Cement and Building Materials Review

No. 102 December 2025

Contents

Articles

The magazine editorial staff welcome the contribution of experts to enrich the contents of the magazine.

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AUCBM's **Quarterly Cement and Building Materials Review (CBMR)**

EDITORIAL SCHEDULE FOR 2026

Issue: March 2026 (# 103)

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Follow-up order from Saman Cement, Iraq

Saman Cement has once again placed its trust in the innovative grinding technology of Gebr. Pfeiffer and awarded the company another contract. The follow-up order comprises the delivery of a state-of-the-art MVR 5000 R-4 for the second production line of the Saman cement plant.

The mill will be used for the efficient grinding of cement raw material and represents another milestone in the long-standing partnership between Saman Cement and Gebr. Pfeiffer. For almost a decade, a Pfeiffer MPS 5000 B vertical roller mill has been reliably producing cement raw material for clinker production on the cement plant's first line. This follow-up order emphasises the customer's high level of satisfaction.

Saman Cement is a modern, forward-looking cement company that aims to establish itself as a leading player in the industry. That is why the company has opted for advanced Pfeiffer technology for its second production line as well. The Saman cement plant is located in the Al Mothanna province of Iraq, 38 km west of the city of Samawa, and represents an investment by Saman Cement Co.

The renowned Sinoma International Engineering Co. Ltd. from China was selected as the general contractor for this project.

The new Pfeiffer raw mill is equipped with a latest-generation SLS 4000 VR classifier. It will grind 450 t/h of cement raw material to a fineness of 12 % R to 0.090 mm. The cement raw material is dried from a feed moisture content of approx. 6.7 % to a residual moisture of < 1 %. The mill drive has a power of 4,000 kW.

Commissioning of the state-of-the-art MVR vertical roller mill is scheduled for the first half of 2027 and will undoubtedly mark another important step in the success story of Saman Cement.

Holcim Takes over Xella

Holcim AG of Zug, Switzerland, has signed a binding agreement to take over Xella GmbH, Duisburg, Germany. Xella, formed in 2022, unites the brands Ytong, Silka, Hebel and Multipor (amongst others). The company specializes in the production of building materials, especially aerated concrete blocks and manufactured limestone blocks. The Xella group employs 4.000 people and expects to reach a turnover of 1.000 mio Euro in 2025. According to Holcim, the transaction value was 1.850 mio Euro (which is 8,9 times the expected EBITDA for 2026). The transaction is still subject to regulatory approvals and is expected to be completed in the second half of 2026.

Ceramica Sant'Agostino looks to the future and goes for SACMI Continua+

A long-standing symbol of 'Made in Italy' ceramic excellence, the company has now completed an investment in a large-format line. The new PCR 2120 is up and running and, with Optima+ and MDX, cutting-edge automation and control solutions have been added to the high-power dryer and the FMD Maestro digital kiln

A symbol of Italian excellence worldwide thanks to first-rate design and high-tech, eye-catching collections, Ceramica Sant'Agostino recently completed the renewal of its large slab line. This decidedly future-focused investment employs SACMI Continua+ technology, the global benchmark for quality, productivity and versatility.

At the heart of the new line - which has been in operation successfully for several weeks now - lies the PCR 2120: this produces the main formats in the portfolio, such as 120x120 cm slabs and relative sub-sizes, the cornerstones of the Ferrara-based company's new collections, which are sold all over the world.

Founded in 1964 by Aristide Manuzzi, Ceramica Sant'Agostino is renowned for outstanding technical innovation and aesthetics, providing high-quality ceramics that meet the needs of contemporary architecture. Hence their decision to go for SACMI Continua+ and take technological quality to the next level while instilling a new manufacturing concept that spans from automation to process control.

Beyond the Continua+, in fact, the project included the supply of all the handling systems, with the new Optima+ and MDX vision systems giving the company full control over the technical, dimensional and aesthetic characteristics of the slabs leaving the compactor. What's more, the existing SACMI dryer has been upgraded to match the higher productivity of Continua+, and the entire line will feed the FMD Maestro, SACMI's flagship digital kiln, in operation at Sant'Agostino since the end of 2023.

"With this investment," observes Filippo Manuzzi, CEO of Ceramiche Sant'Agostino, "we aim to achieve superb quality and higher productivity while implementing new process and vision controls. These systems will provide long-term quality assurance, ensuring our processes are always at peak efficiency and streamlining the operators' tasks."

Completing the plant are BMR's finishing (cutting, grinding, lapping, surface treatment) solutions, which have been used to excellent effect for years now.

"For us, this is a project that looks to the future," points out CEO Filippo Manuzzi. "It's the continuation of a production model that has long been based on quality, sustainability and excellence: the high-added-value cornerstones of Italian ceramics worldwide."

Contingency Planning for Process Blowers

Matt Piedmonte
Vice President and General Manager of Aerzen Rental Solutions

Abstract

Reliable operation of process blowers is essential for maintaining continuous production in cement plants, gypsum plants, and similar industrial facilities. These low-pressure, high-volume machines support critical functions such as pneumatic conveying, silo fluidization, and combustion air supply, typically operating at pressures between 400 and 3500 mbar(g) with airflows from 10 to 300 m³/min. Unplanned blower outages can cause major production disruptions and financial losses. This paper presents a proactive approach to contingency planning, helping plants mitigate downtime risks by assessing process requirements, evaluating response strategies, and preparing detailed implementation plans. While routine preventative maintenance—such as vibration monitoring, oil analysis, and spare parts stocking—remains important, this paper focuses on planning for significant blower failures that can still occur despite good maintenance practices.

Role of Process Blowers in Cement and Gypsum Plants

In cement and gypsum manufacturing, process blowers perform critical functions such as transporting material, cooling, fluidization, and supporting combustion processes. A failure in any of these process blowers can severely impact production targets, customer delivery schedules, and overall plant profitability.

Step 1: Establishing Process Requirements

For effective contingency planning, it is essential to define the specific air flow and pressure requirements for each process. This assessment may involve consultation with design engineers or third-party experts to validate original design criteria. Plant operators should also evaluate the possibility of temporarily operating at reduced flow rates, considering the operational risks and process implications. For example, reduced airflow might slow product transfer without halting production entirely. It is also important here to not rely on name plate data from permanently installed equipment as the original design points of the processes may differ considerably from the actual operating points currently in place. For example, if the permanently installed process blower has a name plate rating of 45 PSIG but the plant never exceeds an operating pressure of 17 PSIG, the reduced pressure requirement greatly expands the number of rental process blowers that can help solve the problem and minimizes the footprint / cost of the solution. Also, permanently installed equipment is typically designed for peak plant production and many plants may not need to operate at that peak production point, thus possibly allowing for reduced air flow rates from the process blowers. Bottom line is identifying acceptable operational flexibilities can broaden the range of viable contingency solutions while still meeting the needs of the plant.

Step 2: Evaluating Available Response Options

Several options are available to address process blower failures:

- **Have Dedicated "Big Ticket" Spares:** A permanently installed spare that is proactively procured and properly maintained within the facility and can be installed on an emergency basis. These spares could include a blower stage, motor, starter, or VFD.
- **OEM Exchange Program:** Engaging the original equipment manufacturer (OEM) for expedited replacement of any of the above mentioned major components, though availability for these major process blower components is often limited and not guaranteed around the clock if an emergency plant situation exists.
- **Rental Equipment:** Many plants choose not to invest in these "big ticket" spares and instead rely on rental equipment. The most accessible rental options to replace a failed process blower typically include diesel-driven oil-flooded or oil-free compressors. However, these units are inefficient, expensive, and require frequent maintenance shutdowns. A preferable alternative is renting an electrically driven process blower that closely matches the failed blower's performance and can be powered by the plant's existing electrical infrastructure. Availability of rental process blowers varies by region, making advance planning critical to secure the best solution.

Step 3: Developing an Implementation Plan

A robust implementation plan should address the following key areas:

- **Rigging and Handling:** Pre-arrange access to cranes, forklifts, or aerial lifts to facilitate quick installation.
- **Electrical Connections:** Identify available power sources or make necessary modifications to the motor control center (MCC) to accommodate rental equipment. Standby electricians should be available to minimize commissioning delays.
- **Mechanical Interfaces:** Plan for mechanical connections, including installation points and piping interfaces. Proactive modifications can significantly reduce installation time during emergencies.
- **Rental Partner Engagement:** Establish relationships with rental providers who understand your plant's operational needs and can offer reliable, rapid-response solutions.
- **Fuel Supply (if applicable):** For diesel-driven solutions, secure a dependable fuel delivery partner and implement spill prevention and response protocols.

Case Study 1: Gypsum Plant in Saudi Arabia

A gypsum plant experiencing frequent process blower stage mechanical failures developed a comprehensive contingency plan by:

- **Assessing Process Needs:** The permanently installed blower delivered 71 m³/min at 1000 mbar(g) pressure. Operators identified limited flexibility in reducing flow rates and noted a lack of pressure monitoring in the system so there was uncertainty as to whether any flexibility existed there.
- **Evaluating Options:** Faced with conflicting opinions on the root cause of failures, the plant avoided investing in a redundant blower stage. Instead, they secured a rental process blower capable of fully replacing the flow of the permanently installed process blower and providing up to 2000 mbar(g) discharge pressure (vs 1000 mbar(g) on the permanently installed process blower) with data logging features to monitor system conditions.

Figure 1.

Rental Process Blower at a Gypsum Plant in Saudi Arabia

- **Implementing the Plan:** Preparations included identifying installation points, securing electrical connections, and setting up mechanical tie-ins for rapid deployment.
- **Outcome:** When another failure on the plant process blower occurred, the plant was able to resume production quickly by deploying the pre-identified rental process blower on an emergency basis. Operating data from the rental unit confirmed that system pressures regularly exceeded the maximum allowable operating pressure of the permanently installed blower, likely contributing to the recurring stage failures. This insight enabled the plant to specify and procure a properly rated replacement blower while avoiding additional costly production interruptions. Without the contingency plan, the facility would have faced a prolonged shutdown or been forced to rely on diesel-driven compressors—an option five to six times more expensive than renting , with higher maintenance needs and performance challenges due to moisture carryover and unstable air quality. By partnering with low-pressure air specialists and planning ahead, the plant avoided costly interruptions and positioned itself for long-term operational reliability.

Case Study 2: Cement Plant in Texas, USA

A cement plant faced prolonged disruptions following a process blower failure in a silo homogenization process due to a lack of contingency planning:

- **Initial Response:** The plant resorted to renting a diesel-driven oil-flooded compressor without an air dryer, leading to high fuel costs, maintenance interruptions, and moisture carryover issues in the process.
- **Alternative Solution:** Upon discovering the availability of rental process blowers, the plant transitioned to a more suitable rental option, achieving operational stability and significant cost savings.
- **Outcome:** By switching from diesel compressors to an electric driven rental process blower, the plant saved approximately $700,000 in rental and fuel expenditures and avoided further operational challenges during the replacement period.

Figure 2.

Rental Process Blower Replacing a Diesel Compressor at a Cement Plant in Texas

Case Study 3: New repackaging plant in Canada

About 6 months before a greenfield product packaging plant start-up in Canada was committed to becoming operational, they faced a daunting challenge from their customer to accelerate the start-up date by 2 months. “Not possible” was not an answer the customer would accept.

- **Assessing Process Needs:** A thorough analysis of how to accelerate the start-up was completed and 2 items were identified as controlling path. Municipal power for the entire facility would not yet be available and the process blowers that move the product from railcars to the packaging center could not be further expedited. The specific process needs of each were easily known as this plant was a duplicate of others that have been recently commissioned across North America.
- **Evaluating Options:** The power side was relatively easy as temporary power solutions providers are readily available in Canada. The company learned of the existence of rental process blowers through their permanent installed blower supplier. The process blower needs were presented and a plan was developed by the rental provider to mobilize four rental process blowers to the project site for installation and commissioning using generator power.
- **Implementing the Plan:** A detailed plant layout was developed to determine where to place all of this rental equipment given that available real estate was tight.
- **Outcome:** The temporary system was installed and the entire plant commissioned to allow repackaging production to begin 2 months earlier than previously committed. The successful acceleration of the go-live date strengthened the relationship between the plant and their customer and the commissioning team is now armed with new experiences in accelerating commissioning that they can carry forward to future commissioning projects.

Figure 3. Rental Process Blowers at a Repackaging Plant Startup in Canada

Conclusion

Proactive contingency planning for process blower outages is a strategic investment of effort that minimizes downtime, reduces emergency costs, and safeguards production continuity. By understanding process requirements, assessing all response options, and developing a detailed implementation plan, industrial plants can significantly improve their resilience against unforeseen process blower failures or unavailability. Facilities that take these preparatory steps are better positioned to maintain operational stability and protect their bottom line during unexpected process blower outages.

CV of Author: Matt Piedmonte serves as Vice President and General Manager of Aerzen Rental Solutions in the Americas, as well as Global Business Development Manager for Aerzen Rental Solutions in the Middle East. He is currently leading the greenfield startup of Aerzen Rental Solutions in Dammam, Saudi Arabia, supporting industrial plants across the GCC region in achieving continuous, reliable, and efficient operations through the implementation of engineered rental process blower solutions.

Empowering Local Workforces

Eng. Ahmed Serry- Sr. Training Manager- ASEC

Abstract

The modern cement manufacturing industry faces a critical challenge: the widening "Human Skills Gap." While equipment failure is often cited as a primary operational risk, this paper argues that the reliance on external expertise to manage increasingly complex automation and chemistry is the greater threat to sustainability. This paper outlines a comprehensive methodology for shifting operational models from dependence on foreign specialists to "command" by local personnel. Drawing on five decades of data and operations across 24 countries, we present a dual-strategy training framework—comprising Short Technical Courses and Job Role Development Programs—designed to achieve operational self-sufficiency, agility, and true local control.

1. Introduction: The Risk of the Human Skills Gap

In the contemporary industrial landscape, the greatest risk to operational continuity is no longer strictly mechanical or equipment-based failure. Rather, it is the human skills gap. The cement industry is currently characterized by advanced automation, complex chemical compositions, and high workforce turnover rates.

Currently, many developing markets manage these complexities by relying heavily on expensive, external expertise. This paper posits that such a model is unsustainable. The inability to cultivate local talent creates fragility in the supply chain and operational hierarchy. To ensure long-term viability, organizations must pivot toward empowering local populations, transforming them from passive operators into active technical leaders.

2. Strategic Objective: From Dependence to Command

The primary objective of the proposed framework is to fundamentally shift local operations. The transition is defined as moving from **"Dependence on Foreign Specialists"** to **"Command by Native Personnel."**

This shift is not merely semantic but operational, targeting three specific outcomes:

1. **Self-sufficiency:** Reducing the need for external consultants for day-to-day operations.
2. **Agility:** The ability of the local workforce to respond instantly to operational variances.
3. **True Operational Control:** Ensuring the asset is managed competently by the asset owners' own teams.

This methodology is backed by ASEC's empirical experience spanning 50 years (1975–2025), covering over 65 plants globally and the training of over 16,000 trainees from 17 countries.

3. Methodology: A Dual-Strategy Approach

To bridge the skills gap, two distinct educational strategies are employed, each targeting different segments of the workforce and different operational needs.

3.1. Strategy A: Short Technical Courses (Competency Gap)

- **Primary Goal:** To fix immediate skill deficits in specific technical areas.
- **Target Audience:** Existing employees requiring updates, troubleshooting skills, or certification renewal.
- **Time Frame:** Short-term (1–2 weeks).
- **Measurable Result:** The trainee can correctly and safely perform a specific task.

3.2. Strategy B: Job Role Development Programs (Job Caliber)

- **Primary Goal:** To build complex roles and prepare personnel for higher-level responsibilities.
- **Target Audience**: Fresh graduates (New Hires), future leaders, or internal candidates for promotion.
- **Time Frame:** Long-term (Months to 1+ years).
- **Measurable Result:** The trainee is certified as "Role Ready," demonstrating mastery across all required competencies.

4. Implementation of Short-Term Technical Interventions

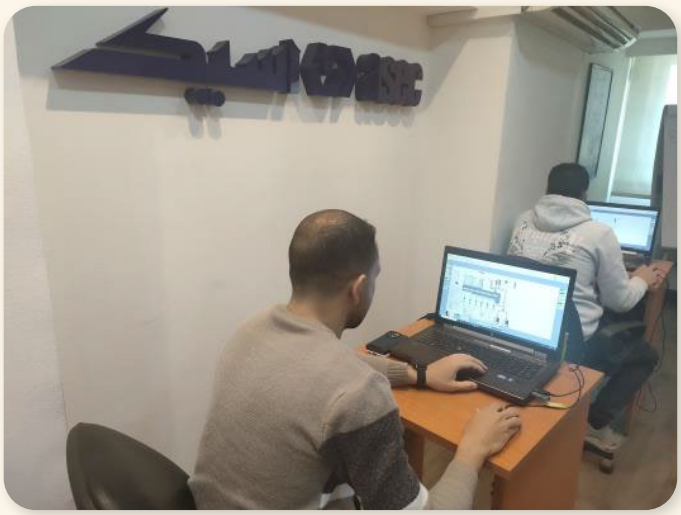
The Short Technical Course strategy is executed through three primary channels:

4.1. Simulator Courses (Risk-Free Environment)

Simulation is critical for bridging the gap between theory and practice without endangering assets. The KHD SIMULEX simulator allows operators to practice emergency procedures and dangerous fault scenarios—such as cyclone blockages or ID fan failures—in a risk-free environment. This prevents damage to the actual plant and production schedule while building operator confidence.

4.2. ASEC Cement Manufacturing Course (ACMC)

Established in 1996, the ACMC is a comprehensive 35-day program. By 2025, the program serves as a regional benchmark, celebrating its 38th round. It brings together cement leaders from across the Middle East and Africa (MEA) to standardize operational knowledge.



4.3. Specialized Technical Courses

These courses prioritize depth over breadth, targeting distinct processes including:

1. **Pyro-processing:** Optimization and refractory management.
2. **Mechanical/Electrical:** Maintenance, hydraulics, and process control/automation.
3. **Quality & Quarry:** X-ray spectrometry, QA, mapping, and raw material assessment.

5. Implementation of Long-Term Job Role Development

The Job Role Development Program (DP) utilizes a phased approach: Skills Building, Knowledge Building and Job Actualization.

This systematic progression allows for accelerated career pathing for local talent. Case studies within the framework demonstrate the efficacy of this timeline:

- **Fresh Graduate to Mill Operator:** Achieved in roughly 10 weeks.
- **Mill Operator to Kiln Operator:** Transition achieved in roughly 12 weeks.

This structured acceleration ensures that fresh graduates can be transformed into competent Central Control Room (CCR) operators, planning engineers, or quality engineers in a predictable timeframe.

6. Conclusion

The transition from reliance on foreign expertise to local empowerment is a strategic necessity for the cement industry. By moving beyond the role of a standard plant operator to becoming a “Builder of Experts,” organizations can mitigate the risks associated with the human skills gap.

The implementation of the dual-strategy framework—balancing immediate technical troubleshooting with long-term role development—ensures that local workforces are not just participants in the industry but are in command of it.

Arabian Yemen Cement Company

Leading Yemen's Cement Industry Toward a Solar Powered Future

The first cement plant in Yemen to operate on solar energy, with a capacity of 13.75 megawatts and a 5.7 megawatt-hour storage system" The Arabian Yemen Cement Company Limited - Hadramout Cement has inaugurated the largest solar power plant in the city of Mukalla, with a capacity of 13.75 megawatts.

This plant is not just a success story; it is a pioneering national model for investing in clean energy and addressing the challenges of rising electricity costs. The company invested approximately $11 million in this project, achieving a near-zero carbon footprint.

What makes this plant stand out?

- **Large capacity:** 13.75 megawatts of clean energy.
- **First-of-its-kind technology:** Use of a smart solar tracking system that monitors the sun's movement to ensure maximum daily production.
- **Dual panels:** Installation of 22,000 bifacial panels that generate power from both sides.
- 5.7 MWH battery storage system.

We expect this pioneering project to inspire the private and public sectors to shift toward renewable energy in Yemen.

Eng.Waheeb Al-Azab

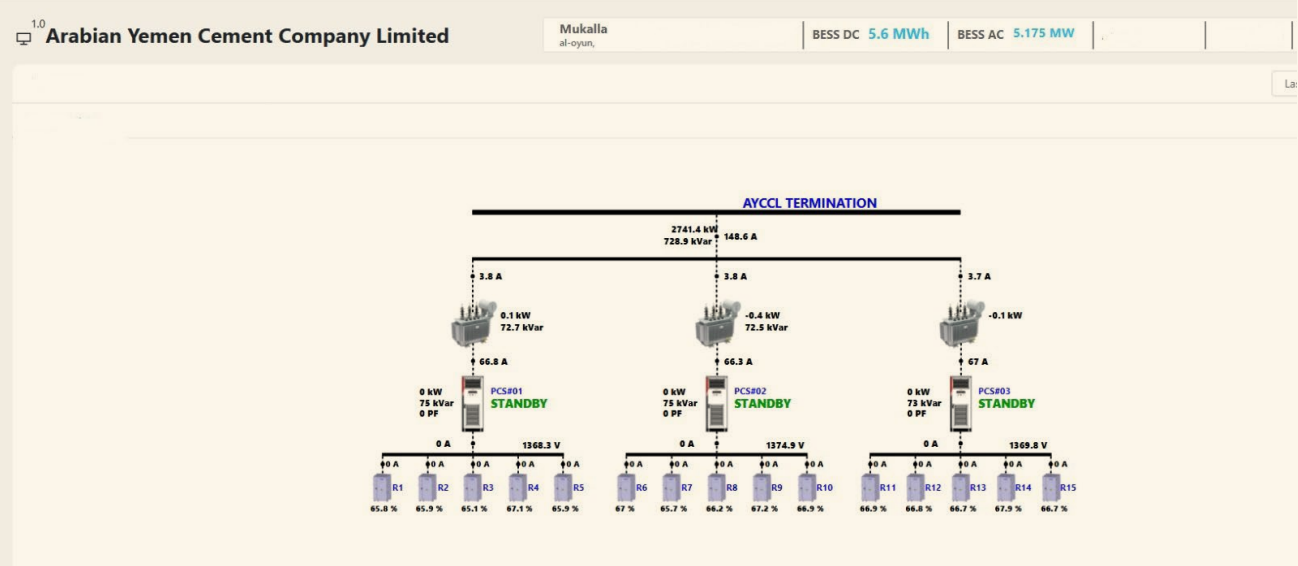
Chief Executive Officer (CEO)

Arabian Yemen Cement Company Limited

Story of Success.

The Arabian Yemeni Cement Company (Hadramout Cement) has long strives to meet the needs of the local and regional markets amid rock and sweat the substance of construction.

Sometimes, you do not need buzzer to realize that something must be change; It was not a sound that alerted. It was number rising consumption of fossil fuels as a single source. More importantly, the company is actively striving for zero-scope emissions from its energy consumption. 34,027,633 KWh clean & green energy production and saving of 21,439 tons CO_2 per annum leading a positive environmental change in the surrounding region.

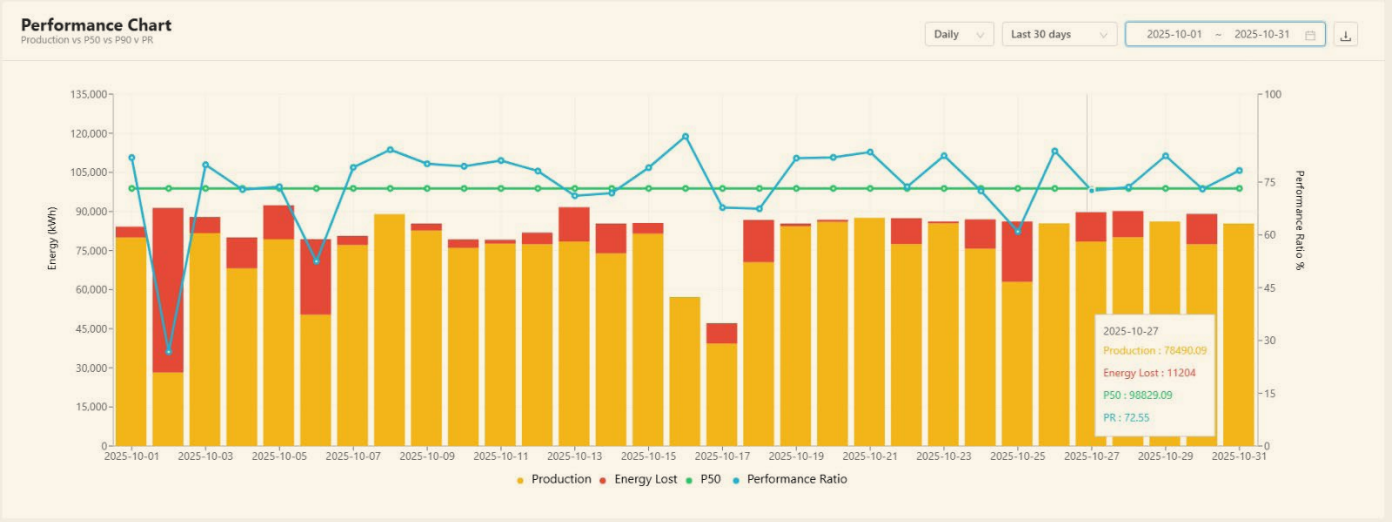


The decision was not a reaction but a conscious response to an inevitable transformation AYCC turned to alternative energy sources available in Yemen. Among the option of renewable energy solar power chosen. The idea was not born from any other source but within the factory itself a group of visionary engineers drawn the plan and a specialized partner (REON from Pakistan) led execution.

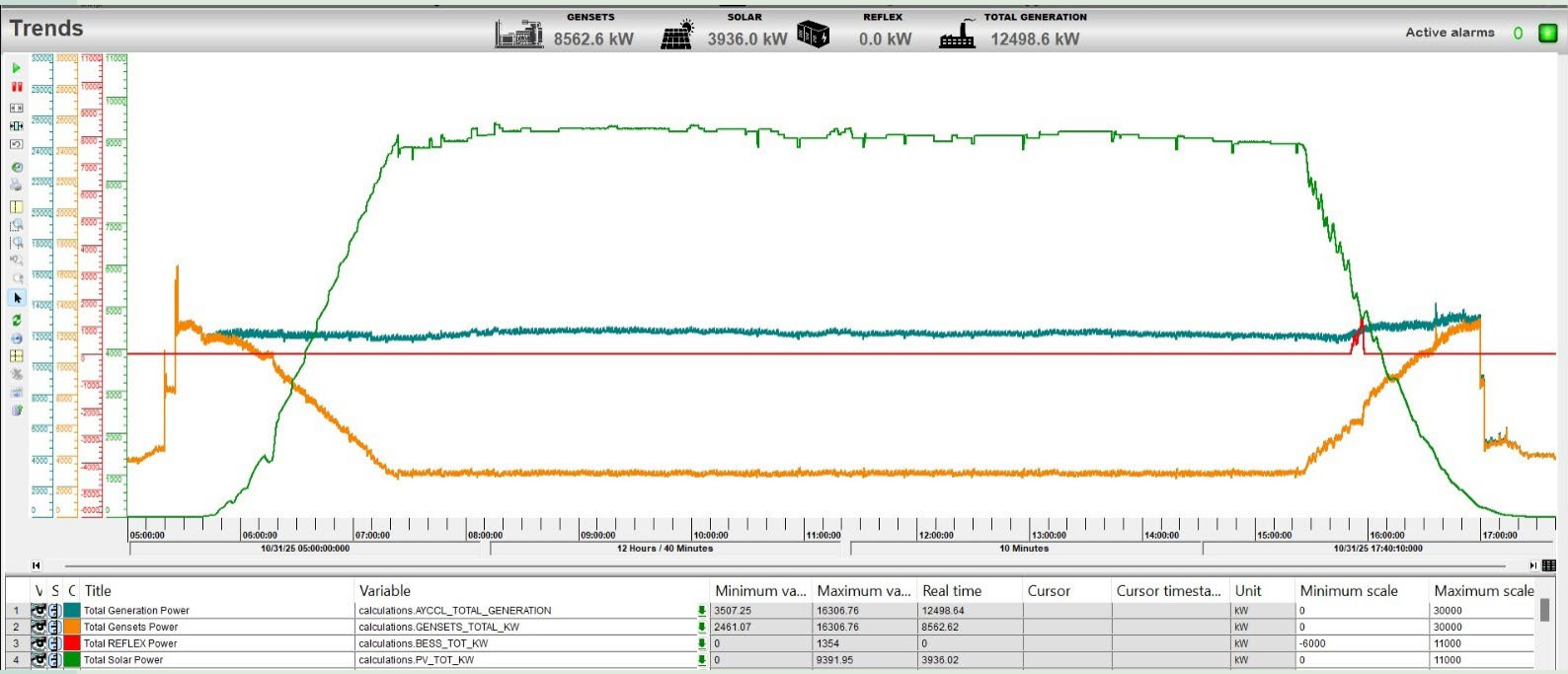
Cement factories have unique demands of heavy electrical loads, technical risks and need to maintain the safety of complex power system.

We searched extensively for qualified companies but the solar energy field is still new to the world after a long search, we found a partner in Pakistan.

We conducted our own technical studies not because that we distrusted others but because we believed more in our own capabilities, our engineering team understood the intricacies of our factory better than any outsider did. When we compared our analyses with those submitted by external firms, we realized we had surpassed them in many aspects. We signed a contract to build a solar power station with a capacity of 13 megawatts at a cost of around 11 million dollars. This project will significantly reduce the cost of energy and cement production and more importantly, its environmental impact will be profound. Solar energy emits nearly zero carbon emissions bringing a positive change to the region around us.



Systematically the panels rose like leaves reaching for the sun 22,000 solar panels, 13 megawatts of light and an electronic control center beating like a new heart within this mighty structure. The panels we used are bifacial, meaning they absorb sunlight from both sides increasing energy output by 10 to 15% compared to standard panels. Moreover, our system features solar tracking technology unlike traditional fixed installations. It follows the sun's path from sunrise to sunset adjusting its angle to capture maximum sunlight throughout the day. This is the first system of its kind in Yemen.



Battery Energy Storage System (BESS) comprise project's capacity was set at 5.7 megawatt-hours for batteries and the battery system was designed not merely for storage but to protect the factory's equipment. It helps to reduce generator usage and optimize power management even during operation of cement plant.

This light does more than power production lines it plants hope in the air and responsibility in every heart that works here in a country facing countless challenges one company chose to endure to remain present in every brick of every building with energy that is clean, steady and sustainable.

We believe this project will become a model for other companies and even for Yemen government initiatives as Yemen moves toward global trends of clean and renewable energy. Its positive impact will echo across Hadramaut and beyond from Hadhramaut the Arabian Yemeni Cement Company has illuminated a new path for investment a path that begins in the heart of stone and leads to a future that shines like this.

Cement Kiln Co-processing of Alternative Fuels: Technical Approaches and Implementation by SINOMA CDI

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Abstract

The cement industry faces growing pressure to reduce its carbon emissions, and the adoption of alternative fuels (AFs) through co-processing in cement kilns has emerged as a key strategy for achieving both environmental sustainability and economic efficiency. This paper presents the specialized technical methodologies developed by SINOMA CDI for the effective integration of AFs, with emphasis on customized pre-processing techniques, optimized combustion systems, and their impacts on kiln performance and product quality. Based on practical implementations, the study illustrates how SINOMA CDI's engineered solutions significantly elevate thermal substitution rates (TSR), enhance combustion efficiency, and ensure compliance with stringent emission standards. The findings confirm substantial CO_2 emission reductions, highlighting the strategic role of AFs co-processing in modern cement production. This research provides practical and scalable insights to support the adoption of sustainable practices across the global cement industry.

Keywords: Co-processing; Alternative fuels; Thermal substitution rate (TSR); CO_2 emission reduction; Cement kiln operation

1. Introduction

The cement industry accounts for a significant share of global anthropogenic CO_2 emissions, with clinker production identified as the dominant source due to the calcination of raw materials and combustion of fossil fuels. [1] In response to stringent decarbonization targets set by international agreements, the sector has increasingly adopted co-processing of AFs as a strategic mitigation measure. [2] The utilization of AFs—such as MSW and biomass—not only reduces dependence on fossil resources but also contributes to waste valorization. [3] A key director for evaluating the environmental benefit of this approach is the thermal substitution rate (TSR), which quantifies the proportion of fossil energy replaced by alternative sources. Cement kilns are particularly suitable for AFs integration due to their operating temperature and alkaline environment, which facilitate complete combustion and contribute to the immobilization of heavy metals. [4] Despite these advantages, heterogeneous properties of AFs present challenges to process stability and clinker quality. [5] Through advanced engineering solutions and systematic process optimization, SINOMA CDI has developed robust methodologies to address these technical challenges, enabling higher TSR levels and advancing the industry's transition toward sustainable manufacturing.

2. Technical Challenges in AFs Co-processing

The integration of AFs into cement kilns, although beneficial from both environmental and economic perspectives, introduces a range of technical complexities that require careful and systematic management. These challenges primarily arise from the inherent properties of AFs and their interactions with the complex thermo-chemical environment within cement kiln systems.

2.1 Diversity of Fuel Characteristics

The fundamental challenge lies in the highly variable physicochemical properties of AFs. Unlike homogeneous fossil fuels like coal, AFs — including refuse-derived fuel (RDF), scrap tires, waste oils, and biomass—exhibit significant fluctuations in composition, calorific value, moisture content, and concentrations of harmful elements (e.g., chlorine, sulfur, and heavy metals). [6] This heterogeneity poses a threat to process stability. For instance, high moisture content can substantially reduce the net calorific value, consume considerable energy for evaporation in the calciner, and disrupt the delicate heat balance of the kiln system. Furthermore, variable chlorine levels, particularly from plastics or industrial wastes, promote the formation of volatile cycles (e.g., of alkali chlorides) within the preheater, resulting in aggressive coating buildup and blockages that often require unplanned shutdowns for cleaning. [7] In addition, inconsistent particle size and bulk density of AFs—such as whole tires or shredded waste — complicate feeding system design, leading to uneven fuel delivery and pulsating combustion, which undermines the performance of automation control system designed for steady-state operation.

2.2. Impacts on Clinker Quality and Process Stability

The integration of AFs poses significant challenges to clinker quality and process stability. The non-combustible ash derived from AFs alters the composition of raw meal, potentially disturbing critical phase equilibria (e.g., C3S-C2S balance) and

compromising cement strength development if not adequately compensated for in raw mix design.[4] Process instability stems from inconsistent combustion characteristics, particularly when utilizing heterogeneous fuels such as whole tires, which may introduce localized reducing conditions. These conditions disrupt kiln atmosphere, promote CO formation, and lead to operational problems including incomplete calcination and accelerated refractory wear. Maintaining consistent product quality requires thorough fuel characterization, precise adjustments to the raw mix, and the implementation of advanced process control strategies to mitigate these impacts. [8]

3. SINOMA CDI's Technical Solutions

To address the aforementioned technical challenges, a systematic engineering framework—illustrated in Figure 1—has been developed, encompassing integrated pre-processing protocols for AFs and optimized combustion configurations. This methodology is derived from industrial practice and has been continuously refined through dedicated R&D initiatives. The pre-processing phase aims to produce refined AFs with low moisture content, high and stable calorific value, and uniform particle size distribution via mechanized treatment processes.

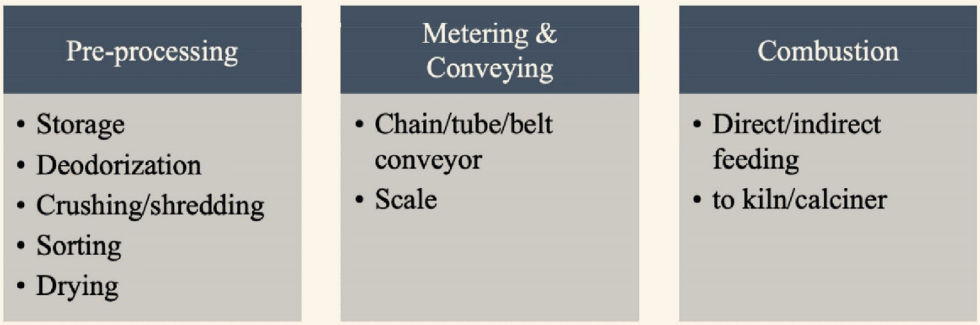

Figure 1 SINOMA CDI's simplified technical approaches.

3.1. Tailored Pre-processing Techniques

The composition of the feedstock is complex. For MSW, its heterogeneous and biodegradable nature—characterized by odor emission, leachate formation, and spontaneous combustion risks—necessitates enhanced impermeability, fire prevention, and enclosed odor control systems. Odor control is typically achieved through bio-filtration, negative-pressure enclosures, UV photocatalytic oxidation, and the application of plant-based or microbial deodorants. Feed system selection depends on capital investment and processing capacity requirements. To produce AFs with consistent calorific value and particle size, raw materials undergo sequential processing steps including shredding, screening, sorting, air classification, and drying. Compared to conventional fossil fuels, AFs generally possess higher moisture content, which at elevated TSR increases bulk density, hinders complete combustion, and raises heat consumption due to slower burnout and greater heat loss. [9] [10] Additionally, the variable ignition point of AFs—typically above 100–130°C for RDF—further complicates stable combustion. [11] [12] To address these issues, a low-temperature belt dryer as shown in Figure 2 utilizing flue gas (80–120°C) from the clinker cooler or preheater has been developed. This belt dryer reduces moisture to below 15–20%, thereby improving effective calorific value and enhancing operational stability.

3.3. Metering and Transport

To prevent dust emissions, ensure worker safety, minimize material loss and moisture content increase, AFs should be conveyed in enclosed systems whenever possible, with enclosed belt conveyors being the preferred option. When space limitations require steep conveying angles or continuous operation without transfer points, tubular belt conveyors can serve as a suitable alternative. For short-distance transport, screw conveyors may be utilized. In metering applications, belt-type gravimetric feeders equipped with integrated weigh hoppers or inline screw weighers are selected to ensure high measurement accuracy and stable material flow. For fuel feeding to kiln burners, rotor weigh feeders integrated with bins are generally preferred to guarantee precise and consistent fuel delivery.

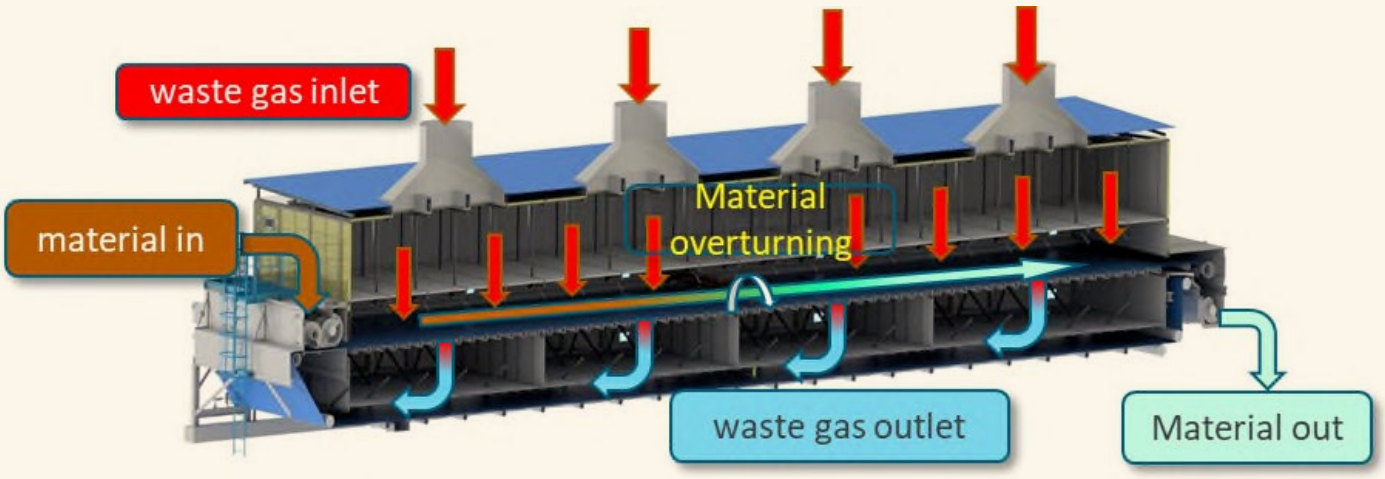

Figure 2 The low-temperature belt dryer.

3.4. Combustion

AFs with a calorific value exceeding 3500 kcal/kg.clinker, an average 2D particle size <80 mm, moisture content below 15%, and limited feeding quantities can be directly introduced into the calciner via proper feed points. A mismatch between particle size and the locations of the feed points may cause AFs to fall directly into the riser duct or be carried by high-temperature gas into downstream systems. This can displace the combustion zone and disrupt the thermal regime. Driven by the availability of AFs in the market and the imperative to achieve higher TSR for carbon reduction, CDI has dedicated over a decade to the development of pre-combustion furnace technology. To accommodate lower-quality fuels—such as those with high moisture content and low calorific value-this effort leverages the intrinsic advantages of cement kiln and calciner systems, including high calcination temperatures and long residence times. A co processing system capable of adapting to various types and physical states of AFs has been developed and engineered. The system features a dynamic pre-combustion furnace with a wide operational control range and strong adaptability, as well as static acceptance technology, enabling the utilization of a wide variety of AFs, including biomass, MSW, industrial by-products, and hazardous waste. Research has focused on the integrated flow dynamics between the Step Pre-Combustion Furnace (SPF) as shown in Figure 3 and the calciner, particularly in optimizing feed point selection and implementing precise dynamic control strategies for the coupled pre-combustion furnace and kiln system. The objective is to enable complete and harmless treatment of waste while minimizing— or even eliminating—any adverse impacts on the operation of the cement clinker production system.

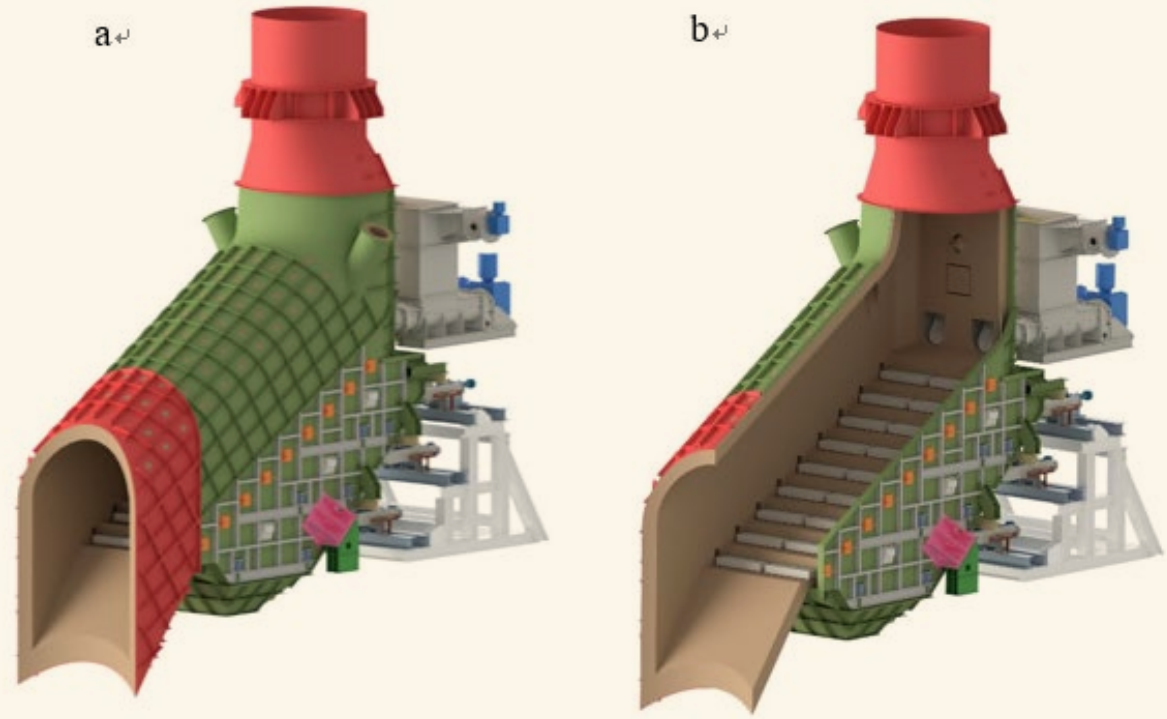

Figure 3 3D Model of SPF (a) Exterior and (b) Section View

3.5. Application Examples

Two representative application scenarios are presented to illustrate the operational and engineering implications of AFs integration in cement kiln systems. The first case, X cement project examines a configuration in which AFs are introduced at the calciner. The second case explores a combined firing approach, with AFs utilized simultaneously at both the main burner and the calciner, demonstrating the interactions and overall system impacts under a higher TSR. These examples underscore the critical role of equipment selection and process adaptation in achieving stable and efficient co-processing.

3.5.1 X Cement AFs Co-processing Project

The X Cement Project exemplifies a significant advancement in waste co-processing, with an annual capacity to utilize 20,000 tonnes of RDF produced from MSW. This initiative incorporates a comprehensive processing chain encompassing storage, pre-treatment, conveying, metering, and final combustion. Integrated into a cement production line with a specific fossil fuel-derived heat consumption of 721 kcal/kg.clinker at a daily output of 5,000 tonnes. MSW is stored in an enclosed waste bunker equipped with a grab bucket and a leachate collection system, and its characteristics are detailed in Table 1. The material is metered by a belt-type gravimetric feeder and then conveyed to a pre-treatment system, which includes a disc screen, primary and secondary shredders, a wind shifter, and several magnetic separators. The pre processing successfully upgraded MSW into a material with higher calorific value (>3500 vs. >2800 kcal/kg.clinker), lower moisture (15.29% vs. 25.63%), and lower ash content (11.53% vs. 31.67%), making it a more suitable feedstock for combustion.

The sorted material is processed into RDF and conveyed to an enclosed storage shed, the properties of which are detailed in Table 2. The metered RDF is then fed into a SPF for drying and pre-combustion. By controlling the feed rate, the volume of tertiary air (combustion air), and the raw meal feed rate, the temperature within the SPF is maintained below 1050°C to optimize the thermal efficiency of RDF in the calciner. As shown in Table 3, the TSR reaches approximately 61.7% in the calciner and about 37% for the whole system, resulting in a 13.9% increase in specific heat consumption. This increase is attributed to the lower thermal efficiency and higher moisture content of RDF compared to coal. However, it is offset by a significant 85.4% reduction in specific fuel-derived CO_2 from clinker production in the calciner, highlighting the substantial environmental benefit of co-processing.

Table 1 Proximate Analysis of MSW

Proximate Analysis (%)				$Q_{net,ar}$	Average Size (mm)		Density
M_{ad}	A_{ad}	V_{ad}	FC_{ad}	kcal/kg.clinker	2D	3D	t/m^3
25.63	31.67	57.58	9.72	>2800	≤300	≤150	0.5

Table 2 Proximate Analysis of RDF.

Proximate Analysis (%)				$Q_{net,ar}$	Ave. Size (mm)		Density
M_{ad}	A_{ad}	V_{ad}	FC_{ad}	kcal/kg.clinker	2D	3D	t/m^3
14.59	11.53	77.28	10.87	>3500	≤80	≤40	0.3

TSR (%) in the calciner		0	61.7
Specific heat consumption in calciner (kcal/kg.clinker)		432.6	502.5 (↑13.9%)
Fuel consumption rate in calciner (t/h)	coal	16.7	6.4
	RDF	0	20.0
Specific fuel-derived CO_2 of clinker (kg/t, clinker)		193.9	28.4(↓85.4%)

Table 3 The impacts of TSR on heat consumption and CO_2 emission.

3.5.2 Y Cement AFs Co-processing Project

The city where plant Y is located generates between 400 and 600 tonnes of MSW per day, all of which is utilized for co-processing at this cement plant. The clinker production capacity of the facility is 5,000 TPD. Figure 3 illustrates the simplified process flow of the project.

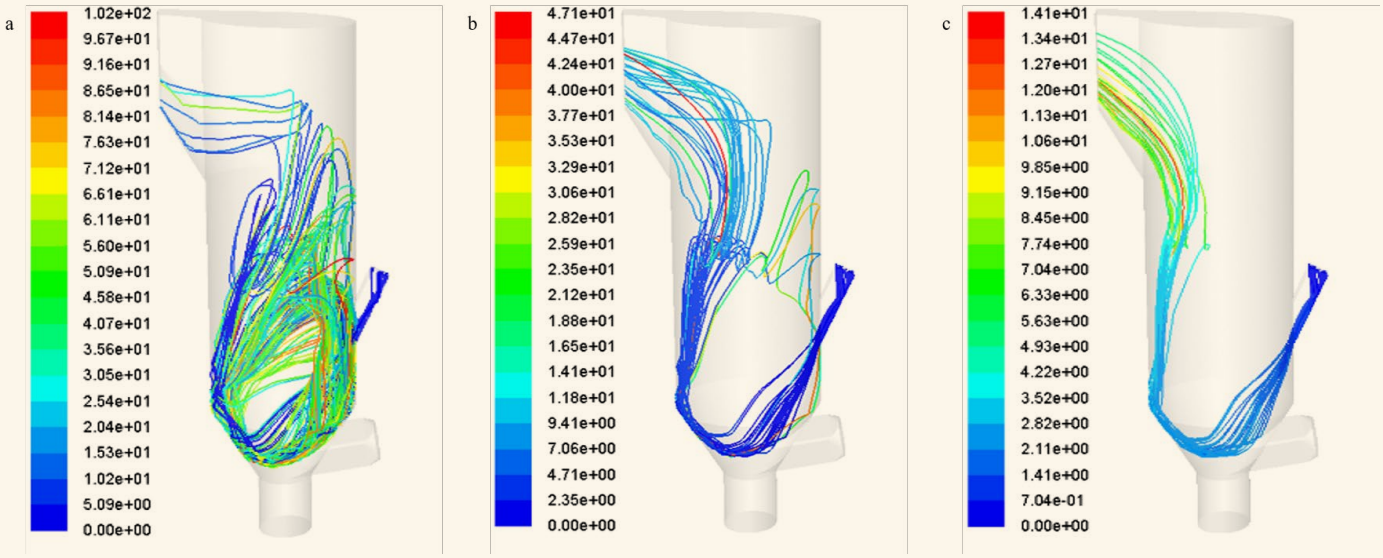

Figure 4 Y Cement AFs Co-Processing Flow.

The calorific value of the AFs after pre-processing ranges from 3,500 to 4,600 kcal/kg.clinker. Coarse particles in the size range of 30–80 mm are conveyed to the SPF for combustion, while materials smaller than 30 mm are fed into the multichannel main burner. The impacts of TSR on energy and heat consumption, as well as CO_2 emissions, are summarized in Table 4.

TSR (%)		0	64.7
Specific heat consumption (kcal/kg.clinker)		716	839.1 (↑16.7%)
Fuel consumption rate (t/h)	Coal(k)	10.5	6.3
	Coal(c)	17.6	3.6
	RDF(k)	0	6-8
	RDF(c)	0	20-27
Specific fuel-derived CO_2 of clinker (kg/t, clinker)		326.4	115.0(↓64.8%)

Table 4 The impacts of TSR on energy & heat consumption and CO_2 emission.

4. Conclusions

This study has delineated a comprehensive technical framework developed by SINOMA CDI for the effective integration of AFs into cement production through co-processing. The research confirms that while the utilization of AFs presents significant challenges—including fuel heterogeneity, operational instability, and potential impacts on clinker quality—these barriers can be systematically overcome through engineered solutions tailored to the physicochemical properties of various waste-derived fuels.

The core of SINOMA CDI's approach lies in its integrated pretreatment, handling, and combustion strategy. By implementing mechanized sorting, shredding, and low-temperature drying systems, raw MSW with high moisture and variable composition can be transformed into RDF characterized by consistent calorific value (>3500 kcal/kg.clinker), reduced moisture content (<15%), and uniform particle size distribution. Furthermore, the adoption of enclosed conveying systems, along with gravimetric or rotor weigh feeders, ensures accurate metering and stable feeding delivery—both of which are critical for maintaining kiln operation stability.

Central to achieving high TSR is the development and optimization of SPF technology, which enables the safe and efficient co-combustion of low-quality AFs within the cement kiln system. By leveraging high-temperature conditions and alkaline environments inherent in cement kilns, the process completes combustion and effective immobilization of heavy metals, thereby supporting compliance with stringent emission standards.

The application examples from Projects X and Y demonstrate the practical viability and environmental benefits of this approach. With TSR levels exceeding 60% in the calciner, specific fuel-derived CO_2 emissions were reduced by up to 85.4%, highlighting the potential of AFs co-processing as a cornerstone strategy for decarbonizing cement manufacturing. Although the specific heat consumption increased due to the lower thermal efficiency of AFs, this drawback was substantially offset by the significant reduction in fossil carbon emissions and waste valorization.

In conclusion, SINOMA CDI's technical methodologies provide a scalable and replicable model for the global cement industry. The integration of advanced pre-processing, precision metering, and adaptive combustion systems enables cement plants to achieve higher TSR, enhance sustainability, and align with circular economy objectives without compromising product quality or operational reliability. This work highlights the essential role of innovation in engineering and process optimization to facilitate the industry's transition toward low-carbon manufacturing.

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Localized and Distributed Information in Dust Collection Systems

A New Capillary Monitoring Architecture for the Cement Industry

CleanAir Europe – Technical Article (2025) by Corrado Maggi

Based on AICCE28 Conference Presentation

1. Introduction

Industrial dust collection in cement production has evolved from a compliance-driven function to a strategic component of plant reliability, environmental performance, and operational safety. In the context of rising ESG requirements, energy efficiency goals, and the transition toward digitally integrated industrial systems, dust collectors are expected to deliver higher performance with lower operating costs.

CleanAir Europe's research program—inaugurated at AICCE27 (Tunis, 2024)—introduced a disruptive concept: **capillary-level monitoring inside filter bags and cages**, enabling true localized and distributed information within the dust collector. This architecture aims to bridge the gap between theoretical innovation and measurable field impact.

At AICCE28 (Dubai, 2025), the company presented a complete technology framework demonstrating how embedded sensors, energy-harvesting electronics, AI-driven data fusion, and digital twin methodologies can reshape filtration management.

2. Digitalization: From Data Collection to Decision Intelligence

Until recently, dust collectors generated minimal diagnostic information—primarily differential pressure, fan behavior, and occasional emissions data. Modern plants require more.

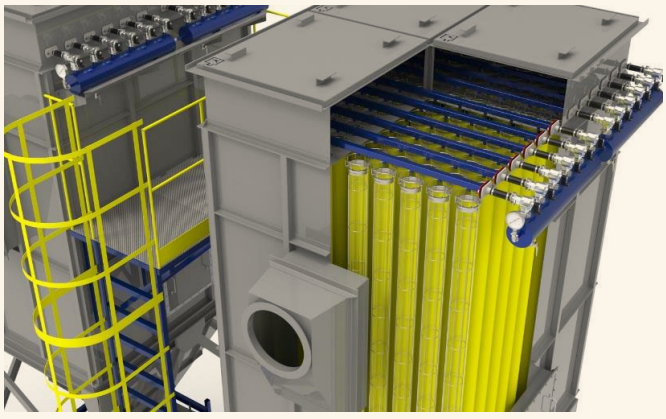
CleanAir Europe's approach introduces **connected multi-sensor nodes embedded directly in filter cages and bags**, transforming each filter element into a data point. These sensors might monitor:

- temperature
- local pressure variations
- humidity
- vibration
- particle concentration
- airflow patterns at bag level

Data is transmitted wirelessly via low-energy protocols, enabling real-time monitoring without intrusive cabling.

Predictive maintenance becomes achievable through continuous tracking of filter clogging, cleaning efficiency, fan imbalance, and localized temperature anomalies. AR (Augmented Reality) and NFC support tools simplify service routines by giving operators instant access to sensor history and diagnostic alerts.

The dust collector becomes an **active cyber-physical component**, no longer a passive endpoint.



3. Sustainability: Efficiency by Engineering Design

Energy consumption remains one of the highest operating costs in filtration systems. CleanAir Europe highlights several design elements impacting sustainability:

- **CFD-optimized housings and components** to reduce pressure losses
- **High-efficiency fans** minimizing electrical demand
- **Advanced filter media** capable of achieving **PM emissions below 1 µg/m³**
- System-level eco-design aimed at reducing the mechanical load during cleaning cycles

By integrating distributed data directly from inside the filter pack, operators can optimize airflows, detect inefficient cleaning sequences, and calibrate pulse-jet pressures, ultimately lowering energy use.

The sustainability model also supports unified dashboards aligned with **ISO 50001** and **ESG reporting**, allowing plants to track their real-time carbon and energy indicators.

4. Safety: Data-Driven Prevention of Dust Hazards

Combustible dust risks remain critical in cement and mineral handling. CleanAir's system adheres to ATEX and OSHA standards while enabling predictive hazard identification:

- Temperature sensors detect **ignition precursors**
- Particle sensors identify **filter bag leaks** and early emissions spikes
- Differential pressure analytics detect **fan anomalies** and opportunities for energy optimization
- AI-based triggers enable **automated isolation** or alarm activation

By embedding sensor intelligence throughout the filter array, operators gain continuous verification of safe operating conditions, significantly reducing the likelihood of catastrophic events.

5. A New Monitoring Architecture: Capillary and Distributed

The core innovation lies in the **capillary monitoring concept:**

Smart Multi-Sensor Nodes

Installed inside cages and integrated into filter fabrics, they operate as a distributed array capturing hyper-local information.

Energy-Harvesting Operation

Low-power electronics harvest energy from airflow, vibration, or thermal gradients, extending lifespan and reducing maintenance overhead.

Standard Protocol Integration

Compatible with DCS/PLC and modern digital environments via OPC-UA, MQTT, and other industrial protocols.

Plug-and-Play Deployment

Compact, non-intrusive modules suited both for new installations and retrofit projects—addressing the sector's pressing need for simplicity and cost-effectiveness.

This architecture enables **"information at the fingertip"**: high-resolution process visibility without operator burden.

6. AI Data Fusion and Cloud-Based Analytics

The system could include a multi-layer data interpretation model:

- **Base analytics** correlate raw variables (temperature, vibration, differential pressure)
- **AI-driven algorithms** identify emerging anomalies such as incipient clogging, fan imbalance, or irregular dust loading
- Cloud-based dashboards enable **predictive actions** and **process optimization**
- Continuous learning models refine operational recommendations over time

This combination allows plants to shift from reactive maintenance to **proactive and eventually autonomous filtration management.**

7. Digital Twin Integration

A full digital twin of the dust collector could be generated and included in the offer, incorporating:

- CFD simulations of airflow and particulate behavior
- Environmental scenario modeling
- Predictive lifecycle performance analysis

Real-world sensor feedback continuously updates the twin, ensuring accurate forecasting of filter aging, cleaning cycle optimization, and energy consumption trends.

This digital replica becomes a strategic tool for design validation, OPEX reduction, and maintenance planning.

8. Industry Challenges and Technological Barriers

Despite clear advantages, implementing distributed monitoring requires addressing several constraints:

- Harsh environmental conditions (abrasive dust, high temperatures)
- Extended electronic lifetime and thermal protection
- Minimal installation time and low operator overhead
- Maintenance requirements for probe cleaning
- Cost-sensitive markets demanding affordable large-scale deployment

CleanAir Europe's solution tackles these through robust mechanical design, optimized firmware, high-temperature electronics, and modular plug-and-play architecture.

9. Proof of Concept and Field Pilot Results

A full proof-of-concept was deployed on an industrial dust collector line, equipped with:

- Multi-sensor capillary units
- Cloud-based monitoring dashboard
- AI-assisted diagnostic layer

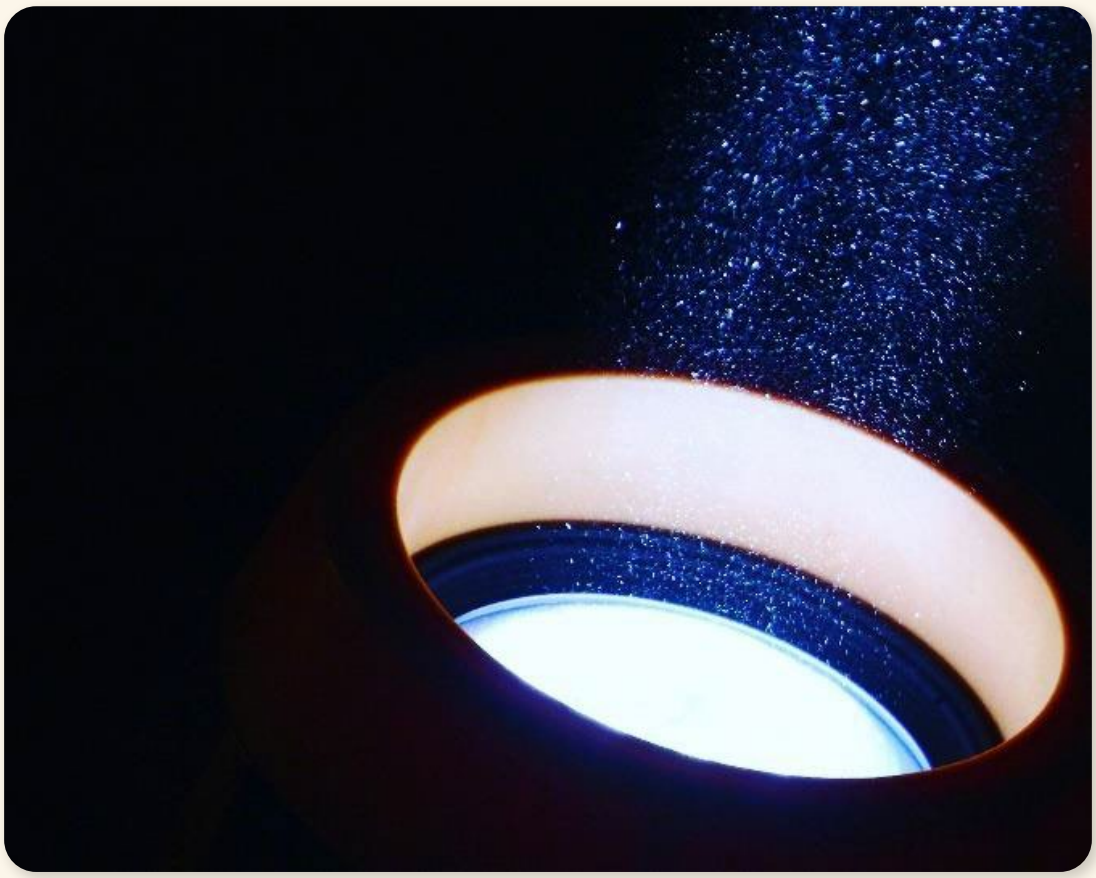
Key Performance Indicators (KPIs) monitored:

- energy use
- pressure drop patterns
- emissions and dust concentration
- thermal behavior inside the filter pack

Expected and preliminary results:

- >20% reduction in unplanned maintenance events
- 10–15% reduction in energy consumption
- improved emission stability
- optimized cleaning cycles and extended filter lifespan

Next steps involve full-scale deployment, AI-driven recommendations, and integration with plant ERP and DCS platforms.



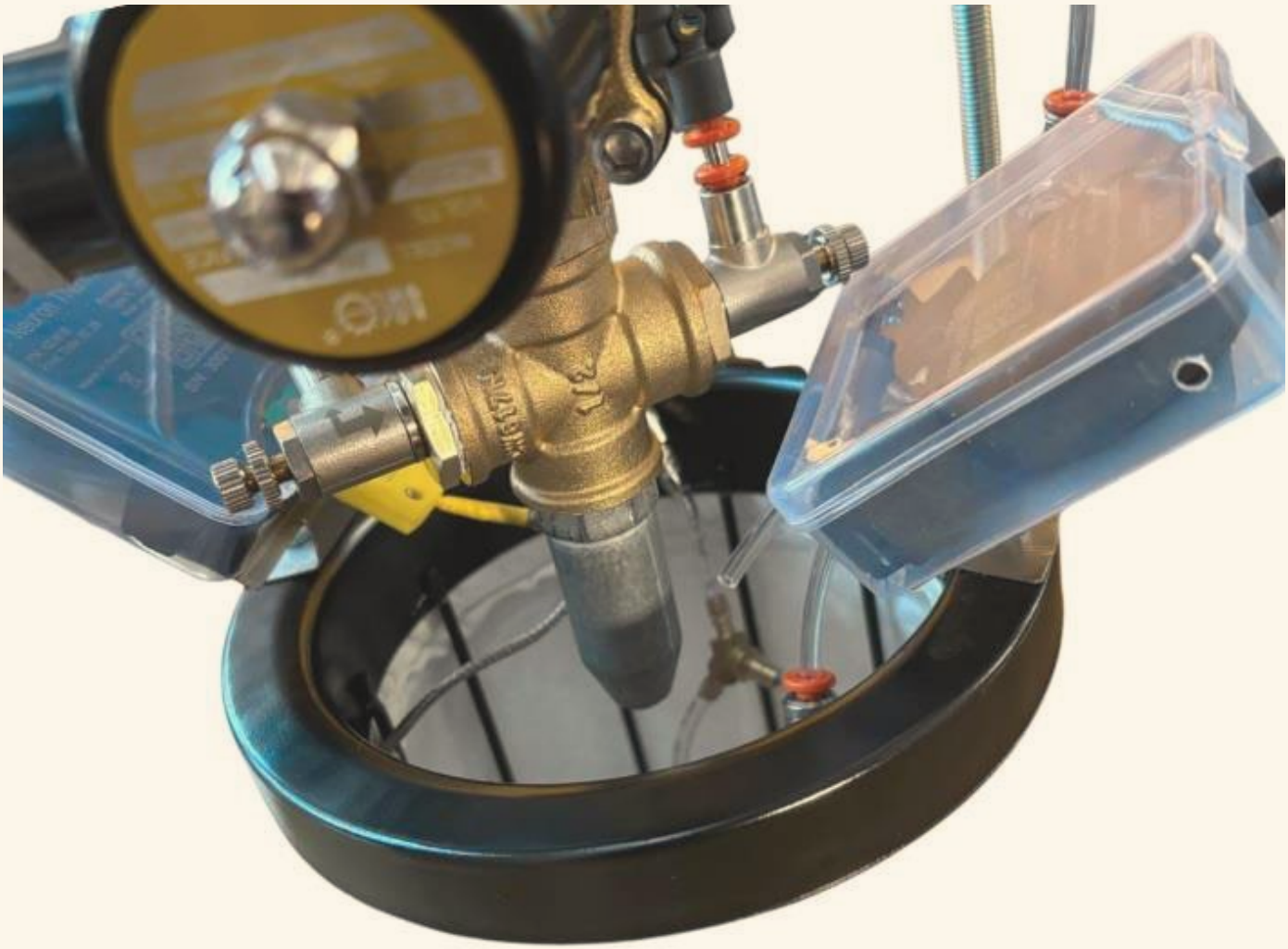
10. Conclusion

The transition toward **digitally intelligent, sustainable, and safety-centric dust collection** is accelerating across the cement industry. CleanAir Europe's capillary monitoring system EcoSense represents a fundamental shift in how filtration systems are designed, operated, and maintained.

By bringing data granularity down to the level of **individual filter bags and cages**, dust collectors become:

- more energy efficient
- safer
- more reliable
- fully integrated with plant digital ecosystems

This architecture positions the dust collector as a future-ready asset—one capable of meeting the strict environmental, operational, and safety demands defining the cement industry in 2025 and beyond.



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A conspicuous place in the journal materials is given to the problems of plant development, capital movement, economic problems facing the cement industries of Russia and other countries.

The journal comes out once in two months and includes news, analytical materials and detailed abstracts of all the articles in English.

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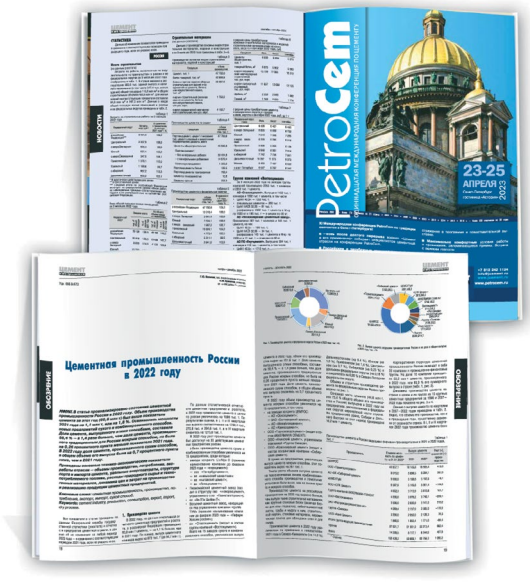
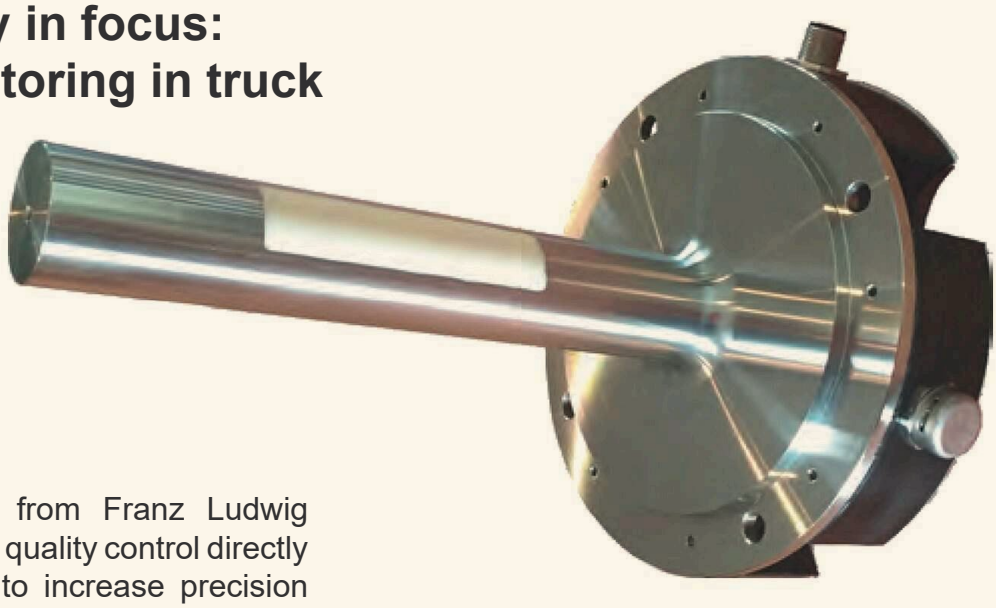


Concrete quality in focus: Innovative monitoring in truck mixer drums



New measuring system from Franz Ludwig GmbH optimizes concrete quality control directly in the truck mixer drum to increase precision and efficiency on the construction site.

The quality of concrete is crucial for construction projects. Franz Ludwig GmbH, with almost half a century of experience in moisture measurement of bulk materials, has developed an innovative measuring system for truck mixer drums: the FL-Mobimic-Inspector. This system aims to precisely monitor concrete quality and thus minimize fluctuations, for example in water content, which can significantly affect concrete properties. It generates process-relevant data directly in the drum of the concrete truck mixer to ensure the high performance of concrete produced in precast or ready-mix concrete plants.

Comprehensive Data for Optimal Concrete Consistency

The FL-Mobimic-Inspector collects a variety of parameters relevant to concrete quality, including water content (optionally as w/c ratio or in l/m³), consistency, slump, temperature, drum rotation direction and speed, drum filling level, and even the amount of wash water in an empty mixing drum. Central positioning of the measuring unit in the middle of the mixing drum ensures stable signal curves and precise measurement results. This enables reliable acquisition of all relevant data, rapid corrections in the mixing plant, and seamless documentation of the entire concrete production process.

Innovation and Sensor Technology for Precise Measurements

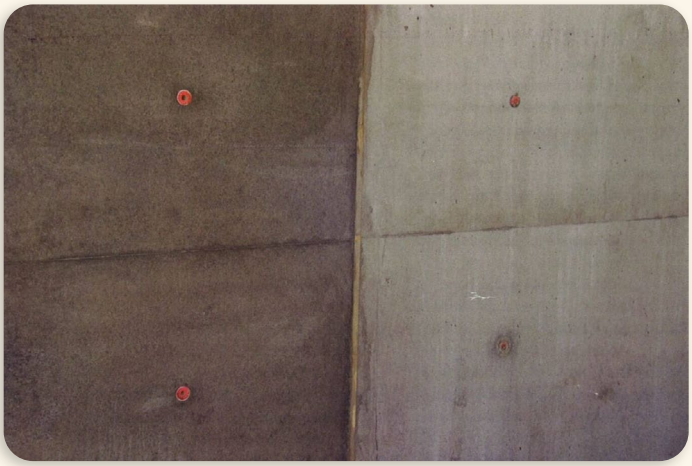
The development of the FL-Mobimic-Inspector required overcoming technological challenges such as reliable wireless data transmission and the integration of electronic components and sensors. The measuring unit, which is mounted inside the inspection cover of the truck mixer drum, contains several sensors: a microwave sensor for moisture measurement, strain gauges for detecting forces on the measuring rod, an acceleration sensor for drum rotation direction and speed, and a temperature sensor. Through the intelligent interconnection of these sensors and special software algorithms, highly accurate measurement results can be achieved.

Benefits for Quality Assurance and Dispute Avoidance

The collected mixing parameters are wirelessly transmitted to a tracking box and can be sent in real-time to a server. This allows the concrete plant to be informed early about deviations in concrete composition and to make quick corrections, such as adjusting water or admixture additions as needed. A significant advantage of the system is that it provides more representative measurement results for the entire batch than conventional sampling methods. This minimizes potential disputes regarding non-compliance with guaranteed concrete properties, as concrete quality is continuously monitored and documented from the plant to the construction site.

Impact of water-cement ratio on concrete brightness

The water-cement ratio is crucial for concrete surface brightness. Moisture variations in aggregates and mixing processes affect the color and brightness stability of bulk material concrete.



The Role of Water-Cement Ratio in Concrete Brightness

Differences in the water-cement ratio (w/c value) are the most frequent cause of color and brightness variations in concrete products. Efflorescence also contributes. Modern cements and additives may introduce additional influences. Pigments do not change their properties during concrete production and remain permanently bound to the binder. However, the binder itself changes its chemical structure through hydration, which affects concrete strength. The formation of fine structures leads to brightness, as seen in efflorescence. The higher the w/c value, the brighter the concrete surface.

Influence of Moisture and Temperature on Surface Brightness

In fresh concrete, water acts as a reactant for the hydration of the binder. Concrete does not simply dry out; rather, the water chemically reacts with hydraulic cement and additives. Higher temperatures lead to brighter concrete surfaces. The amount of water remaining in the concrete during hydration is also critical. An unprotected concrete surface can release a lot of moisture at high temperatures, potentially leading to a darker surface if the w/c value decreases. This is particularly true for earth-moist concrete, which can be demolded immediately after forming and is highly influenced by ambient conditions.

Fluctuations in Water Content in the Concrete Mix

Water enters the concrete mix in various ways, including added water and additive suspensions. A factor of uncertainty is the moisture content of the aggregates, especially sand, which can fluctuate significantly. An uncorrected high water content in the sand affects the concrete recipe because it alters the ratio between this aggregate and other raw materials. This can lead to variations in color and binder concentration, as well as changes in the aggregate grading curve. Microwave moisture measurement systems and mixer measurements can accurately determine the inherent moisture and precisely calculate the required added water, ensuring targeted concrete production.

Homogeneity and Consistency in the Mixing Process

A concrete mixing plant's ability to homogenize a specific amount and composition of concrete depends on the inherent moisture of the aggregates and the dosed water quantity. For aggregates with high moisture content, a longer dry mixing time is necessary to achieve a stable measurement. Modern moisture measurement systems use software algorithms to determine the degree of concrete mixing, allowing for adjustment of mixing times to changing conditions. This prevents excessively short mixing times and insufficient blending. It also avoids excessive energy input and unnecessary energy costs.

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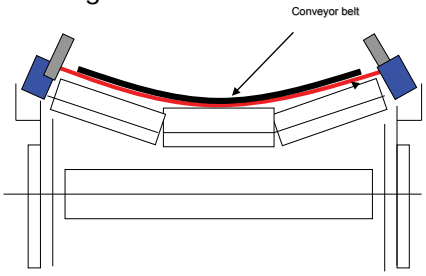
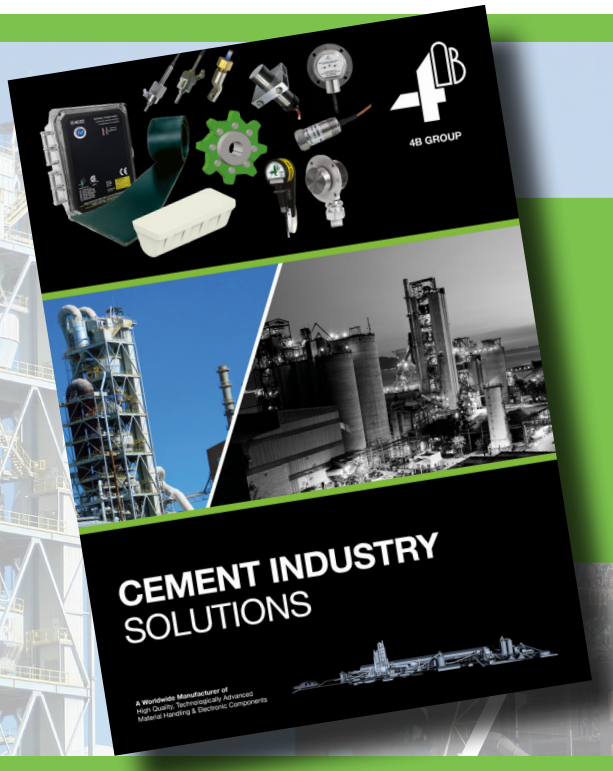
The Bulldog alignment and rip detection switch is an electro-mechanical system designed to detect dangerous misalignment of the conveyor and also detection of belt tear damage.



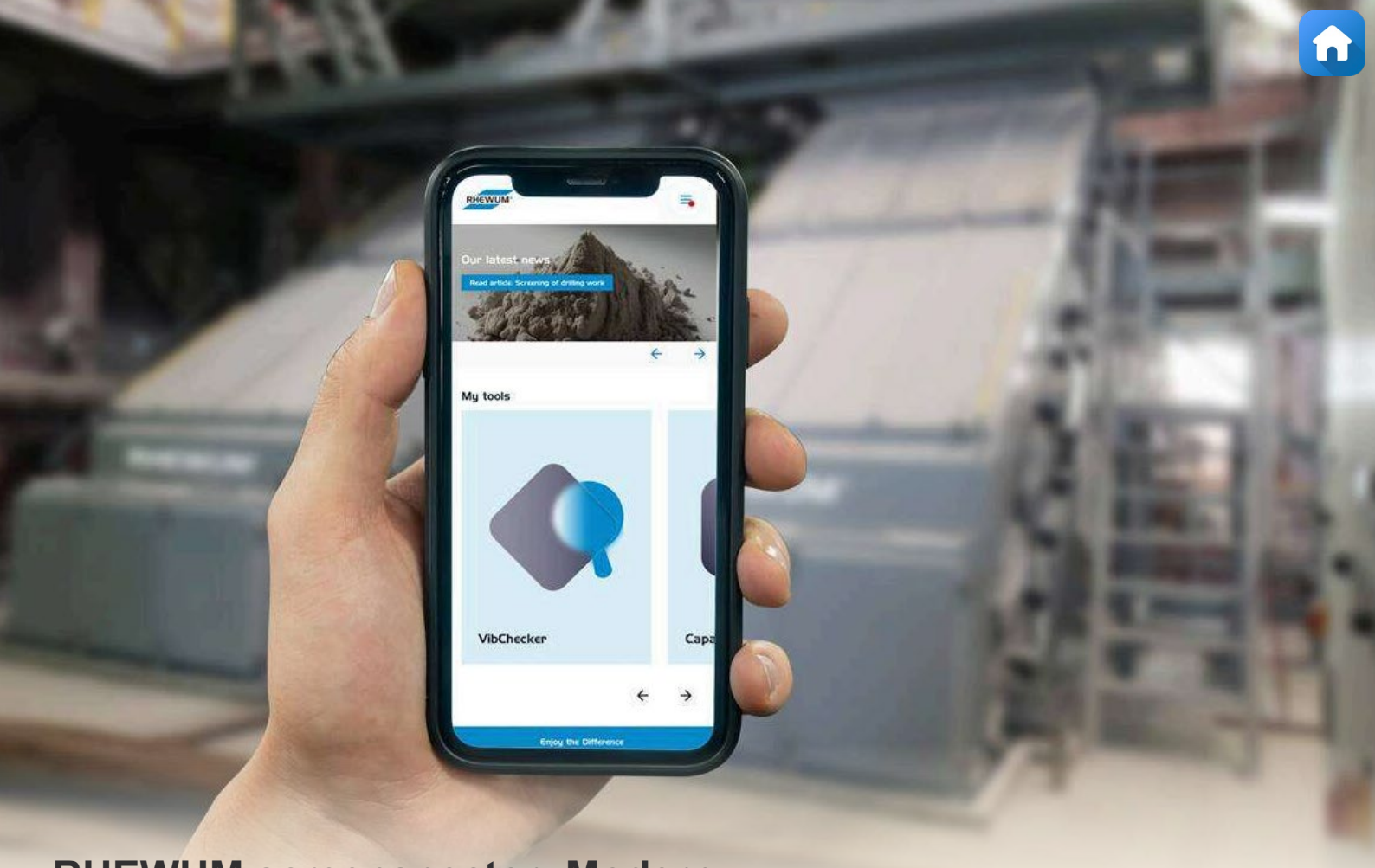
Features:

- > Easy installation
- > No calibration required
- > Robust design
- > 20° belt misalignment alarm
- > 35° belt misalignment shutdown
- > For open belt conveyors
- > Worldwide hazardous location approvals

IP66



Scan the QR code to explore the full 4B Cement Range



RHEWUM screenspector: Modern optimization of screening machines

The RHEWUM ScreenSpector app optimizes screening machine monitoring with tools like MeshConverter and VibSonic, available for iOS and Android.

The RHEWUM app, known as ”RHEWUM ScreenSpector,” provides users of RHEWUM screening machines with tools for optimal utilization. Available for iOS and Android, it supports the operation and monitoring of screening machines with several key features:

MeshConverter

The MeshConverter simplifies the conversion of mesh sizes. It converts between DIN millimeters, inches, ASTM, and Tyler mesh units and offers advanced functions for calculating separation sizes for inclined screens. Users can input mesh sizes and angles to determine separation sizes in inches or millimeters. The tool supports calculations with any two values, making it a comprehensive solution for various screening scenarios. Additionally, the inclination angle (0°-45°) can be automatically determined using the smartphone’s sensors.

VibSonic

VibSonic transforms your smartphone into a powerful sound measurement device that measures sound levels across various frequencies. It calculates a mean sound level for quick assessment of noise compliance. After measurement, detailed reports can be generated in CSV or PDF format and analyzed. The latest version offers an improved user interface and functionality, making VibSonic a valuable tool for monitoring noise levels in industrial environments.

VibFlash

VibFlash uses your smartphone’s LED as a stroboscope for analyzing vibrating equipment. The feature allows users to set custom flash frequencies. With precise frequency selection, VibFlash facilitates visual inspection and recording of equipment vibrations. This mobile technology provides engineers with a portable solution for on-site vibration analysis, similar to a traditional stroboscopic testing device.

VibChecker

The VibChecker monitors vibrations of screening machines by utilizing the mobile device's acceleration sensor to capture three-dimensional vibration data. It identifies the dominant frequency and displays acceleration and amplitude values. Due to technical reasons, this feature is currently available only on Android devices.

CapacityChecker

The CapacityChecker helps users determine the feed rate of a screening machine. It calculates either the capacity or the layer height based on the entered parameters, making it an ideal support tool for planning screening machine installations.

General Features

The RHEWUM app excels in user-friendliness and accessibility. It accepts both decimal points and commas in numeric fields and features a news section that informs users about the latest RHEWUM updates. Each tool includes its own help or explanation page, providing additional information.

Powerful tool for operators

The RHEWUM ScreenSpector app is a milestone in screening machine management. It combines essential tools into a user-friendly platform and enhances operational efficiency through real-time analysis. Its intuitive design and comprehensive help features make it accessible to professionals of all technical levels. The RHEWUM ScreenSpector is a powerful support tool for operators of screening machines, setting a new standard for industrial mobile applications.

SM 50: Worldwide first cutting mill with a removable milling chamber

Retsch presents the SM 50, a powerful and space-saving tabletop cutting mill that raises the process of sample preparation, developed in close and continuous exchange with its customers worldwide

Since its market launch on April 1, 2025, the new SM 50 from RETSCH has attracted considerable interest worldwide and has already been ordered dozens of times by customers around the globe. This versatile tabletop cutting mill has all the features necessary to become a classic in laboratory technology. The development team at Retsch GmbH in Haan, Germany, has successfully developed a compact and powerful cutting mill that comes with a whole series of new benchmarks. The Total Access Concept allows access to all relevant components of the grinding process via push-fit. For the first time, even the entire milling chamber can be removed - with just one hand.

Retsch CEO Dr. David Szczesny: ”With the SM 50, we have developed a powerful and space-saving tabletop cutting mill that raises the process of sample preparation to an entirely new level. Thanks to our unique development approach, we have once more succeeded and reinforced our position as world market leader through our innovative strength.” The basis of all development processes at Retsch is the close and continuous exchange with its customers worldwide. The resulting needs and problems are evaluated and directly integrated into the development process. In addition, Retsch offers free test grinds that provide a valuable exchange with laboratories, companies and scientific institutions from all over the world. Combined with the company’s long-term development expertise, the SM 50 was able to define a new cutting mill that fills a gap in the market.

The Total Access Concept, equipped with an EasyInspect hopper and push-fit components, simplifies the cleaning process for all surfaces, from the hopper to the collection container. For the first time, the removable milling chamber allows cleaning under water. This development represents a true milestone in the field of sample preparation, reducing the entire process time by up to 30 percent and significantly reducing the risk of sample contamination. The direct integration of the cyclone into the SM 50 represents a groundbreaking technological advancement, enhancing the effectiveness of the system. In combination with an optimal flow dynamic, it achieves an exceptional sample recovery rate up to 100 percent.

Szczesny: ”In addition to grinding performance, we are setting new benchmarks in ergonomics and versatility with the SM 50, which we ensure with our extensive range of accessories. Thanks to the modular design, the grinding chamber and other components can be replaced without tools. I am certain that with the SM 50, we have developed a genuine all-round solution that has been optimally adapted to the different needs of our customers.”

Turning waste into value using Poppi's fine powder recovery technology

An innovative patented system allows fine powder to be automatically reused inside the spray dryer.

In the ceramic industry, optimising the production process means minimising waste, improving product quality and increasing sustainability. Every detail counts, such as the fine dust collected from post-spray-dryer filters. When managed effectively, this valuable resource can be transformed into a clear competitive advantage.

Thanks to innovative patented technology from Poppi Clementino SpA (Reggio Emilia), ceramic manufacturers can now automatically recover and reuse fine powder inside the spray dryer, eliminating waste while ensuring optimal process control. The system is designed for maximum efficiency, significantly improving ceramic production.

The patented system feeds fine powder directly into the spray dryer, eliminating the need for manual intervention. The feed zone has been optimised so that powder is introduced into a strategic area of the spray dryer, preserving the quality of the spray-dried product. Advanced pneumatic transport ensures that the recovered powder is transferred efficiently and without dispersion. If necessary, the fine powder can also be stored in a dedicated silo to be reused later with precise dosing.

This brings clear benefits for ceramic manufacturers. In terms of energy and environmental sustainability, the system reduces waste while lowering energy and water consumption by avoiding a double transition to the liquid state. At the same time it increases spray dryer production yields by up to 3-5%. As a result, this technology cuts costs, enhances product quality and reduces waste.

New Products

New SACMI glazing line for RAK Ceramics

Investment plan for production plant at Ras Al-Khaimah moves forward. New robotized glazing line for Sanitaryware Unit 1 just supplied, bringing to 10 the number of glazing robots installed. The newly started-up machine will be mainly dedicated to glazing complex WCs.

RAK CERAMICS

Rak Ceramics confirms its confidence in SACMI RobotGlaze systems for the automated glazing of its sanitaryware. Another investment has recently been completed for its Sanitaryware production plant 1, bringing to 10 the total number of SACMI-Gaiotto robots installed at the Ras Al-Khaimah factory.

The new SACMI glazing line consists of a 4-position carousel, with fully automatic piece loading and unloading carried out by means of bar conveyors and an angle transfer device. This system eliminates manual handling operations thus increasing efficiency and reducing waste.

Connected to the carousel is the latest generation SACMI-Gaiotto GA2000 robot, equipped with Mass Control® system, to regulate the glaze flow-rate, and with overspray recovery made possible by a water curtain filter. The robot uses the hugely popular SACMI GDA80 spray-gun for the spraying operations.

Mainly dedicated to the manufacture of complex WCs, this is a glazing line with a high production output and glazing times lower than 120 seconds for each piece. The robot supplied is also equipped with offline programming software to facilitate the implementation of new glaze recipes without disturbing line productivity.

“The world’s leading Lifestyle Solution Provider” is the slogan that aptly sums up the global brand positioning of Rak Ceramics which, with this latest investment, confirms its confidence in SACMI Sanitaryware technology.

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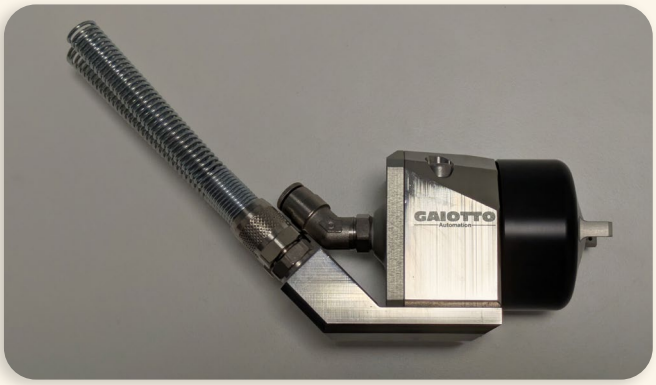
SACMI GDA80: more than 1000 supplied around the world!

Sacmi-Gaiotto's GDA80 continues its success and popularity on the market as leading solution for robotized glazing of sanitaryware. Among its many advantages, customers particularly appreciate zero maintenance, consistent quality and reliability over time, plus the possibility to re-vamp existing cells.



Ever since its launch in 2013, GDA80 – the automatic membrane glazing spray-gun developed by SACMI-Gaiotto – has been highly popular on the market with more than 1000 supplied and currently operating in over 500 sanitaryware plants around the world, re-affirming its reputation as the leading solution for reliability, efficiency and quality in the glazing process.

Long lifetime and zero maintenance: revolutionary for its simplicity

Compared to the traditional spray-gun, the Gaiotto Membrane Automatic Gun uses membrane technology specifically adapted to the robotized glazing process.

In particular, the GDA80 has no needle or seal, which are the main causes of wear and clogging in conventional spray-guns. The result is a consistent process and uniform glazing quality, thanks to the reduced overspray and perfect distribution of the glaze.

Moreover, the needle in conventional spray-guns is made of tungsten carbide which is a particularly expensive consumable material, unlike a rubber membrane, which is both cheaper and lasts longer (6 months guaranteed but field tests also show durability with continuous use of even more than a year).

The first advantage is clearly the cutting of maintenance costs which, with this type of application, can have a greater impact than the cost of the spray-gun itself. The second benefit, of equal importance, is the consistently high-quality glaze application (the needle with seal needs continuous maintenance and its action leads to premature wear of the nozzle which has to be replaced after just a few months).

Even if the glaze quality is considered the same, the GDA080 solution is advantageous compared to the traditional version, in terms of repeatability of the process, because it is more reliable.

Confirmation in the field: "We forget it's even there!"

"Ever since we started using it, we forget it's even there", is a common refrain from our customers who have chosen the GDA80 over the years. Easy installation and the dramatic reduction in the need for technical assistance leads to a return on the investment in less than 12 months, with real savings of over 90% in terms of spare parts and manual operations.

The solution can also be supplied as part of a "revamping" of existing cells, as can be seen by the large number of jobs of this kind carried out by SACMI (which, for these applications, has the largest machine fleet in the world).

Feedback from the field has also led to another innovation; the idea of equipping the robot with a single spray-gun instead of two. Thanks to the top part with enlarged lights, with a negligible increase in cycle time, the use of a single spray-gun halves costs improving the flexibility and precision of robot applications, as well as significantly reducing glaze overspray.

Technical specifications

Made entirely of stainless steel, the GDA80 is supplied with 0.5 to 2.7 mm nozzles and is both EC- and Atex-Certified, thus also suitable for working environments with potentially explosive atmospheres.

The solution can work with the most common automatic spraying systems (electric/volumetric pump and with pressure control).

Contact your SACMI sales representative to find out more!

GSI (Gruppo Sanitari Italia) invests in new SACMI "self-cleaning" porous resin panel

Installed on the existing glazing booth, the panel, with the help of the dry filter, enables 100% recovery of glaze overspray which can be put straight back into the production process. The solution dramatically reduces cell cleaning times, improving efficiency and work conditions.

Part of a project for the continuous improvement of its production lines, in terms of technology and impact on the environment, GSI – Gruppo Sanitari Italia - has installed a new **SACMI self-cleaning porous resin** panel. The panel was fitted on an existing robotized glazing booth that was supplied by SACMI in 2022.

The new solution involves the replacement of the conventional steel front panel with a special panel made of porous resin, fruit of SACMI's experience working with resin mould technology. This panel is served by air and water supplies and makes use of the same operating principles as the systems used to supply resin moulds in the casting process (in which SACMI is world leading specialist). In this way it is possible to carry out **cleaning using controlled amounts of air/water** to remove the film of glaze residue left over after each work cycle.

The result, working together with the dry filter already provided for the booth operating at GSI, is **easy automatic management** of glaze recovery, with **100% recovery of the overspray** deposited on the panel at the end of each glazing cycle.

The key advantages of this panel include **more efficient and sustainable glazing:**

- the recovered glaze has density ≥ 1700 g/l and can therefore be immediately reused in the work process without the need for filtering or treatment (thanks to the frequent work cycles which prevent the build-up of dry glaze deposits).
- more plant availability due to the drastic reduction of cleaning times at the end of the work-shift and reduction even by 85% of the downtime required for routine cleaning of the cell;
- improvement in working conditions: with the special self-cleaning panel routine maintenance becomes faster and easier, eliminating repetitive manual operations with low added value.

GSI, renowned for excellence in the sector, is among the first of the lead players in the Italian sanitaryware manufacturing district to embrace this new opportunity reaffirming its shared vision with technological partner SACMI. In fact, the new porous resin panel with self-cleaning function represents a concrete and profitable step towards a circular sanitaryware production process, contributing to reduced running costs, lower environmental impact and improved working conditions.

New Products

Bongioanni launches Quantum Carbide

Energy savings, lower spare part costs, improved product quality and exceptional durability are the main benefits of this innovative new product from the Italian company.

Bongioanni is introducing Quantum Carbide, a next-generation tungsten carbide material set to transform the heavy clay industry. Thanks to its outstanding strength and durability, this material can significantly improve the performance and efficiency of production lines for all types of clay products.

"Quantum Carbide has been designed, developed and tested in our laboratories for over two years. Its microstructure and optimised composition guarantee exceptional strength and durability," explains the company's management team based in Fossano (Cuneo).

This product represents a major innovation for the industry, combining the well-known advantages of tungsten carbide with advanced technologies that further boost its performance. While tungsten carbide has long been valued for its hardness and wear resistance, the improvements made by Bongioanni bring even greater benefits, particularly in industrial applications where component wear is a significant challenge.

Adopting Quantum Carbide brings numerous advantages, including reduced machine downtime and greater productivity.

This innovation not only meets the growing demand for durability and reliability within the industry, but also provides a clear opportunity to reduce long-term operating costs by minimising maintenance needs and component replacement.

ZAMZAM GROUP

Driving Innovation in the Iraqi Cement Industry: Zamzam Group Hosts Joint Technical Seminar

SULAYMANIYAH, IRAQ – On November 25th, Zamzam Group solidified its role as a bridge for industrial excellence by hosting a high-level technical seminar in Sulaymaniyah. The event brought together global industry leaders MAAG GEAR and Simatek A/S to present the latest technological breakthroughs to a room of Iraq's leading engineers and plant managers.
The symposium served as a strategic platform to address the evolving needs of the cement sector, focusing specifically on the critical roles of high-performance gear units and advanced filtration systems.

A Forum for Technical Exchange

The event was defined by its high level of engagement. Beyond the presentations, the seminar prioritized "real-world" dialogue, allowing attendees to discuss site-specific challenges directly with international experts.

The success of this seminar reminds us that progress is fueled by the free flow of ideas. Zamzam Group remains committed to hosting future events that empower local talent and bring world-class innovation to the heart of Iraq’s industrial landscape.

Strategic Collaboration

The partnership between MAAG GEAR and Simatek A/S, facilitated by Zamzam Group, highlights a holistic approach to industrial maintenance and efficiency.

MAAG GEAR shared insights on how their solutions provide reliability and peace of mind for operators.

Simatek A/S focused on the vital importance of filtration technology in maintaining environmental and operational standards.

Zamzam Group acted as the local pillar, ensuring the event met the specific cultural and technical requirements of the Iraqi market.

07 January 2026

Cemtech Live Webinar

Best Practices for Alternative Fuels in Cement Plants

Time: 14:00h UK (GMT)

Register here

21-22

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For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838

01-04 February 2026

Cemtech Middle East & Africa 2026

Riyadh, Saudi Arabia

02-03

1st CemFuels Asia Conference and Exhibition

Alternative Fuels for Asia

Bangkok, Thailand

For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838

02-04

INTERCEM Dubai 2026

Dubai, UAE

For more information, please contact:
Ms. Lola Carragher
Commercial Sales Manager

25-26

CarbonSmart Digital Futures

Copenhagen, Denmark

12-13 March 2026

Women in Cement and Construction International Congress Americas 2026

Dallas, USA

mariana.gheorghe@industrylink.eu

contact@industrylink.eu

For more information, please contact:
Industry Link
Ms. Mariana Gheorghe, Marketing and Program Manager
Tel.: +40726 497 448

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With Holcim Lägerdorf plant visit

Organised by:

global cement™ MAGAZINE

Details:

All Enquiries

Exhibition and sponsorship:
paul.brown@propubs.com

Programme and speakers:
robert.mccaffrey@propubs.com

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www.Cemtech.com/MEA2026

Diary dates

15-18 March 2026

EnviroTech London 2026

London, UK

24-25

2nd Low Carbon Data Centres

Bangkok, THAILAND

26-27

INTERCEM Shipping Americas 2026

The Royal Sonesta Houston Galleria, in Houston, Texas, USA

For more information, please contact:
Ms. Lola Carragher
Commercial Sales Manager

15-16 April 2026

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Maximising profits from slag

Istanbul, Türkiye

For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838

18-19

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Erbil International Hotel, Erbil, Iraq

For more information, please contact:
CEMTECH Group
Tel.: +963988413989 / +963969019984 / +963114476769

26-29

68th IEEE-IAS/PCA Cement Conference 2026

Fort Lauderdale, USA

19-20 May 2026

1st Global CementAI Conference, Exhibition and Awards

AI and automation for cement

Brussels, Belgium

For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838

13-15 May 2026

CEMENTTECH 2026

The 27th China International Cement Industry Exhibition

Fuzhou Strait International Convention and Exhibition Center, Fuzhou, China

For more information, please contact:
Ms. Joanna Long
Tel.: +86-10-88083329

09-10 June 2026

3rd Global CemCCUS Conference, Exhibition & Awards 2026

Carbon capture, use/storage for cement and lime

Hamburg, Germany

For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838

23-24 September 2026

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Tel.: +44 1372 743837
Fax: +44 1372 743838

30 September – 2 October 2026

XXVIII International Construction Forum 2026

Cement.Concrete.Dry mixtures

Moscow, Russia

Tel.: (+7 812) 3350992

Info

Press

15-17 October 2026

7th Conference of Cement Industry & Concrete 2026

Syria – Damascus Fairground – International Hall No.1

For more information, please contact:
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18-22 October 2027

The 17th International congress on the Chemistry of Cement ICCC 2027

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Yashobhoomi Convention Centre, New Delhi, India

For more information, please contact:
National Council for Cement and Building Materials

Cementtech

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China Cement Association

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Cement Manufacturing Technology

Cement Carbon Capture, Utilisation, and Storage (CCUS)

6-Week Online Training

19 January 2026
14 April 2026
06 July 2026
12 October 2026

Cement Kiln Process Chemistry

6-Week Online Training

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20 April 2026
13 July 2026
19 October 2026

Cement Factory Maintenance
Grinding and Milling Systems
Cement Kiln Pyroprocessing
Cement Factory Quality Control

3-Week Online Training

02 February 2026
27 April 2027
20 July 2026
26 October 2026

Calcined Clay Cement
Alternative Fuels for Firing Cement Kilns

02 February 2026
26 October 2026

Fly Ash Cements

6-Week Online Training

27 April 2026
20 July 2026

Cement Kiln Refractories

Ceramic

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Info

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12 - 13 May 2026

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5 - 8 October 2026

Online Seminars

Grinding technology in cement production
2 - 6 March 2026

Burning technology in cement production
23 - 26 March 2026

Firing alternative fuels
20 - 23 April 2026

Technologies and optimisation strategies for efficient CO_2 capture
19 - 20 May 2026

Benchmarking carbon capture – A practical guide to technology evaluation
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More information and registration:
www.vdz-online.de/en/training
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40476 Duesseldorf
Germany

General

13-15 January 2026

Future minerals forum
Dawn of a Global Cause

King Abdulaziz International Conference Center, Riyadh, Saudi Arabia

04-06 February 2026

Asia Environmental and Waste Management Expo (Asia EnwastExpo)
"Empowering Asia's Green Future"

Hall 5-6, IMPACT Exhibition & Convention Center, Bangkok, Thailand

Time: 09.00 a.m - 6.00 p.m

For more information, please contact:
The Federation of Thai Industries (FTI)
Ms. Thitiporn (Kat) Mobile: +66 (0) 84-166-9229
Ms. Pavinee (May) Mobile: +66 (0) 63-223-4014

05-07

SENCON 2026 – the 11th International Construction Materials and Machinery Exhibition in Senegal

Hall A-D-E-F, Centre des Expositions de Dakar, Diamniadio, Senegal

Phone / WhatsApp: +971 50 8721510

10-12

ExpoSolidos 2026
12th International Exhibition for the Technology and Processing of Solids

La Farga de L'Hospitalet, Barcelona, Spain

11-12

Global EPC Project Leaders Forum

JW Marriott Hotel Riyadh, Saudi Arabia

For more information, please contact:
Great Mind Events Management
Phone: +9714 568 7800

11-12

Solids Parma

Parma, Italy

27th February – 1st March 2026

9th Edition of Sri Lanka Buildcon 2026

BMICH, Colombo

For more information, please contact:
Mr. Moiz S. J, Exhibitors Consultant, Bright Exhibitions
WhatsApp: +971 50 8721510

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N.E.C.C, Hanoi, Vietnam

22-24 April 2026

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ASEAN's Leading International Trade Fair for Laboratory Technology, Analysis and Biotechnology

International Exhibition Center (ICE) | Hanoi, Vietnam

04-08 May 2026

IFAT Munich 2026

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Munich, Germany

14 May 2026

3rd Egypt Drymix Mortar Meeting and University Symposium (MEDMA)

New Administrative Capital, Egypt

14-17 May 2026

16th Iraq International Building, Construction and Machinery Exhibition

Erbil Build Expo, Iraq

For more information, please contact:
PYRAMIDS GROUP FAIRS
Tel.: +90 216 5752828

17 September 2026

9th Central and South European Drymix Mortar Conference

Istanbul, Türkiye

05-07 May 2026

Egypt Projects 2026

Egypt International Exhibition Center – Cairo

28th September - 1st October 2026

Bauma CONEXPO INDIA (bCI) 2026

8th edition of the International Trade Fair for Construction Machinery, Building Material Machines, Mining Machines, and Construction Vehicles

India Expo Centre (IEML), Greater Noida – Delhi NCR, Uttar Pradesh, India

For more information, please contact:
Messe Muenchen India Pvt. Ltd.

16-18 November 2026

Analytica China 2026

The International trade fair for laboratory technology, analysis and biotechnology in China

Shanghai New International Expo Centre (SNIEC)

24-27

Bauma China 2026 — **Shanghai New International Expo Centre, China**

31 March – 2 April 2027

Analytica Vietnam 2027

International Trade Fair for Laboratory Technology, Analysis, Biotechnology and Diagnostics

Hanoi, Vietnam

Short courses - Wolfson Centre - University of Greenwich

Caking and Lump Formation in Powders and Bulk Solids
27-28 January 2026
Online course

Undesired Deblending and Separation in Processes and Equipment
10-11 February 2026
Online course

Rotary Valves: Design, Selection and Operational Issues
24 February 2026
Online course

Storage and Discharge of Powders and Bulk Solids
21 - 22 April 2026 **Theory classroom sessions**
23 April 2026 **Practical Workshop**
University of Greenwich Medway campus in Kent ME4 4TB

Workshop Week

16 - 19 March 2026
University of Greenwich Medway campus in Kent ME4 4TB

Monday 16 March: **Pneumatic Conveying**
Tuesday 17 March: **Understanding Powder Flow**
Wednesday 18 March: **Characterisation Techniques**
Thursday 19 March: **Dust Containment Methods and Filtration**

مجلة عالم الإسمنت ومواد البناء

صادرة عن الاتحاد العربي للإسمنت ومواد البناء

جدول موضوعات المجلة لعام 2026

العدد: مارس/آذار 2026، رقم 103		
آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات هو: 26 فبراير / شباط 2026		
الموضوعات		**المناسبات**
- التعبئة والتغليف - أنظمة التحميل / التفريغ والتخزين - حلول النقل - تكنولوجيا التغذية - سيور الرافعات الدلوية - مناولة المواد في مصانع الإسمنت والمحاجر والمحطات والموانئ - القباب والصوامع والنقل	- الحماية من التآكل - التروس والمحركات والتزييت - أنظمة الحماية من الحريق - إجراءات الصيانة - الحراريات - تأهيل المحاجر - تنظيف الصوامع - المرشحات وإزالة الغبار	

العدد: يونيو/حزيران 2026، رقم 104		
آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات هو: 28 مايو / أيار 2026		
الموضوعات		**المناسبات**
- المبردات - المراوح - مدافع الهواء - الصحة والسلامة المهنية - تكنولوجيا الطحن - الطواحين العمودية - زيادة إنتاج مطحنة الإسمنت - التكسير - مساعدات الطحن والطحن	- استعادة الحرارة المفقودة - التصوير الحراري - إعادة التدوير الحراري - طرق معالجة واستخدام غبار الممر الجانبي - الحماية من الانفجار في صوامع تخزين الوقود البديل - أنظمة مناولة الوقود البديل - إنتاج واستخدام الوقود الصلب المسترد	

العدد: سبتمبر/أيلول 2026، (عدد خاص)، رقم 105		
آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات هو: 24 سبتمبر / أيلول 2026		
الموضوعات		**المناسبات**
- المعالجة الحرارية - التحكم في العمليات والتحسين نحو الأمثل - هندسة عمليات الإسمنت - أفران الإسمنت - معالجة النفايات الخطرة ومراحل ما قبل معالجتها - معالجة غازات المداخن	- التحول الرقمي - الرقمنة في صناعة الإسمنت - الحرائق وعمليات الحرق - تطوير المشاريع - التحديث والأتمتة - تحليل الغازات - الاختبار والتحليل - معدات المختبرات	**المؤتمر والمعرض العربي الدولي التاسع والعشرون لصناعة الإسمنت ومواد البناء** **نوفمبر / تشرين الثاني 2026**

العدد: ديسمبر/كانون الأول 2026، رقم 106		
آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات هو: 8 ديسمبر / كانون الأول 2026		
الموضوعات		**المناسبات**
- تصنيع الإسمنت الأبيض - الإسمنت المخلوط - الإسمنت متعدد المكونات - إسمنت الخبث - إنتاج الإسمنت الأخضر - خلائط الإسمنت - مضافات الإسمنت - مكونات الإسمنت - كيمياء الإسمنت	- الإسمنت الخالي من الكربون - إنتاج الكلنكر منخفض الكربون - المواد الخام لمضافات الإسمنت - إدارة الإمدادات - إنتاج الإسمنت بطاقة منخفضة - توكيد الجودة ومراقبة العمليات في مصانع الإسمنت - توفير تكلفة إنتاج الإسمنت	

مجلة عالم الإسمنت ومواد البناء
صادرة عن الاتحاد العربي للإسمنت ومواد البناء

الإعلانات

(بالدولار الأمريكي)

المكان	الإعلان في عدد واحد	الإعلان في عددين	الإعلان في ثلاثة أعداد	الإعلان في أربعة أعداد
غلاف خارجي ملون	1,250	*	*	*
صفحة داخلية ملونة (A4)	750	950	1,250	1,350
نصف صفحة داخلية ملونة (A5)	450	550	650	750
ربع صفحة داخلية ملونة	300	350	400	450

بالنسبة للغلاف الخارجي:

الأبعاد: ارتفاع 20 سم وعرض 20 سم

الدقة: 300dpi

نوع الملف: PSD أو EPS أو PDF

الإعلان على موقع الاتحاد www.aucbm.net

بالنسبة للإعلان على موقع الاتحاد **www.aucbm.net**:

الأبعاد: عرض 200 بيكسل وارتفاع 75 بيكسل

القيمة: 150 دولاراً أمريكياً في الشهر الواحد

الدقة: يرجى إرسال الصور مع **الرابط المطلوب** استخدامه بها بدقة 300 dpi (dot per inch)

الإمارات العربية المتحدة

هولسيم و44.01 تطلقان أول مشروع رائد لاحتجاز الكربون وتحويله إلى معادن في الفجيرة

أعلنت شركتا هولسيم و44.01 عن إطلاق أول مشروع تجريبي لتمعدن ثاني أكسيد الكربون الملتقط من صناعة الإسمنت. وتدعم هذه المبادرة مسار الإمارات نحو استراتيجية الحياد المناخي 2050، من خلال تطوير حلول دائمة لتخزين الكربون في قطاع الإسمنت، وتمثل خطوة مهمة في مسيرة إزالة الكربون الصناعي في المنطقة.

يهدف المشروع التجريبي في مرحلته الأولى إلى التقاط 5 أطنان من ثاني أكسيد الكربون يومياً مباشرة من عملية إنتاج الإسمنت، وتخزينه بشكل دائم في التكوينات الصخرية تحت الأرض ليتمعدن، موفراً طريقة طبيعية وآمنة ودائمة لتخزين الكربون الجيولوجي. وستكون هذه المبادرة الأولى عالمياً التي تجمع بين ثاني أكسيد الكربون الملتقط من مصنع إسمنت وعملية التمعدن في الموقع.

يقع المشروع في الفجيرة ويستفيد من دعم مؤسسة الفجيرة للموارد الطبيعية، وسيتم تنفيذه بالتعاون مع شركة NT Energies، وهي مشروع مشترك بين Technip Energies وNMDC إنيرجي، باستخدام حلول Shell CANSOLV™ لالتقاط الكربون من خلال التحالف بين شركتي Shell Catalysts & Technologies وTechnip Energies.

المملكة العربية السعودية

إسمنت الجوف تبرم عقدًا مع «طوى» لتصدير الإسمنت لسوريا وفلسطين

أعلنت شركة "إسمنت الجوف" توقيع عقد بقيمة 37.5 مليون ريال مع شركة "طوى للتنمية". وبموجب هذا العقد تقوم شركة إسمنت الجوف ببيع الإسمنت للشركة المذكورة لغرض التصدير إلى كل من سوريا وفلسطين. وأوضحت الشركة أن مدة العقد سنة واحدة تبدأ من 30 نوفمبر 2025 إلى 29 نوفمبر 2026.

"إسمنت القصيم" توقع اتفاقية تسهيلات بنكية مع البنك الأهلي السعودي

تمت شركة إسمنت القصيم توقيعها اتفاقية تسهيلات ائتمانية مع البنك الأهلي السعودي وذلك للمساهمة في تمويل مشروع إنشاء خط إنتاج رابع في مصنع الشركة، وبطاقة انتاجية تبلغ 10,000 طن يومياً، ليتم إحلاله محل بعض خطوط الإنتاج الحالية، بالإضافة إلى تمويل رأس المال العامل للشركة.

الجمهورية العربية السورية

إطلاق إسمنت بورتلاندي بوزلاني 42.5 أول منتج صناعي جديد

أعلنت الشركة العامة لصناعة وتسويق مواد الإسمنت - عمران عن إطلاق إسمنت بورتلاندي بوزولاني 42.5 الجديد، في خطوة تعكس التزام الشركة بتعزيز الإنتاج المحلي والمساهمة في تنمية القطاع الصناعي السوري.

وأكدت الشركة أن المنتج الجديد يتميز بخصائص فنية متطورة تجعله مناسباً لجميع أنواع الإنشاءات، بما في ذلك المشاريع السكنية، التجارية، والبنية التحتية التي تتطلب مقاومة عالية للظروف البيئية والتشغيلية.

وأضافت الإدارة أن النوع من الإسمنت سيسهم في تقليل الاعتماد على الواردات الأجنبية، ويعكس قدرة الكوادر الوطنية على تطوير منتجات محلية ذات جودة عالية تلبي احتياجات السوق.

جمهورية العراق

انطلاق مشروع معمل فان للسمنت في المثنى

باشرت شركة "فان" الاستثمارية تنفيذ مشروع "معمل فان للسمنت" في محافظة المثنى، على مساحة تبلغ 400 دونم، في خطوة تُعد من أبرز المبادرات الصناعية في جنوب العراق. إذ يجري العمل حالياً على إنجاز البُنى التحتية الأولية للمشروع، التي تشمل توسعة الشوارع الداخلية، تجهيز القوالب الخرسانية، وإنشاء معمل متكامل لإنتاج الكونكريت.

كما بدأت الشركة بإنشاء محطة كهربائية بطاقة 72 ميغاواط، تتكون من أربع وحدات تشغيلية، تمهيداً لتسليم تنفيذ المعمل إلى شركة "سينوما" الصينية المتخصصة في صناعة السمنت، والتي ستتولى استكمال الأعمال الإنشائية والتشغيلية. وصمم المشروع بطاقة إنتاجية تصل إلى 7,000 طن يومياً، وبكلفة تقديرية تتراوح بين 200 إلى 250 مليون دولار.

سلطنة عُمان

ريسوت للإسمنت توقع اتفاقية موزع حصري في الصومال

وقعت شركة ريسوت للإسمنت اتفاقية موزع حصري مع شركة برواقو للإسمنت، ومقرها مقديشو - جمهورية الصومال، لتوريد الإسمنت.

وأوضحت الشركة أن الاتفاقية تم توقيعها بتاريخ 9 نوفمبر / تشرين الثاني 2025، وتبلغ قيمتها التقديرية السنوية نحو 45 مليون دولار أمريكي، على أن تظل سارية حتى 14 سبتمبر / أيلول 2026.

وأكدت ريسوت للإسمنت التزامها بتعزيز التعاون الإقليمي وتقديم خدمات متميزة، ودعم شركائها وعملائها بإمدادات وخدمات موثوقة لتلبية الطلب المتزايد في السوق. وتتوقع الشركة أن تسهم الاتفاقية في تحسين الطاقة الإنتاجية وزيادة العوائد الإجمالية.

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جمهورية مصر العربية

استثمارات جديدة لشركة تيتان مصر

تعتزم شركة تيتان مصر ضخ استثمارات جديدة داخل السوق المحلية بقيمة تتجاوز 3 مليارات جنيه خلال عامي 2025 و2026، تشمل مشروعات في الطاقة المتجددة وتحسين كفاءة الوقود البديل والتوسع في خطوط الإنتاج والطحن. وأكدت الشركة أن المجموعة الأم تمضي بخطى ثابتة في توسيع استثماراتها داخل السوق المصرية، مستندة إلى رؤية طويلة المدى تركز على الاستدامة والتحول الأخضر وزيادة الطاقات الإنتاجية والتصديرية.

وتمتلك الشركة مصنعين رئيسيين لإنتاج الإسمنت في بني سويف والإسكندرية، بالإضافة إلى أربع محطات خرسانة جاهزة موزعة في الجيزة ودمياط، إلى جانب مصنع للركام في السويس، وشركة متخصصة في تدوير المخلفات تعمل في نطاق محافظات القاهرة الكبرى والإسكندرية والسويس.

وستضخ شركة تيتان 3 مليارات جنيه استثمارات جديدة خلال العامين المقبلين، سيتم تمويل نحو 60 إلى 70% منها ذاتياً، بينما تغطي القروض المحلية والدولية النسبة المتبقية.

كما تقدمت الشركة إلى الهيئة العامة للتنمية الصناعية بطلب زيادة رخصة الطحن بمليون طن سنوياً ضمن مجموعة تضم 4 إلى 5 شركات، لترتفع الطاقة الإنتاجية الإجمالية من 4.5 ملايين طن إلى 5.5 ملايين طن سنوياً بعد موافقة الهيئة. وستوجه هذه الزيادة لإنتاج الإسمنت منخفض الكربون، وخاصة الإسمنت البوزولاني الذي تعمل الشركة على توطينه محلياً.

كما تنفذ الشركة خطة استثمارية متكاملة للتحول نحو مصادر طاقة أكثر استدامة، حيث ستستثمر نحو مليار جنيه لتحسين جودة وكفاءة الوقود البديل، ورفع نسبته من 40% حالياً إلى ما بين 60 و70% خلال 3 إلى 4 سنوات".

وتشمل الخطة تطوير عمليات الفرز والتقطيع لتقليل الرطوبة وتحسين جودة الوقود، إضافة إلى رفع الكفاءة الحرارية لتصل إلى 2500 وحدة حرارية تقريباً لتقترب من الفحم (7000 وحدة حرارية/كجم)، مما يسهم في خفض الانبعاثات وتقليل الاعتماد على الفحم.

وتسعى الشركة لمضاعفة الطاقة التشغيلية لشركة تدوير المخلفات التابعة من 200 ألف طن إلى 400 ألف طن سنوياً، من خلال إنشاء خطوط إضافية، مؤكداً أنها تمتلك امتيازات في القاهرة الكبرى والإسكندرية والسويس، وتستعد قريباً للحصول على امتياز محافظة الشرقية.

وفي إطار التوسع في الطاقة المتجددة، تعمل الشركة على تنفيذ محطة طاقة شمسية بقدرة 10 ميجاوات داخل مصنع بني سويف، بتكلفة 20 مليون دولار (نحو مليار جنيه)".

وسيقام المشروع بنظام الشراكة مع مستثمرين متخصصين في الطاقة الشمسية، لتغطية نحو 15% من احتياجات المصنع من الكهرباء، على أن يتم توقيع عقد التنفيذ قبل نهاية 2025، وتستغرق أعمال الإنشاء 8 إلى 10 أشهر.

وتجدر الأشارة إلى أن حجم أعمال تيتان مصر يبلغ 4 مليارات جنيه سنوياً بمعدل نمو 7%، وتستحوذ على حصة سوقية تقارب 6% من سوق الإسمنت المحلية. كما أن 40% من مبيعات الشركة حالياً منتجات خضراء، موضحاً "نركز على تطوير الإسمنت البوزولاني المصنوع من خامات مصرية مثل البازلت، وهو مطابق للمواصفات الأوروبية (EN 197/1)".

الجمهورية اليمنية

تدشين مشروع طاقة شمسية في مصنع إسمنت بحضرموت

تم بمحافظة حضرموت تدشين مشروع محطة الطاقة الشمسية التابعة للشركة العربية اليمنية للإسمنت المحدودة، بقدرة إنتاجية تبلغ 13.75 ميجاوات وبكلفة إجمالية وصلت إلى 11 مليون دولار.

و أُنشئ المشروع على مساحة 200 ألف متر مربع، ويضم 22 ألف لوح شمسي "ثنائي الوجه لزيادة الكفاءة بنسبة تصل إلى 15%، إلى جانب نظام بطاريات ضخم لضمان استقرار التيار وحماية المعدات.

ويُعد المشروع أول تحول من نوعه في قطاع صناعة الإسمنت باليمن نحو الطاقة النظيفة، حيث يعتمد على نظام التتبع الشمسي وتقنيات الجيل الجديد، فيما تصل الطاقة التخزينية إلى 5.7 ميجاوات/ساعة، ما يعزز استمرارية الإنتاج ويقلل الاعتماد على المولدات التقليدية.

المؤتمر والمعرض العربي الدولي للصناعات الصغيرة والمتوسطة (الدورة الثانية)

تحت شعار "التصنيع الذكي : تعزيز التنافسية والابتكار"

التاريخ: 08-10 فبراير / شباط 2026

المكان: قصر المعارض – الجزائر / الجمهورية الجزائرية الديمقراطية الشعبية
الجهة المنظمة: الإتحاد العربي لتنمية الصادرات الصناعية والشركة الجزائرية للمعارض والتصدير

المؤتمر والمعرض الأول لصناعة الإسمنت في العراق - أربيل 2026

التاريخ: 18-19 أبريل / نيسان 2026

المكان: فندق أربيل الدولي - أربيل | جمهورية العراق
الجهة المنظمة: مجموعة "سسيم تك"

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مؤتمر ومعرض صناعة الإسمنت والمجبول البيتوني في سورية 2026

التاريخ: 15 - 17 أكتوبر / تشرين الأول 2026

المكان: مدينة المعارض بدمشق – الجناح الدولي رقم 1 | الجمهورية العربية السورية
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