All it needs is a power source and it immediately starts working. No installation required.

ROBUST

Arpuro is robust enough that it can withstand 6 months of continuous operation in a demanding industrial environment even without maintenance.

RELIABLE

Arpuro can monitor dust pollution even in the harshest of industrial environments. Third-party certification confirms its accuracy, even after prolonged periods without maintenance.

Application

Indoor airborne dust monitoring

Measurements

PM_{2.5}, Respirable fraction, PM₁₀, humidity and temperature

PM range

from 0 and up to 1 000 mg/m³
Depending on dust properties

Operation humidity

Non-condensing

PM accuracy in field

±15 %*

Measurements frequency

15 sec

Data transfer

Cellular (LTE-M)

VERIFIED

The Arpuro system is verified against**, but not limited to:



Microsilica

Amorphous silica

Hazard levels **Medium**



Quartz dust

Crystalline silica

Hazard levels **High**



Charcoal

Carbon dust

Hazard levels **High**



Carbon

Various carbon products

Hazard levels **Medium**



Ferro-silicon

Crushed refined product

Hazard levels **Medium**



Cement

For concrete-production

Hazard levels **High**

* During field testing by a third party after six months of continued operations near a tapping platform. The accuracy is ±10% in lab testing.

**Hazard levels are for illustration only.