

CASE STUDY

# Detect and localize leaks in cement manufacturing



Air leaks detected in a cement plant with the ii900 Sonic Industrial Imager.

Cement manufacturing process involves several phases where the process temperature needs to reach up to 2000 °C. These high temperatures result in equipment deformation, making it very likely for leaks to appear in various locations. These leaks decrease process temperature, which in turn increase coal or gas consumption to compensate for the temperature drop.

**Location**

Maintenance of cement plants

**User/department**

- Maintenance Managers
- Energy Managers

**Application**

- Vacuum in calcination
- Dust removal filters
- Flange connections
- Pneumatic actuators
- Packaging process

**Why use the Fluke ii900 Sonic Industrial Imager?**

- Ease-of-use
- Quick detection from the distance
- Reliable operation in noisy environment
- Increased efficiency
- Report generation capabilities
- Time saving benefits

**Today's practice**

During the calcination phase, vacuum is extremely critical. Avoiding leaks in that stage is one of the most important focus areas. Identifying those leaks might be a challenging task due to the big distances and harsh process conditions such as high temperatures and dusty environments. Compressed air is widely used in cement industry from instrument air in the beginning of production until the final packaging phase. Leaks are mostly found in dust removal filters, fans, connection points and valves used in the process.

**Our solution**

Fluke ii900 Sonic Industrial Imager enables maintenance teams to increase efficiency, safety and quality while reducing energy costs. The user-friendly interface helps the team to start detecting leaks without any further training. Once a leak is found, it can be documented using acoustic and visual images, making leak identification and reporting more intuitive than ever for the maintenance teams. The imager's Leak Quantification feature also enables the team to better estimate losses and prioritize repair based on ROI.

We asked a maintenance leader from a cement factory:  
**"Why did you choose the Fluke ii900?"**

*"We were already aware of the leaks in our process but because of the high temperature and distance, we were not able to locate them. The ii900 helped us to easily pinpoint the leaks and visually see them."*

*"Reporting is extremely important for us. Documenting the exact leak locations and the ability to calculate ROI easily helps us get approval for the required investments from our top management."*

*"We already found over 100 leaks in our production facilities through our inspections with the ii900. We can easily improve energy efficiency by just fixing those leaks."*

