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- 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 2024

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<p>June 2024 (# 96)</p>	<ul style="list-style-type: none"> - Bagging and packing - Loading/unloading and storage systems - Conveying solutions - Feeding technology - Belt bucket elevators - Materials handling in cement plants, quarries, terminals and ports - Domes, silos and transport - Wear protection - Gears, drives and lubrication - Fire protection systems - Maintenance procedures - Refractories - Quarry rehabilitation - Silo cleanout - Filters, dedusting 	
<p>September 2024 (# 97)</p>	<ul style="list-style-type: none"> - White cement manufacturing - Blended cements - Multi-component cements - Slag cements - Green cement production - Cement blends / mixes - Cement additive - Cement composition - Cement chemistry - Zero carbon cement - Producing low-carbon clinker - Raw material for cement additive - Supply chain management - Energy-efficient cement production - Quality assurance and process control in cement plants - Cement Production cost saving 	<p>27th Arab International Cement Conference & Exhibition (AICCE27)</p> <p>Tunis, Tunisia November 2024</p>

December 2024 (# 98)	<ul style="list-style-type: none"> - Coolers - Fans - Air cannons - Occupational health and safety - Comminution - Vertical roller mills - Roller presses - Increasing cement mill output - Crushing - Grinding & grinding aids - Waste heat recovery - Thermal imaging - Thermal recycling - Methods for treating and utilizing bypass dusts - Explosion protection in alternative fuel storage silos - Alternative fuels handling systems - Production and use of Solid Recovered -Fuels 	
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Deadlines for receiving articles, press releases, or advert materials for 2024 issues are as follows:

June issue: **30th May 2024**
September (Bonus) issue: **20th September 2024**
December issue: **5th December 2024**

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FLSmidth Cement closes the sale of its MAAG gears and drives business to Solix

With reference to the announcement made on 22 January 2024, FLSmidth Cement has now closed the sale of its MAAG gears and drives business to the Swedish investment company, Solix Group AB.

The transaction does not change FLSmidth's previously announced financial guidance for the full year 2023

FLSmidth to explore divestment options for its Cement business

FLSmidth announced that they will explore the available divestment options for their Cement business. FLSmidth objectives are to enable the Cement business to maximise its full potential as well as to further strengthen our Mining business' market-leading position as a full flowsheet technology and service provider to the global mining industry.

As announced on 18 January 2023, FLSmidth has introduced pure play strategies to separate its Mining and Cement businesses. Additionally, long-term financial targets have been announced for each of the two businesses. As of 1 January 2024, the new company structure is in place and the remaining separation activities are expected to be completed during the first half of 2024.

The Mining and Cement businesses are very different in terms of market dynamics and industry fundamentals. In addition, the synergies, overlap in customer base and overlap in product offerings between the two businesses are limited. Consequently, by separating the two businesses, both will benefit from increased operational flexibility, strong accountability and improved financial transparency. This allows them to focus on their own unique opportunities and challenges, and thus maximise their respective full potential.

Over the past year, we have simplified and rightsized the Cement business to further strengthen its market-leading position, improve profitability and make it fit-for-purpose with a strategic focus on the core products and services required in the cement industry. We continue to believe that the global economic development and the green transition offer attractive long-term growth opportunities for our Cement business, and that especially the Service business holds significant untapped potential.

To unlock the full potential of the Cement business and to maximise shareholder value, we have as part of the pure play separation process assessed different business models, investment scenarios and potential ownership structures. This assessment suggests that the Cement business could benefit from an alternative ownership. Consequently, the Board of Directors and Group Executive Management have decided to explore the available divestment options for the Cement business.

Chair of the Board of Directors, Tom Knutzen, says: "I am truly proud of what we have achieved with our Cement business for more than 140 years. I firmly believe the business is well positioned for future success and that it has a significant role to play in the decarbonisation of cement. However, when reviewing the long-term options for FLSmidth as a business, for our customers and for our shareholders, we have concluded that a separation of ownership could be beneficial for both the Mining and Cement businesses. Unlocking the full potential of the Cement business requires substantial investments and dedicated management attention, which we believe will be more easily achieved under a different ownership than FLSmidth's."



Group CEO of FLSmidth A/S, Mikko Keto, says: “Our Cement business has shown robust performance and good strategic progress over the past years. This gives me great comfort in Cement’s ability to continue its positive journey, also – and maybe even more so – under another ownership than FLSmidth’s. We have a clear ambition of further strengthening our market-leading position in Mining, and we see tremendous long-term opportunities for the business backed by strong industry fundamentals and a positive long-term market outlook. Consequently, today’s decision of exploring divestment options for our Cement business constitutes a key step in unlocking the full long-term potential of both the Mining and Cement businesses.”

There is no certainty that any transaction will transpire. Any further announcements will be made as and when appropriate. We would expect a potential transaction to take place by late-2024 at the earliest. In the meantime, FLSmidth Cement will continue to execute on its ‘GREEN’26’ strategy with no changes to leadership or operations.

FLSmidth to deliver a dry grinding solution to an iron ore pellet plant in Oman

The Oman-based mining company Vulcan Pelletizing has placed an order for a range of FLSmidth mineral processing technologies to be installed at their upcoming pelletization plant. The technologies will both reduce water usage and drive operational efficiency.

With water being a scarce resource in the Middle East, dry grinding is well-suited to minimize its consumption as well as drive operational efficiency when downstream processing does not require water.

FLSmidth has a long-standing history in supplying dry grinding solutions and has a market-leading position with over 80 sites operating more than 150 FLSmidth dry grinding mills and air separators on various ores, including gold, nickel, lead, zinc, phosphate and iron ore. Our dry grinding portfolio was further strengthened through the Mining Technologies acquisition.

Reducing water is a key focus area for this customer and one of the key reasons for having chosen FLSmidth’s well-proven, dry grinding technologies. This order includes the delivery of two dry grinding mills, a wet grinding ball mill as well as high efficiency air separators, hydrocyclones and pumps. The equipment is due to be delivered during 2025.

“Sustainable mining is not only a matter of reducing CO₂ emissions. Reducing water usage in mineral processing stands at the forefront of technologies requested by miners, particularly in water stressed regions and where downstream processing also is dry. This order confirms both our broad, market-leading position within dry grinding as well as supports our MissionZero ambition”, comments Mikko Keto, CEO at FLSmidth.

The value of the order has not been disclosed.

About FLSmidth

FLSmidth is a full flowsheet technology and service supplier to the global mining industry. We enable our customers to improve performance, lower operating costs and reduce environmental impact. MissionZero is our sustainability ambition towards zero emissions in mining and cement by 2030. We work within fully validated Science-Based Targets, have a clear commitment to reducing the sustainability footprint of the global mining industry and aim to become carbon neutral in our own operations by 2030.



TAKRAF secures major Project Award with SNIM for F'Derick Iron Ore Project in Mauretania

TAKRAF Group announced the signing of a major contract with Société Nationale Industrielle et Minière (SNIM) for the supply of a complete iron ore crushing, screening, and material handling system, along with a train loading station for the F'Derick project in Mauritania.

The F'Derick iron ore deposit, known for its natural richness in hematite, is part of SNIM's iron ore complex in Mauritania. With current production of approximately 12 million tons per annum, SNIM aims to increase this to 18 million tons through the development of the F'Derick project, thereby contributing to the country's iron ore production.

The contract, signed at the end of 2023, marks a key milestone as SNIM begins development work on site.

Highlights of TAKRAF's scope of supply include:

Lot 1

- Primary crushing plant
- Apron feeder
- Belt conveyor CV-1
- Secondary crushing plant with pre-screening
- Belt conveyor CV-2 and transfer tower TT-1
- Required auxiliary systems and accessories

Lot 2

- Belt conveyor CV-5
- Train loading (loadout) station
- Required auxiliary systems and accessories

TAKRAF designed the system in order to feed the train load-out station with an average loading rate of 100 wagons per hour. Delivery of the equipment to the port of Nouadhibou is expected to be completed in approximately two years.

[bulk-online](#)

Tenax acquires NEST

As part of its development and growth strategy, Tenax (Volargne, Verona) recently acquired NEST, a company specialising in the production of metal and resinoid-bonded diamond tools for calibrating, smoothing and polishing.

The acquisition, completed in December 2023, will enable both Tenax and NEST to broaden their existing range of tools and will strengthen the group's positioning through strategic synergies in terms of R&D, production capacity and market presence. Alessandro Nicolai will stay on as CEO of NEST to ensure management continuity.

With these shared assets, detailed knowledge of the industry and a constant focus on innovation, the two companies aim to further improve their performance in a market that demands increasingly exacting standards.

The project includes Tenax's recent acquisition of TPM, a Verona-based company specialising in the production of tools for stone polishing, and the increase in its ownership of the American joint venture Weha USA to 100%.

Tenax has more than 65 years of experience in the production of chemicals, abrasives and tools for the treatment of natural stone, quartz and ceramics and offers innovative technological solutions for surface processing and treatment. It has 6 branches spanning 4 continents and distributes its products in more than 100 countries worldwide.

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Cemex Completes Takeover of Kiesel Bauchemie

Cemex of San Pedro Garza Garcia, Mexico, by way of its subsidiary Cemex Deutschland AG, Rüdersdorf, Germany, has recently completed the takeover of Kiesel Bauchemie GmbH & Co. KG of Esslingen, Germany. The portfolio of Kiesel consists of specialty mortars such as cementitious tile adhesives and grouts, self-levelling compounds and adhesives for natural stones as well as an assortment liquid

construction adhesives and primers. With this forward integration, Cemex gains a hold in the construction chemical industry, Kiesel's main markets are Germany, France, Poland and the Czech Republic. The brand name will be maintained as well as the existing management team and workforce. A transaction value was not given by either party.

Mapei Takes Over Saudi Company Bitumat

Mapei of Milan, Italy, has acquired the manufacturer of waterproofing systems Bitumat of Damman, Saudia Arabia. Bitumat's main factory covers over 100.000 sqm in Damman and an additional manufacturing plant operates in Bahrain. Bitumat also runs offices and

warehouses in Saudia Arabia, UAE and Oman. This acquisition is part of Mapei's investment in the Middle East, which is one of their biggest growth areas with revenue increasing by 37,6% in 2022.

[Drymix.info News](https://www.drymix.info/news) 

A project to build the first ceramic slab factory powered by green hydrogen has entered the second stage

Iris Ceramica Group and Edison Next (Edison Group) signed an agreement for the development of H2 Factory™, the new production facility in Castellarano (Reggio Emilia) that will use green hydrogen produced by a custom-built state-of-the-art system.

The partnership between Iris Ceramica Group and Edison Next has now reached the beginning of the second stage. The first step towards decarbonisation has been successfully completed after a year and a half of hard work on the feasibility study and construction of the H2 Factory™ site. The facility meets the very high design standards necessary to accommodate the green hydrogen production plant and is equipped with rainwater collection



tanks, photovoltaic panels and hydrogen production and storage areas. All the infrastructure required for hydrogen distribution inside the facility has also been prepared.

H2 Factory™ will be hydrogen-powered from 2025 onwards and will produce large 4D ceramic slabs (the fourth dimension refers to sustainability) in 12 mm and 20 mm thicknesses.



As part of Iris Ceramica Group's €50 million investment in the new hydrogen-powered H2 Factory™, Edison Next will build a 1 MW capacity plant for the production of green hydrogen by electrolysis from renewable sources. The electrolyser will use rainwater recovered from the collection tanks, thereby promoting virtuous water management. The project will also include an additional photovoltaic system with a capacity of approximately 1.2 MW to complement the existing capacity of about 2 MW.

The hydrogen will be used to power the kiln (in up to about a 50% hydrogen-natural gas blend), while a kiln that will run on 100% hydrogen is at the study stage.



The expected production of about 132 tonnes of green hydrogen per year will replace approximately 500,000 cubic metres of natural gas per year. This will bring an immediate reduction in carbon dioxide emissions and save around 900 tonnes of CO₂ per year.

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Process Optimization in Cement Plants

Ahmed Hamdy, ASEC, Egypt

Introduction

Cement production is a complex and energy-intensive process, and as the demand for high-quality cement continues to grow, the industry faces the challenge of enhancing efficiency and performance. Process optimization in cement plants is a strategic initiative that involves a systematic evaluation and improvement of various aspects within the production cycle to achieve higher productivity, energy efficiency, and product quality.

In the highly competitive and dynamic cement industry, where market demands constantly evolve, optimizing processes becomes crucial for manufacturers to stay ahead. This optimization process often involves a multidisciplinary approach, incorporating engineering, technology, and data analysis to identify and address inefficiencies, reduce environmental impact, and enhance overall operational performance.

Background

The story usually starts with a cement producer grappling with challenges in meeting market demands for cement. They sought ASEC's expertise to enhance productivity and overcome limitations in cement plants. Our focus in this article is on one of the cement mills, an end-discharge ball mill equipped with a third-generation separator.

The initial design specified a feed rate of 110 tons/h, but during Performance Guarantee Testing (PGT), the achieved feed rate was 98 tons/h with a Blaine target of 3000 cm²/gm, falling short of the target. Market requirements prompted an increase in Blaine to 3,550 cm²/gm which required calculating the target feed rate to 84 tons/h. However, the actual average feed rate for this mill stood at 60 tons/h, revealing a significant variance.

The investigation highlighted a 29% feed rate shortage, leading to significant relative losses, as the SPC increased by +21%, and higher grinding media consumption by +21%.

Objectives and strategy

The investigation goals involve comprehending and resolving the underlying factors responsible for the highlighted losses through the attainment of sustainable and efficient operations for cement plant equipment. This is to be accomplished prior to considering any upgrades, with a focus on minimizing costs.

Achieving this goal requires Building an efficient investigation strategy aims to specify the elements that may cause the mill limitations, which have been defined in this case as grinding efficiency and separator efficiency, and so the investigation covers multiple dimensions that affect grinding and/or separator efficiencies:

- Ventilation assessment.
- Assessing separator efficiency.
- Ball charge sampling.
- Axial test.
- Performing internal inspection.



Investigation analysis

The investigation journey started with mill system Ventilation Assessment, where the analysis showed a specific airflow in the second compartment ($0.16 \text{ Nm}^3/\text{kg}$ Vs $0.5 \text{ Nm}^3/\text{kg}$ reference value), while air speed in the above charge (0.38 m/sec Vs 1.5 m/sec reference value) and the Suspension percentage as per the mentioned air speed above charge in second compartment (0.94%) which is significantly lower than recommended values ($5\% - 20\%$), and the measured false air at the mill outlet was (54% vs 25% reference value), revealing one of the reasons that caused the very specific airflow and airspeed above charge indicates very low ventilation in the mill system.

Furthermore, Fig. (1) shows the airflow at the separator outlet was ($1763 \text{ m}^3/\text{min}$ Vs $2500 \text{ m}^3/\text{min}$ reference value), and the Feed/air ratio was (2.94 kg/m^3 Vs $1.5-2 \text{ kg/m}^3$ reference range) that means a high specific material load, and measured false air at the mill filter that was (19% VS 5% reference) playing its role as one of the reasons impacting the low ventilation in the separator.

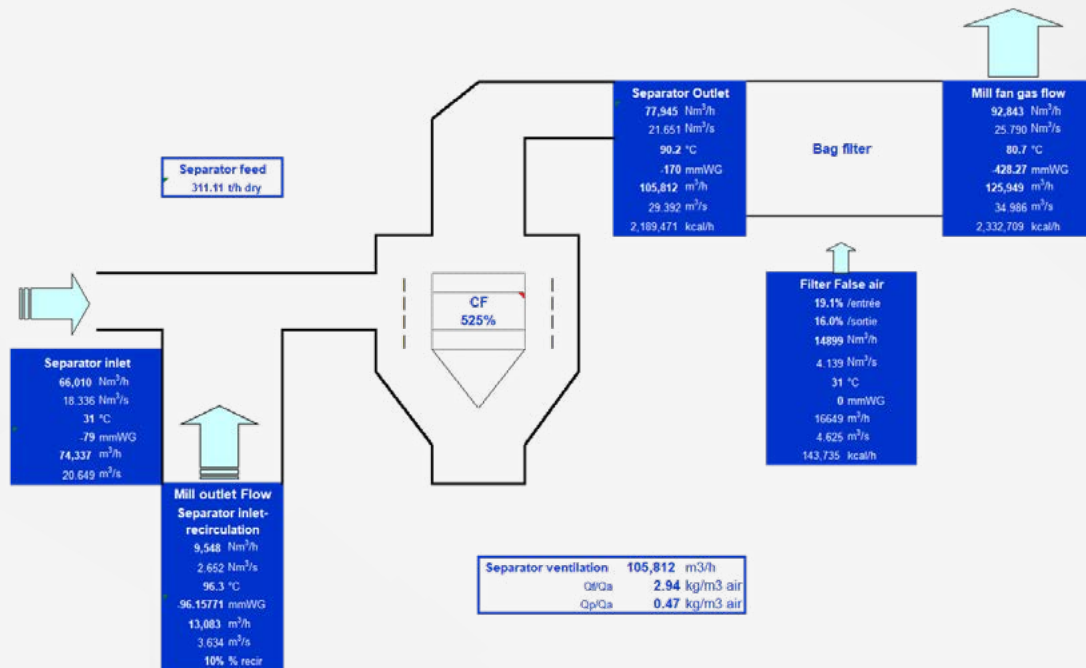


Fig. (1)

Inspecting internal parts as evidential elements to understand the causes and outcomes of low ventilation, as the Mill intermediate & Outlet diaphragms permeability is 70% and 90% due to clogging by nips in 1st compartment and cement coat in 2nd compartment which affects the level of material, fan damper malfunction louver plate which connects with damper actuator reaches to 100% before other louver plates preventing damper from full opening, mill

outlet duct connected to separator coated decreasing cross-section of the duct, beside a welded steel plate in mill outlet duct to separator make obstruction for mill air stream, the existence of steel plates blinding a section and half from turbine separation area {Pic. (1)}, and caught false air, and the mill outlet and mill filter caused restrictions for draft and ventilation from the mill system; those barriers were the main reasons for the low ventilation in the mill system.



Pic. (1)



Pic. (2)

On the other hand, the consequences of this low ventilation are significant on grinding media and liners coating {Pic. (3)} affecting grinding efficiency, and material accumulations all over the system {Pic. (2) & (4)} that also causes more ventilation restriction.



Pic. (3)



Pic. (4)



Proceeding in our investigation with **Separator Efficiency**, were as shown in Fig. (2), the efficiency of sieve analysis resulted in a separator efficiency of 29.69 % Compared typical value of the 3rd gen. separator of 80%, while the circulating factor was (5.25 Vs 1.9 – 3.1 as per working Blaine 3550 cm²/gm), and the bypass percentage was (78.5% Vs Reference < 10 %).

Residue %	Passing %	µm	µm
38.9	61.1	4.8	95.2
46.9	53.1		

Separator feed	311 t/h
Separator product	59.6 t/h
Sieve size	45 µm
Passing Separator feed F	61.1 %
Passing Separator product P	95.2 %
Passing Separator reject R	53.1 %
circulation of sieve analyses	6.25
efficiency of sieve analyses	29.69

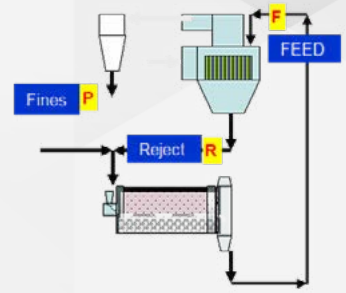


Fig. (2)

A third-generation separator exhibited an efficiency of only 30%, impacting feed rate and energy consumption.

Explaining the low separator efficiency and besides the low ventilation, the separator top seal allowable clearance shall be 14mm and not exceed 19mm as per design shown in Fig. (3), while the measured clearance was 31mm, almost double the design clearance, this variance affects the labyrinth effect allowing the material to escape without separation.

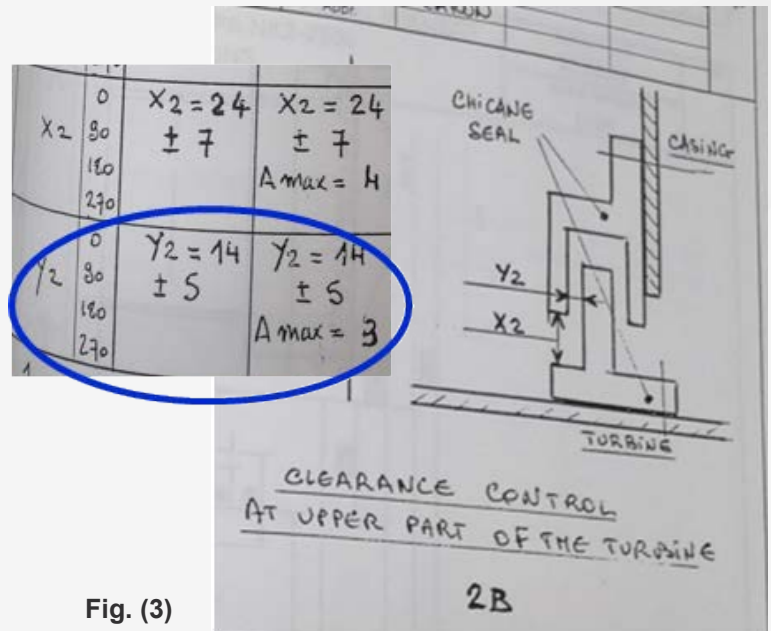


Fig. (3)

Also, material inlet distribution to the separator is mandatory to maintain separator efficiency, the material is fed to the separator through 4 branches as shown in Fig. (4), In fact it was found three out of these 4 branches blocked with material, and this means very poor material distribution which impacts separator efficiency.

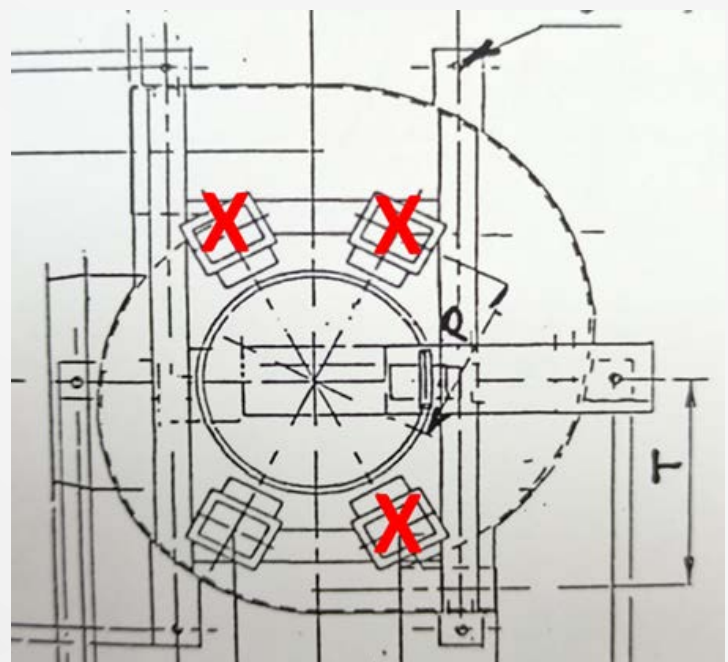


Fig. (4)

The next aspect in this investigation explores grinding media analysis with **ball charge sampling test**.



Fig. (5)

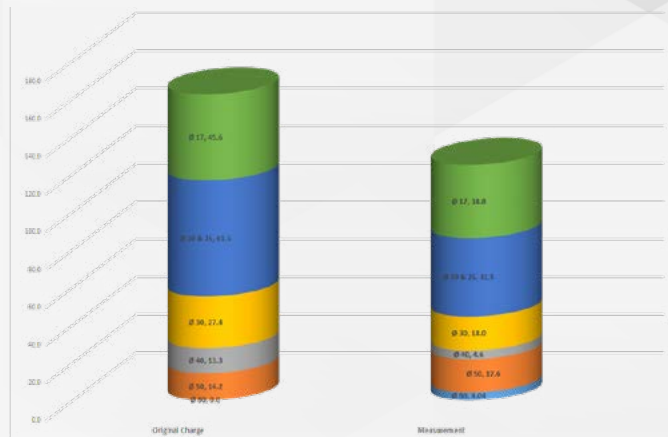


Fig. (6)

The filling degree in the 1st compartment is 24.6%, which is 6% less than the plant figure as per Fig. (5) with a total deficiency of charge media around 12 tons, while the filling degree in the second compartment is 24.8%, which is 7.4% lower than the plant figure as per Fig. (6) with a total deficiency of charge media around 37 tons; Also, the actual composition of the ball does not match the recommended composition.

Going deeper in the grinding media analysis involves the axial test, that results balls Classification graph and granulometry profile.

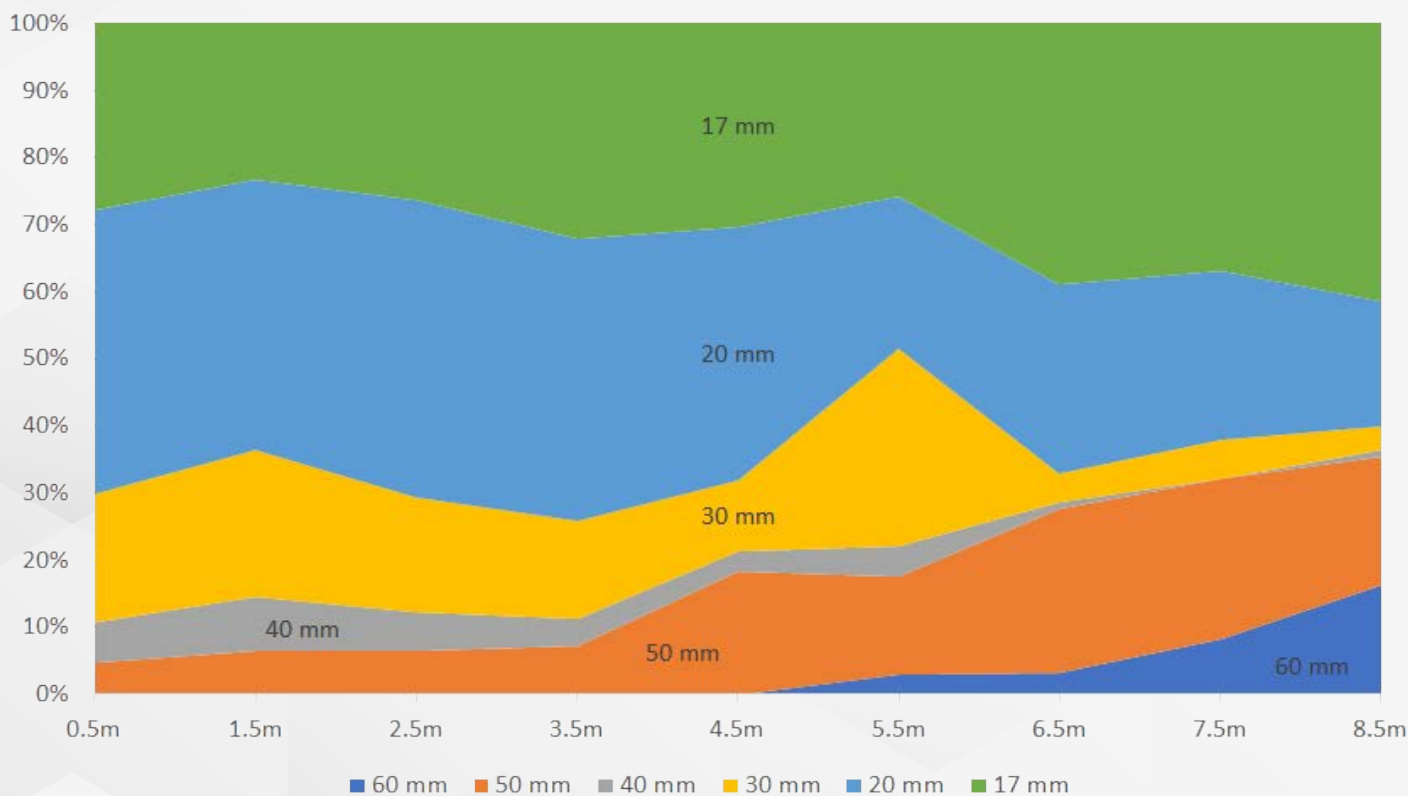


Fig. (7)



The absence of classifying liners further compounded the grinding efficiency issues as Fig. (6) showed the big-sized balls exist along the 2nd compartment length and do not follow the descending profile with higher intensity by the end of the compartment, especially from meter 4.5 you can find in the classification curve that big-sized balls (Ø60, Ø50) have a high concentration in the 2nd half of compartment length, clearly impacting granulometry profile as showed in Fig. (7) the curve profile follows a normal descending manner till meter 8.5 then the horizontal profile exists till meter 11.5, then decreases at the compartment end. The horizontal profile at the curve can be explained by the non-classification of balls explained before.

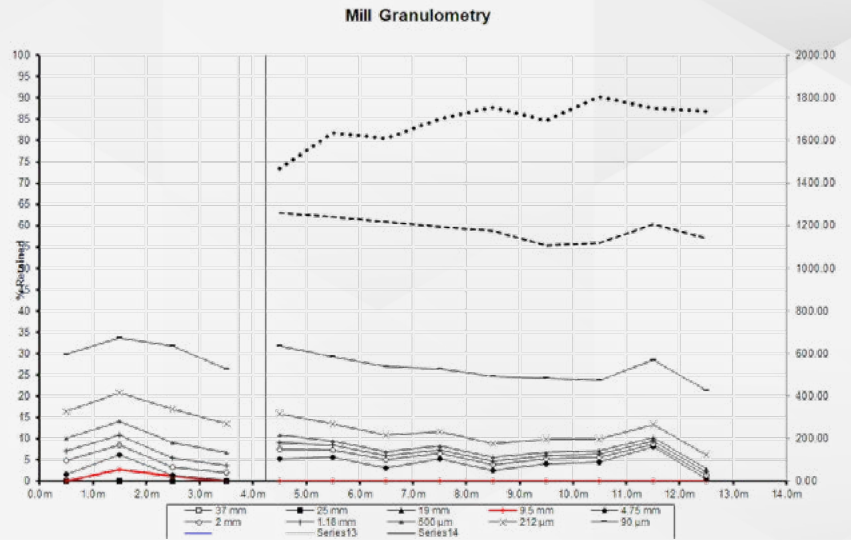


Fig. (8)

Conclusion

Low ventilation was attributed to various factors, from partial blockages to malfunctioning mechanisms.

Solutions involved regular cleaning, false air arrest, adjusting separator top seal gap, damper repair, and the removal of obstructions to restore proper ventilation; those actions were applicable during regular PM stoppages, saving time and money.

While addressing granulometry issues required installing classifying liners, compensating for ball charge shortages, and sorting balls to match the design.

The low-cost solutions aimed at optimizing operation effectiveness included adjusting separator top-seal clearance and maintaining proper material distribution to separator.

The comprehensive approach restored the mill's efficiency, minimizing losses in capacity, energy consumption, and grinding media without sacrificing market requirement of keeping Blaine target at 3,550 cm²/gm, what can clearly be shown in Fig. (8).

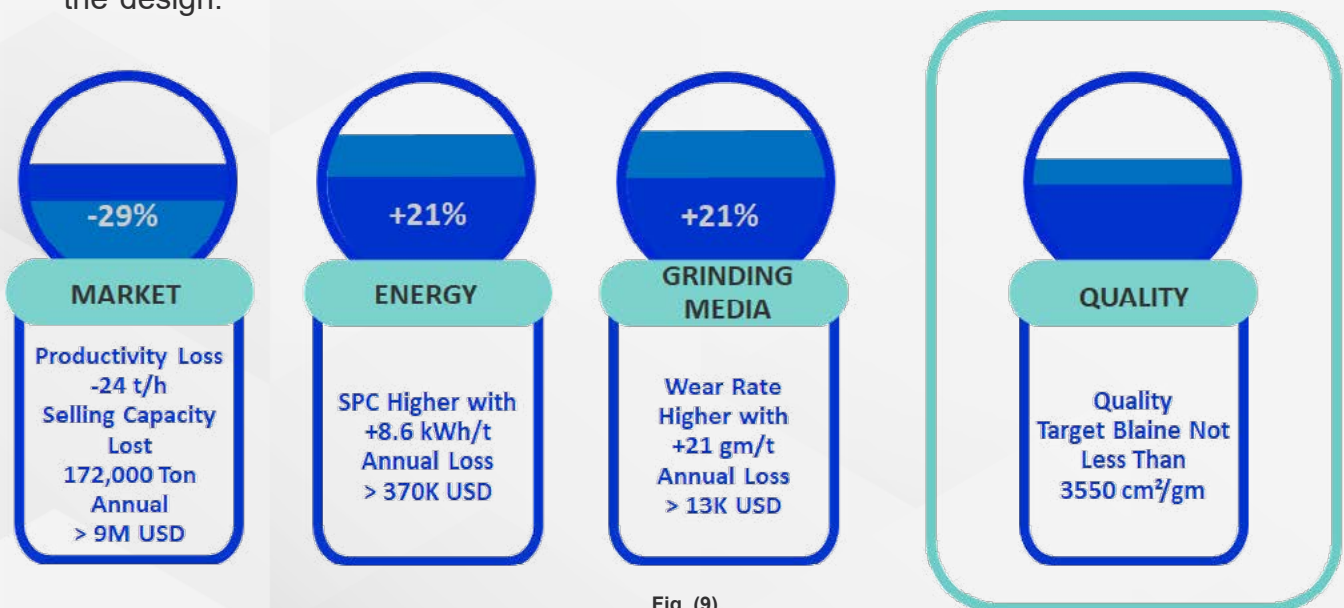


Fig. (9)

Ramco's Green Digital Canvas

Ramco Systems Limited, UAE

Cement production, a vital industry powering global infrastructure, has long been under scrutiny for its significant environmental footprint. The emission of greenhouse gases, particularly CO₂, during cement manufacturing poses a substantial threat to the environment. However, the industry is at an inflection point, with major players spearheading efforts to minimize emissions and embrace sustainable practices.

In response to the pressing need for emission reduction, cement manufacturers are implementing a range of strategies aimed at mitigating their environmental impact. One such approach involves increasing the usage of blended cement, a mixture that incorporates supplementary cementitious materials, thus reducing the reliance on traditional Portland cement and cutting down CO₂ emissions. Additionally, a shift towards adopting renewable energy sources, such as solar and wind power, is underway to power cement plants, further reducing carbon emissions. Moreover, exploring alternative fuels like biomass and waste-derived fuels offers a promising avenue to decrease greenhouse gas emissions in the cement production process.

The integration of Environmental, Social, and Governance (ESG) considerations has become imperative in guiding sustainability practices within the cement industry. Companies are recognizing the importance of making decisions that not only minimize environmental impact but also uphold social responsibility and ensure robust corporate governance. This holistic approach to sustainability is shaping the industry's trajectory, influencing decisions across all levels of operation.

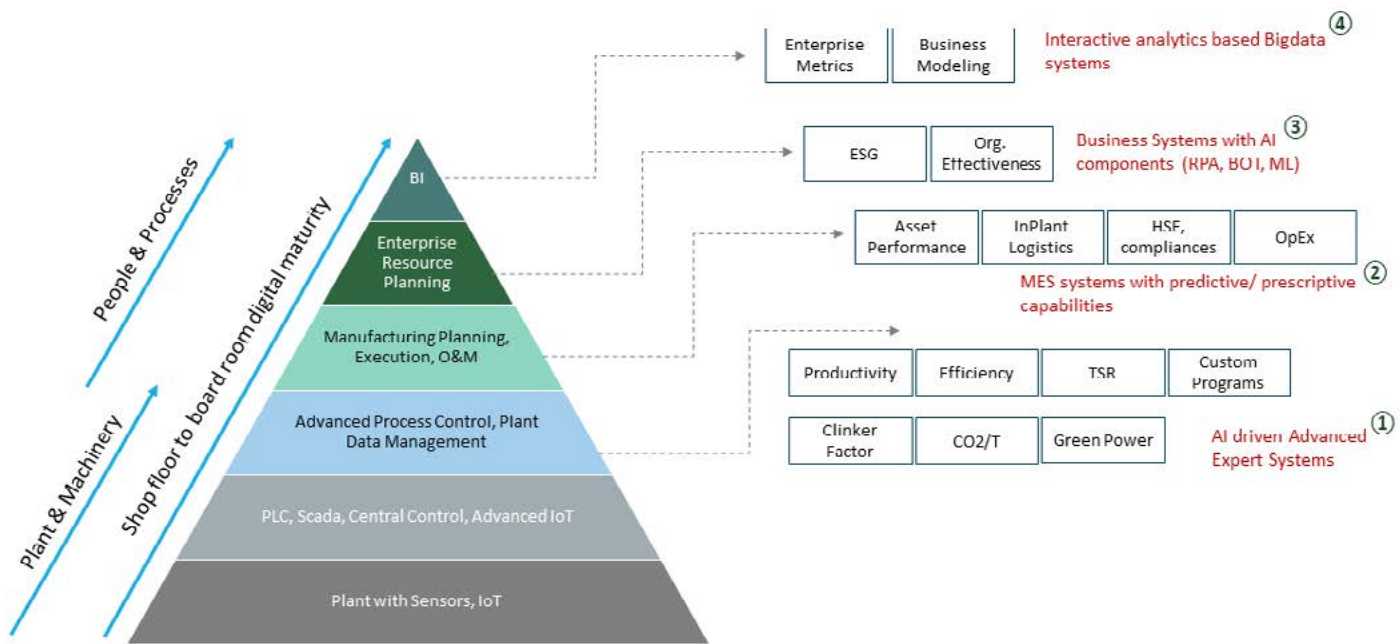
In the quest for sustainability, digitalization emerges as a powerful tool for cement manufacturers to future-proof their operations and meet evolving business demands. Aligned with the principles of Industry 4.0, companies like Ramco are pioneering digital solutions tailored to address the unique challenges faced by the cement industry.

In order to have complete control over cement business, the top decision-makers need to have solutions and tools deployed from shop floor to board room impacting plant, people and processes. These tools enable green cement production quarry to dispatch. At the plant level, AI-driven advanced expert systems co-exist with the DCS and Scada Systems and ensure that parameters such as productivity, efficiency, clinker factor, Thermal Substitutions Rate (TSR) and CO₂ emissions are optimized. At operational level, MES systems with predictive and prescriptive capabilities ensure streamlined production planning, execution, asset performance, control on OPEX, and compliances on HSE. At an enterprise level, the Business Intelligence (BI) applications ensure that there is a unified data backbone that helps build and populate the right metrics for effective decision at levels of the organization.

Ramco's comprehensive digital ecosystem encompasses a range of tools and solutions designed to tackle challenges across various layers of cement manufacturing. From Plant Performance Management (PPM) systems optimizing operational efficiency to Plant Operations Management (POM) systems ensuring seamless integration between business management and plant performance, Ramco's digital canvas offers a holistic approach to sustainability.



The below illustration captures four categories of interventions at various levels:



Category 1:

In this category, challenges are very dynamic in nature. It is about realising your business objectives of TSR, Clinker Factor, SPC, SFC, etc. and thereby demonstrating your commitment towards making cement greener. You need advanced and AI driven optimizers to handle process control and plant operation (e.g influence of alternate fuel) to ensure plant is operated at its optimum level all the time while meeting your business objectives.

One notable solution offered by Ramco is ProcessSuite, the world's most advanced expert optimizer combining Model Predictive Control (MPC) and Machine Learning (ML) based Real-Time Optimization (RTO). ProcessSuite optimizes milling, grinding, and pyro operations, effortlessly handling complexities introduced by alternative fuels while ensuring the plant operates at optimum levels.

Another innovative offering from Ramco is BlendX, a blending optimizer based on MPC technology, aligning with business objectives such as additives economics and cement quality. These solutions have been successfully implemented worldwide, demonstrating their efficacy in driving sustainable cement production.

Unlocking the value of data generated by cement plant assets is crucial in optimizing operations and driving sustainability. Ramco's Plant Data Management (PDM) unifies data from disparate systems, creating a digital backbone for real-time visualization and historical analysis of plant operating data. Additionally, Ramco's Conveyor Vision innovation utilizes AI technologies to enhance loading and dispatch efficiencies, eliminating the need for conventional sensors while accurately counting and reconciling bags loaded.

Category 2:

In this category, the priorities of plant managers are around production planning, scheduling, execution, tracking. The key KPIs are containing OPEX and improving OEEE. Ramco offers a purpose-built Manufacturing Execution System (MES) for the cement industry. It helps in precise planning and execution - both short and long-term. Cement business is capital intensive. Ramco has an integrated asset management solution to track and optimize the performance of plant machinery and equipment to maximize return on assets. Transportation and Storage of cement requires utmost care, as the risk of spoiling and wastage is always looms. Ramco's in-plant and external logistics solution addresses this aspect through tracking and tracing at all stages while cement is in transit.

Category 3:

It is imperative to integrate operational information with corporate functions such as Finance, Planning, Procurement, Sales and Human Resources. Ramco's ERP acts a comprehensive platform that ties together these functions with operational and plant level activities. It is sprinkled with elements of Robotic Process Automation (RPA), Machine Learning and Bots to enhance productivity and user-experience.

Category 4:

This category deals primarily with visualizing the right stories from the operational and business data. It entails building a reliable data backbone and business data model. Once it is established, the decision-makers can create the right metrics and track them for effective decision-making across all levels of the organization. A CEO can visualize the performance of each of his plants on a real-time basis sitting in the headquarters. The information is presented in such a manner that they can take efficient decision just by using the platform.

In conclusion, Ramco's green digital canvas offers a comprehensive suite of solutions to accelerate the transition towards sustainable cement production. With modular offerings and a roadmap-driven approach, Ramco empowers cement manufacturers to navigate the complexities of sustainability and drive towards a greener future. By embracing digital transformation, the cement industry can not only reduce its environmental footprint but also thrive in an ever-changing business landscape, ensuring a sustainable future for generations to come.

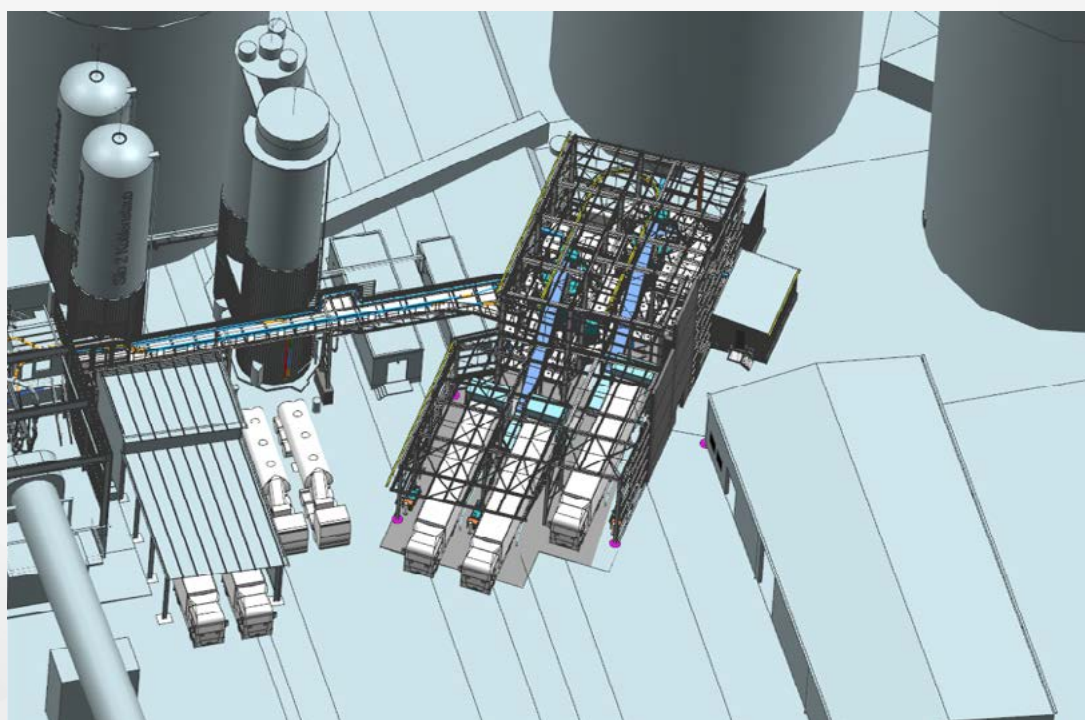
Two current case studies for the use of alternative fuels for cement

Olaf Michelswirth, InterCem Engineering GmbH, Germany

InterCem assumes the responsibility of engineering, supplying and installing cutting-edge alternative fuel projects for its customers, placing great emphasis on environmental concerns and resource optimisation.

Case study 1: Truck receiving station and dosing for alternative fuels for the feeding of the rotary kiln in the Solnhofen Portland cement plant

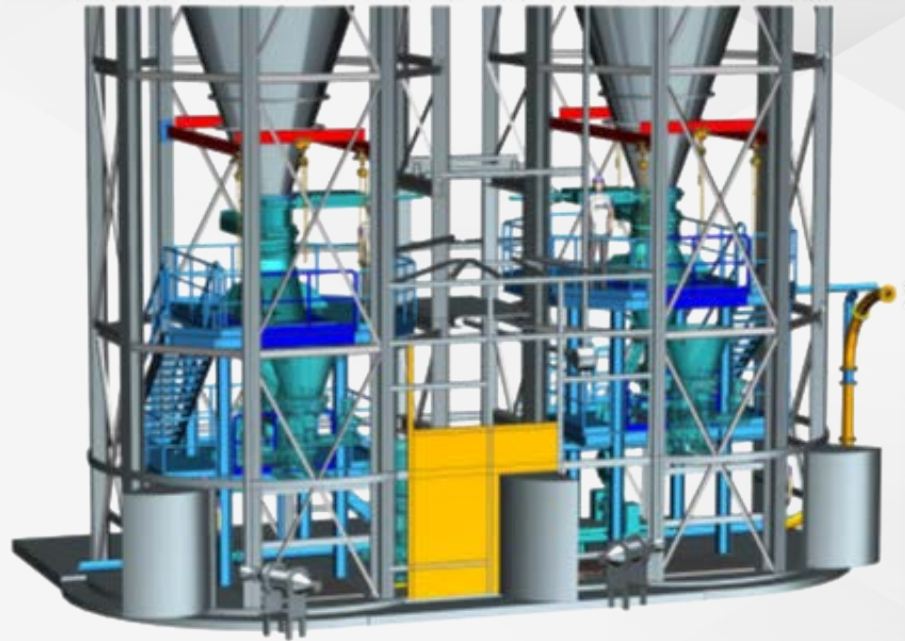
The cement producer decided to carry out a complex conversion of its fuel dosing system, which was to be carried out during kiln operations.



Masterlayout

The aim of this investment/optimisation was to increase the substitution of alternative fuels for the fuel supply of the rotary kiln, the flexible feeding of the individual qualities and the homogenization by weighing of each individual fuel of the total output of the fuel calorific values.

In preparation of the optimisation of the alternative fuel feeding station, i. e. the feeding of various alternative fuels to the rotary kiln, the existing pulverized coal feeders at the Portland cement plant in Solnhofen were converted to the latest state of the art between 2020 and 2021.

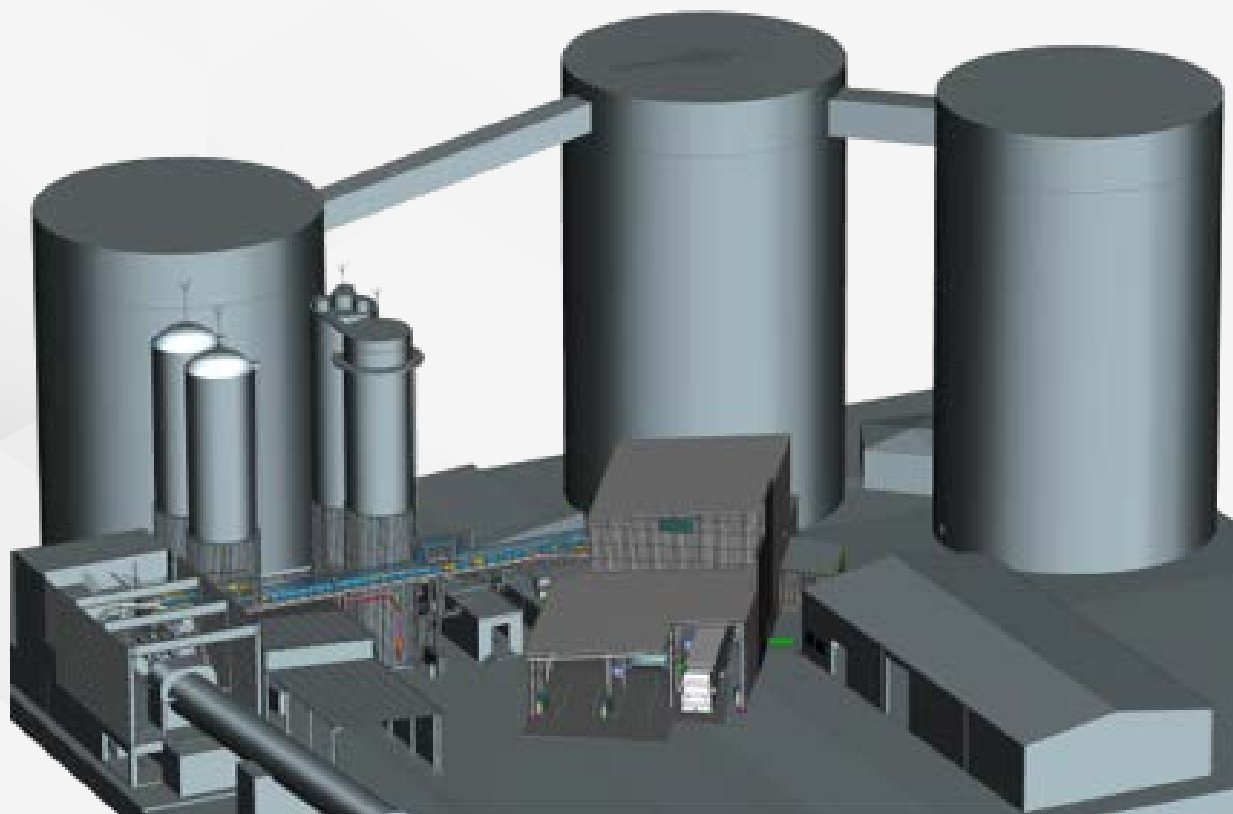


Coal dust silos with new metering system and steel construction

Project process

As a first step, a 3D scan of the plant was made, which included the blower room twice, the inside of silos 1, 2, 4 and 5 and the pipework outside. These data were used to model the grounds, the extension arm of the system, load diagrams and the piping design.

The steel construction, the stainless steel lining of the two silo cones, the pipework and the necessary accessories as well as the complete assembly were included in Intercem's scope of supply and services.





Successive steps of the project

- Relocation of the conveying air fan of the existing coal dosing system
- Installation of the clean air pipes for coal and animal meal
- Dismantling and reassembly of the piping under silos 4 and 5
- Discharge of silo 1
- Disassembly of the connecting screw between silo 1 and the existing coal dosing system under silo 2.
- Sealing of the inlet to ensure that the furnace could be supplied with pulverised coal via the old dosing system and silo 2 without interruptions. Fly ash and animal meal also passed unhindered through the existing dosing system.
- Dismantling of the bursting discs and the filter head of silo 1
- Cleaning of silo 1 and realization of the shut-off measures to silo 2.
- Dismantling of the blower and the rotary valve under silo 1
- Shortening of the silo to $D=700$ and installation of stainless-steel lining
- Assembly of platforms and stairs
- Installation of pulverized coal dosing and diverter
- Assembly of pipelines, bursting discs, filter head and measuring system silo 1
- Cleaning of silo 2
- Dismantling of the measuring system and shut-off measures to silo 1
- Disassembly of the old pulverised coal dosing system, the rotor and the pre-hopper
- Shortening of the silo to $D=700$ and welding-on of the flange
- Installation of stainless-steel lining, platforms and stairs and pulverized coal dosing system
- Fitting of rupture discs and filter head from silo 2
- Connection of the feed lines to supply the kiln with 2 separate coal feeders in single and parallel operation



Thanks to the possibility of feeding very small quantities of 2 types of pulverized coal and the optimal dosing of a wide variety of alternative fuels, it was possible to increase the substitution from 60-65% to 90-95%.



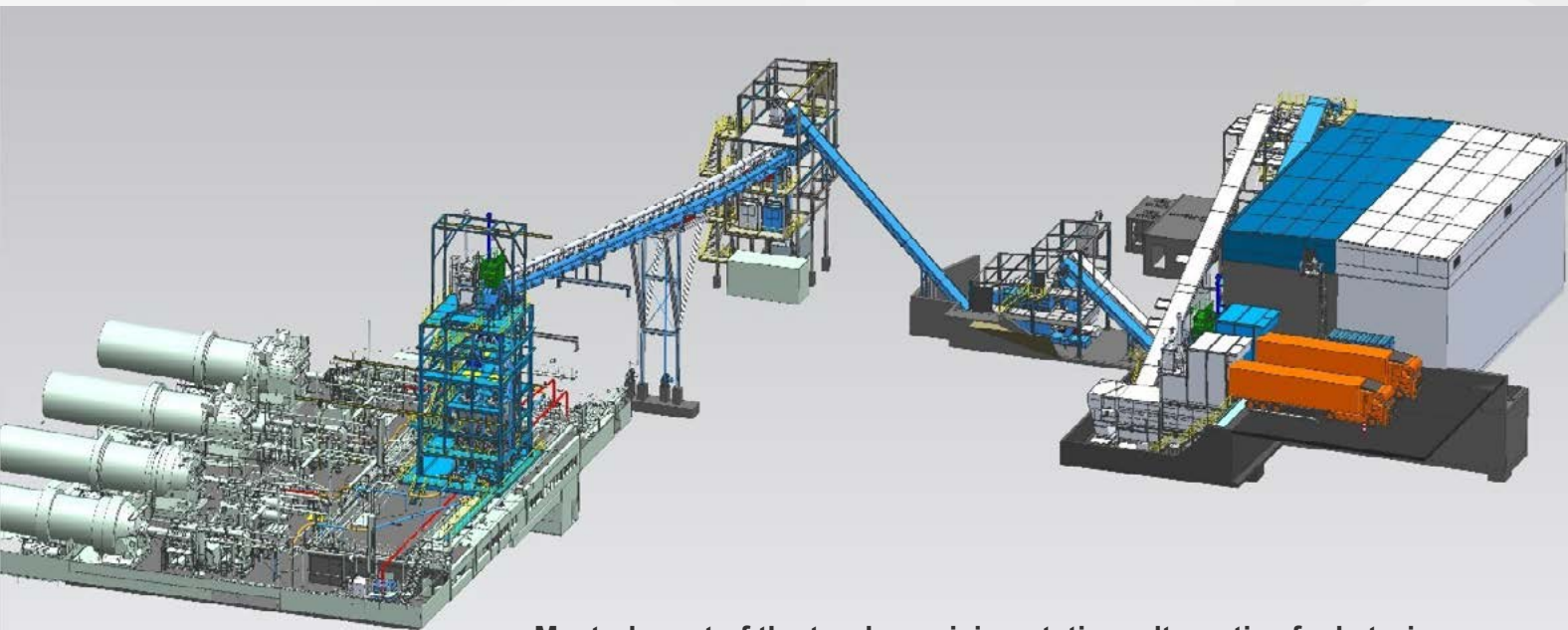
Processing of alternative fuels



Feeding of various alternative fuels to rotary kiln

Case study 2: Alternative fuel plant on the factory premises of a European customer

The customer's objective was decarbonisation and thus a significant CO₂ reduction in the existing plant with 4 rotary kilns.



Masterlayout of the truck receiving station, alternative fuel storing with automatic reclaimer and dosing system for secondary fuels to rotary kilns

The target of this project is to successfully engineer, supply, and install a new alternative fuel plant on the factory premises, ensuring a seamless process of receiving, storing, and dosing fluff while incorporating alternative fuels and promoting sustainability in the industry.

The benefits of this project are multifarious. It has environmental benefits, ensures an optimisation of resources, supports sustainability and increases the operational efficiency.

By integrating alternative fuels and optimizing resource utilization, the project helps reduce carbon emissions and minimize the environmental impact in the industry. The efficient handling, storing, and dosing of fluff material allows an optimal use of resources, ensuring a continuous material flow and maximizing fuel efficiency.

The project demonstrates a commitment to sustainability. It incorporates biomass processing capabilities, promotes the use of renewable energy sources, and ensures long-term adaptability to potential future fuel requirements.

The strategic positioning in the existing infrastructure of the dosing tower, dosing systems and careful sorting processes permit problem-free operation and increase the overall efficiency of the plant with maximum dosing accuracy.

Intercem assumes the responsibility of engineering, supplying, and installing a state-of-the-art secondary fuel plant on the factory premises of its customer. The plant is designed to handle fluff and alternatively biomass, while the existing pilot plant continues its operations. Specialised companies were selected to provide the plant components and relative documentation.

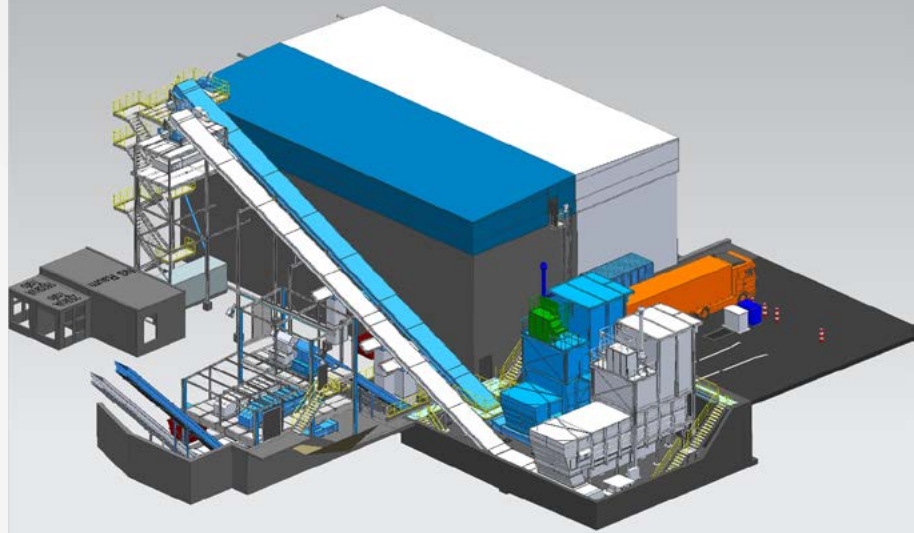
To ensure a continuous process of receiving, storing and dosing fluff in three of the four rotary kilns at the site (stage 1 of the project) is the primary goal. The expansion of the dosing system with the feeding line for the fourth kiln is planned for a later phase (stage 2).



Of course, such a project also has its challenges:

An important investment is required if the implementation of a secondary fuel plant and the integration of advanced technologies are planned.

Implementing a new secondary fuel plant and integrating advanced technologies can require a significant upfront investment, which can represent a significant financial expense for the company.



Masterlayout

From the technical point of view, the introduction of new equipment into existing installations may lead to technical challenges during the mounting and integration. This could cause delays and the necessity of additional resources.

Finally, as the operational complexity is increasing, additional works, trainings and maintenance might become necessary to make sure the operations will run efficiently.



Status of the project 02/2024

Engineering and Planning by Intercem:

- Flowsheet
- Site plan
- Master and general arrangement drawings
- Machine layout plan
- Detailed workshop drawings
- Load and anchorage plan
- Pre-static
- Bill of quantities (preliminary)
- Motor and sensor list
- Project schedule
- Detail engineering
- Electrical engineering
- Cladding engineering
- Project management
- Steel structure assembly
- Mechanical assembly
- Electrical assembly
- Supervision
- Commissioning
- CE conform documents
- Documentation

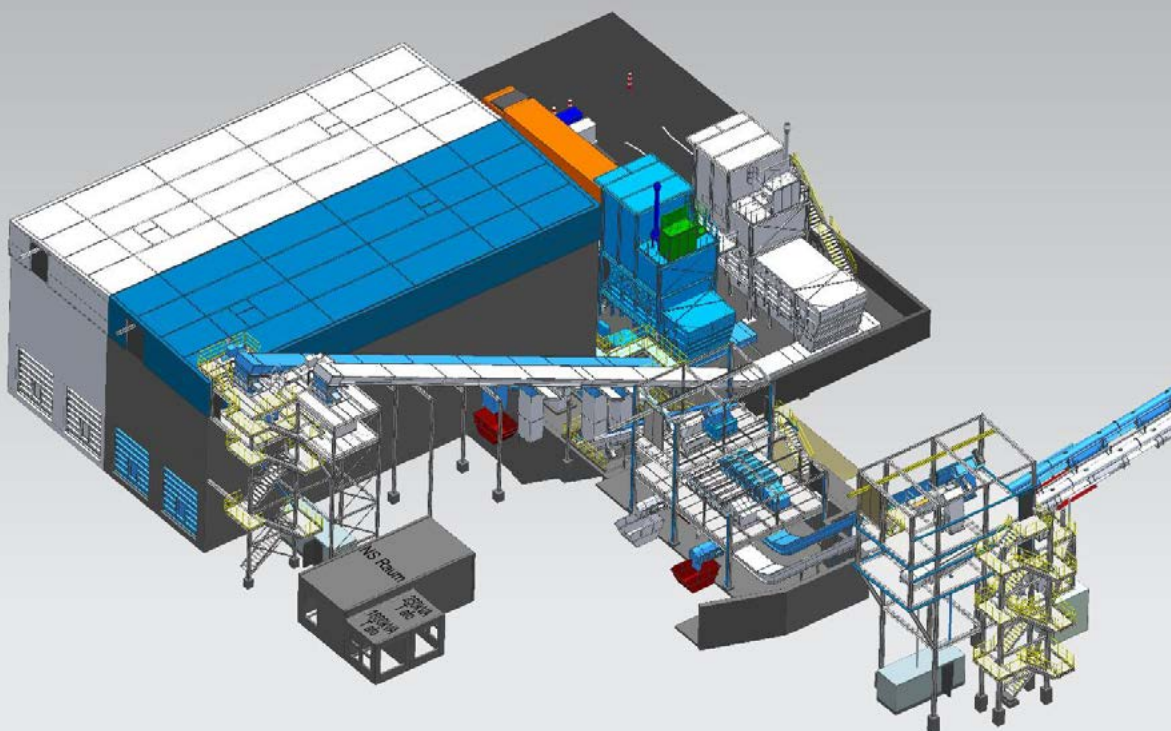
Scope of supply Intercem:

- Truck unloading station
- Material transport to storage box
- Loader/reclaimer system
- Material transport to preparation tower
- Material preparation
- Material transport to fuel dosing system
- Fuel dosing system
- Supporting steel structure and connection chutes
- Handrails, cladding and roofing
- Pipes for pneumatical transport
- Surface protection and painting
- Connection to the kiln main burners

Intercem will be responsible for handling the project from receipt of order to completion of commissioning on an EPC basis from one hand.

Civil engineering, civil works and a few parts of minor priority are not part of Intercem's scope of services and will be executed by the customer.

Time frame: It is estimated that the project will be finished within 50 weeks. Start of production is planned in Q2/2024.



Overview of the truck loading stations, fuel storage, and dosing system for secondary fuels to rotary kilns

Workability of Cement Paste

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Abstract

Workability is a general, descriptive term that indicates the ease with which a concrete can be mixed, transported, placed and compacted to give a uniform material (Taylor 1990). This paper explains all the reasons which may lead to low workability of cement paste and studies a real case of cement produced from ball mill in a cement plant. During the case study, several chemical, physical, and mineralogical tests were performed on clinker, Gypsum, cement paste and concrete under the supervision of ASEC technical center. The collected data was analyzed to find the root causes of this property. This research proposes an action plan to treat the causes of low workability, and this property has been improved based on the application of this action plan. The case study presented here can provide guidance for addressing this property in different plants.

Keywords

Workability; Cement; Concrete

1. Introduction

There is no single measure of workability, but various empirical tests that provide information on particular aspects are widely used. The most important is the slump test, in which the material is moulded by lifting away a conical container in which it was placed. The subsidence of the resulting pat provides a measure of the ability of the material to flow under its own weight (Taylor 1990).

This research treats workability of cement paste (noting that W/C ratio 0.45, type of sand and type of aggregate are constant) by analyzing the root cause of this property. Samples were collected from the cement plant and then chemical, physical, and mineralogical tests were carried out in different laboratories and with different techniques.

2. Chemical, physical and mineralogical tests

Twelve cement samples were collected from inside mill; Axial test was performed using different size of sieves (32 μ , 45 μ , 63 μ , 90 μ , 125 μ and 250 μ). Separator efficiency was evaluated using Tromb curve calculation depending on particle size distribution test for four samples (feeding, rejected, after filter and final product).

XRF (ARL 9900), a wavelength dispersive X-Ray fluorescence instrument containing X-Ray tube with Rh as anode, 11 fixed channels with goniometer and a 3.6 kV generator, was used to measure SiO₂, Al₂O₃, Fe₂O₃, CaO, MgO, K₂O, Na₂O, TiO₂, MnO and P₂O₅ (Rueda, et al. 2012).

XRD (PW 3209), an X-ray diffraction instrument, was used to measure clinker, Gypsum and cement phases. The identification of the most probable phases is carried out using Panalytical X'Pert high score software 2006 with the aid of the international center of diffraction database (Ermrich and Opper 2013).

Paste analysis were performed in accordance with ASTM C-451/18 (ASTM 2022).

3. The main reasons for low workability of Cement Paste

At the beginning of this work, the main possible factors causing this property were reviewed. The following potential reasons have been studied:

- Clinker reactivity
 - High C_3A (tri calcium aluminate) levels
 - High fineness
- Presence of calcium sulfate hemi hydrate
- Narrow particle size distribution (Magistri and Recchi 2010).

3.1. Clinker reactivity

3.1.1. High C_3A level

Uncontrolled hydration of C_3A before the formation of surface ettringite; lead to Flash set. It is accompanied by rapid release of heat and loss of workability and is caused either by insufficient gypsum or of insufficient sulfate solubility (Alsop, et al. 2001).

In this work, Mineral composition was evaluated by:

- Studying the mineral composition of clinker, gypsum and cement using XRD.

3.1.2. High fineness

Adsorption of water from the atmosphere will be greater in finer cements. Hence, such cements will deteriorate more rapidly in storage and on exposure to the atmosphere. Finer cements will also react more strongly with alkali-reactive aggregates. On the other hand, the workability of the paste improves with fineness (in case of optimized sulfate) because of increased cohesion and reduced bleeding (Soroka 1979); In this work, fineness of cement was evaluated by:

- Blaine test according to EN 196-6 (EN 2019)

3.2. Presence of calcium sulfate hemi hydrate

Depending on temperature/humidity inside the mill, gypsum can lose water being converted to other forms. Among them, calcium sulfate hemihydrate is characterized by a higher immediate solubility: higher amounts of sulfate are supplied during clinker hydration. Sulfate in excess with respect to hydrating calcium aluminate precipitates as secondary gypsum, rather than producing ettringite. Secondary gypsum absorbs water reducing fluidity and increase viscosity due to the particular shape of secondary gypsum crystals (Magistri and Recchi 2010); In this work, effect of calcium sulfate was evaluated by:

- Determining Early Stiffening of cement paste according to ASTM C451-18 (ASTM 2022)

3.3. Narrow particle size distribution

Narrowing the particle size distribution (PSD) saves energy in grinding, but increases the amount of water needed to produce a mix of given workability (Taylor 1990); As with Portland cement concrete the cement content necessary to achieve a workable concrete increases with decreasing water/cement ratio (Hewlett 2004). In this work, PSD characteristics was evaluated by:

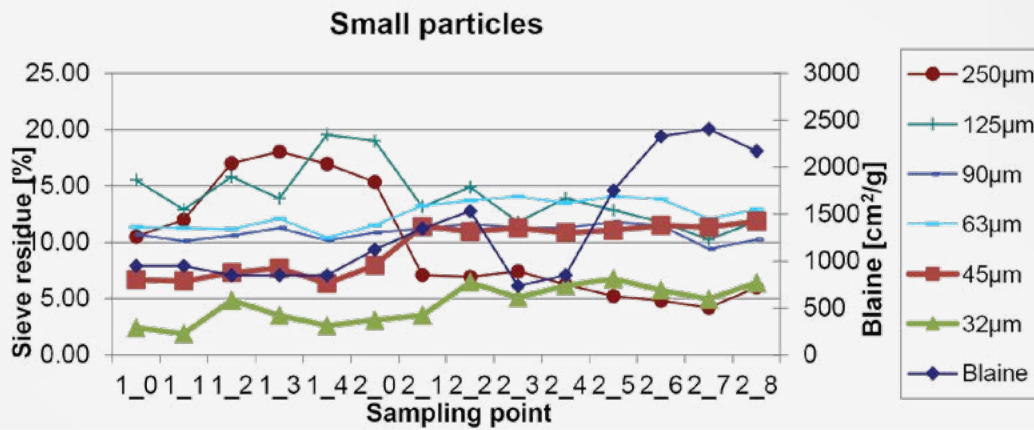
- Studying grinding characteristics by axial test
- Determine separator efficiency by Tromb curve calculation.



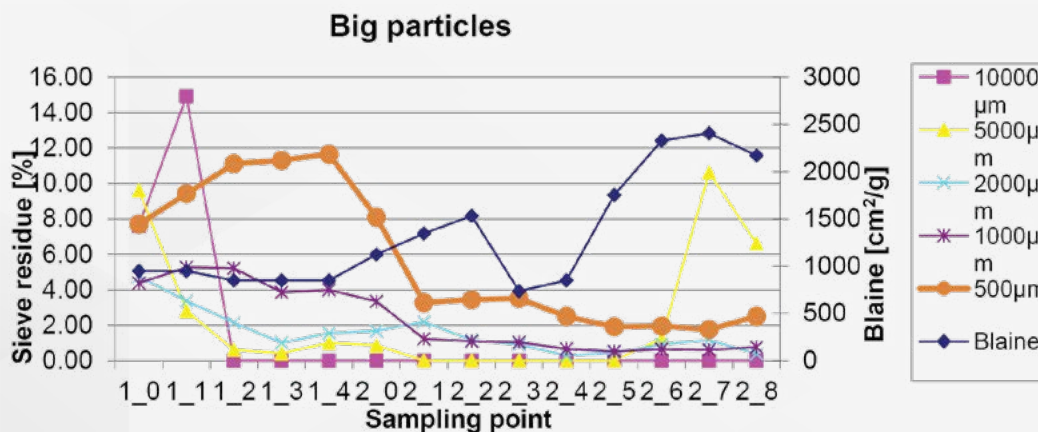
4. Results & Discussion

In this part of the case study, the results of the tests hereby presented

- a. XRD was performed for Clinker, Gypsum and Cement showed that
 - 1. Total C_3A content in clinker equal to 5.44% (Cubic phase 3.01%& Ortho phase 2.44%) is acceptable.
 - 2. 79.5% of Gypsum Di-hydrated converted to Gypsum hemi-hydrated; This indicates an increase in temperature during the production process and could lead to a false set.
 - 3. Cement mineral composition doesn't show any undesirable phase.
- b. Blaine test were performed for Cement shown normal range of fineness $3250 \pm 50 \text{ cm}^2/\text{g}$.
- c. Paste analysis results shown abnormal premature early stiffening and further mixing can dispel this rigidity (False Set).
- d. Axial test shown that
 - 1. Cement mill is not able to grind fine particles.



- 2. Cement mill is able to grind coarse particles.



- 3. The missing capability of grinding fine particles is due to the relative big media size

- e. PSD was performed for cement mill shown that:
 - 1. separator efficiency is according to expectations for a third generation separator for sieves 45µm – 90µm.
 - 2. Low separator efficiency for sieve 20µm

Tromp-curve calculation

Plant:				Mill No.			Date:		
Analysis method				ID NO.:			Name:		
SIEVE(d)	Residues			Rm, corr	C	Vs	Sieve(dm)	Tromp	
mm	Rf, %	Rm, %	Rg, %	%	-	%	mm	%	
10.097	68.4	73.7	86.3	74.15	1.43	23.1			
15.172	50.2	62.4	83.5	60.96	1.58	47.7	12.63	6.87	
19.904	39.5	55.5	82.3	53.30	1.59	58.2	17.54	5.01	
26.111	30.6	49.4	81.5	47.02	1.58	65.5	23.01	4.48	
29.907	26.6	46.4	81.0	44.15	1.57	68.5	28.01	4.77	
34.255	22.7	43.5	80.6	41.34	1.56	71.2	32.08	5.50	
39.234	18.8	40.3	79.9	38.49	1.54	73.8	36.74	7.05	
44.938	14.9	37.0	79.0	35.55	1.52	76.0	42.09	10.11	
51.471	11.2	33.3	77.6	32.55	1.50	77.9	48.20	15.48	
67.523	5.1	25.4	71.8	26.57	1.44	79.8	59.50	30.89	
88.583	1.5	17.5	59.5	20.18	1.38	79.1	78.05	62.13	
133.103	0.0	8.7	34.9	11.25	1.00	100.0	110.84	88.68	
				C-average		1.48			
Delta	4.48								
Cut-size	70.8								
Kappa	0.59								

5. Conclusion

According to the results obtained, several reasons contribute to the occurrence of low workability of cement paste, including:

- False set which usually occurs due to some of the gypsum dehydrates as a result of contacting hot clinker or high temperatures in the grinding mill. The plant should use
 - Cool clinker by water spray on clinker feeder; Or
 - Use 50% Gypsum anhydride in addition to 50% Gypsum di-hydrated
- Missing capability of grinding fine particles. The plant should resort the charge in chamber 2 of cement mill by use balls as the following recommendation:
 - Balls of 25 mm, 20mm and 15mm resort by 40%, 40% and 20%, respectively.
- Low separator efficiency for sieve 20 μ m. The plant should perform mechanical & process check for separator internal parts and operating parameters.

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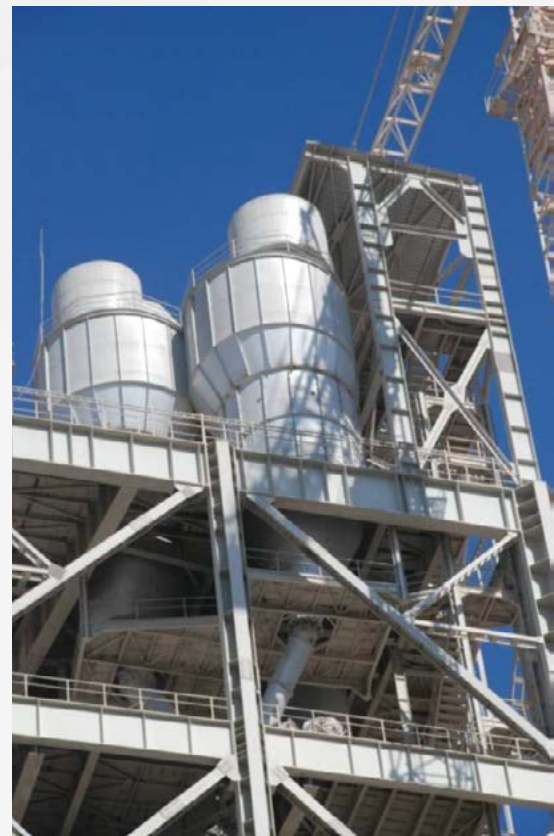
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Convert The Cost to Benefit: Revolutionizing Gas Cooling in The Top Cyclones

Fatih TRABZON, FTR Makina Kimya Metalurji A.S., Turkey

In the ever-evolving industrial landscape, the quest for efficiency, especially in energy utilization, is relentless. A groundbreaking innovation at the forefront of this quest is the CYCLONECOOL™ system, developed by COOLING CONTROL®, a registered trade mark of FTR Makina Kimya Metalurji A.Ş., which offers a novel approach to gas cooling in cement plants.

The core idea revolves around optimizing the cooling of hot gases in the top cyclones of cement plants. Traditionally, these gases are being used for certain purposes in the downstream process to a certain degree. Then the excessive portion is being cooled to a certain degree before reaching the process filter, a task that until now has been both necessary and costly. The CYCLONECOOL™ system, however, turns this cost into an opportunity for energy savings or production increases.



How It Works:

The system injects cooling water in a fine mist form directly into the top cyclones, leveraging the natural flow of gases to achieve efficient cooling without the need for compressed air for atomization. This technique not only reduces energy consumption but also enhances the efficiency of cyclone dust collection by both increasing the density of dust particles through moisture addition, and increasing the dust concentration in gas by means of reduced gas volume after cooling. The cooling water is injected close to the dipping tube against the gas flow, through precisely calculated lance and orifice geometries, securing an operation without the risk of material agglomeration, even with a single fluid operation.



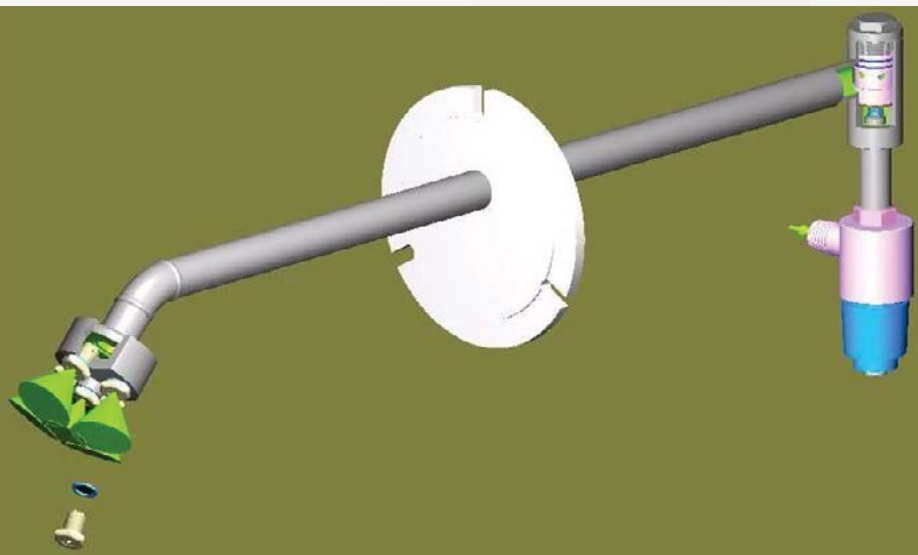


Figure-1: The system is based on VFD control. COOLING CONTROL® NOZZLES & LANCES do not require compressed air to create fine particles of water. They stand out by virtue of the exceptional fineness and uniformity of the droplets they produce. Apart from achieving outstanding distribution of the liquid in the gas stream, the fine droplets also produce the maximum possible surface area of liquid whereby the effective exchange of heat between the gas and liquid is achieved. As a result, the gas stream is cooled with a high degree of efficiency, thus permitting the cooling process to take place in short distances.

Tangible Benefits:

Adoption of the CYCLONECOOL™ system translates to significant operational benefits, including:

- **Energy Savings:** By cooling the gas, the system reduces the volume of gas that needs to be handled by ID fans, leading to less power consumption by ID fan. Plus, increased cyclone efficiency means better fuel-to-material energy transfer, and additional energy saving. Especially in case of fresh air damper usage due to insufficient gas cooling, CYCLONECOOL™ can reduce the filter fan energy consumption by preventing fresh air requirement.
- **Increased Production:** In case of having the bottle-neck at ID fan, instead of reducing the energy absorption, a capacity increase of the whole clinker production line can be achieved, provided the rest of the process is suitable to do so. Case studies demonstrate the potential for up to 19% increase in kiln feed capacity after commissioning of CYCLONECOOL™.
- **Operational Flexibility:** Thanks to its fully automated control schematics, the system offers adjustable temperature reduction settings, enabling operators to optimize based on varying process parameters.
- **Maintenance Reduction:** Less wear on parts and reduced fan coating problems translate to fewer kiln stoppages and lower maintenance costs.

PARAMETERS	BEFORE CYCLONECOOL™	AFTER CYCLONECOOL™	REMARKS
Kiln Feed	405 tph	437 tph	~8% capacity increase
Cyclone Exit Temperature	327 - 345 °C	271 - 274 °C	~65 °C temperature reduction
O ₂ Content	3.6 - 3.8 %	3.8 - 3.9 %	
Fresh Air Damper Position	99% open	20% open	Significant power saving
ID Fan speed	982 rpm	961 rpm	
ID Fan Energy Consumption	1.351 kW	1.326 kW	Power saving
Bag Filter Conveyor Load	15 A	14 A	Improved dust collection in cyclone

Table-1: The case-study indicating drastically reduced fresh air damper usage after installation of CYCLONECOOL® system. This means further energy saving in filter fan.

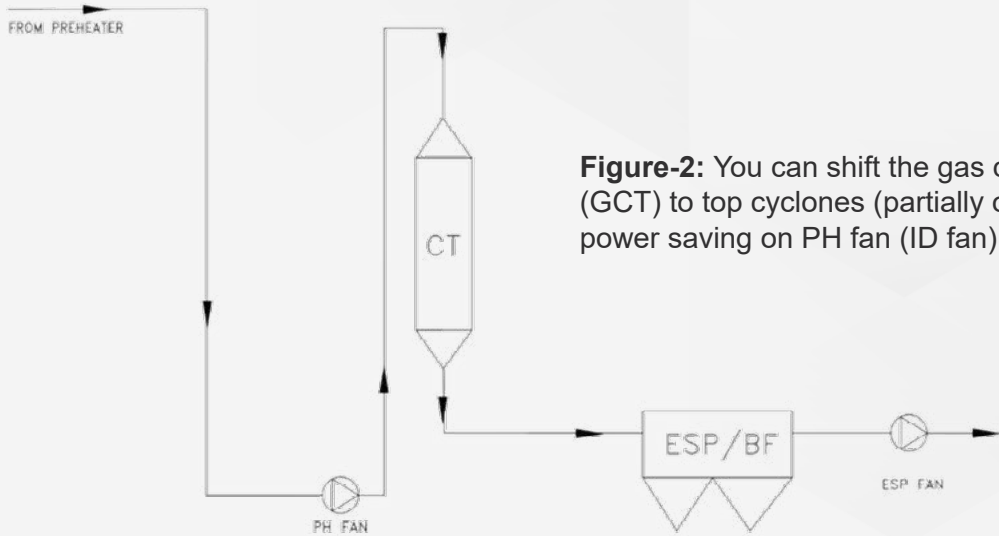


Figure-2: You can shift the gas cooling duty from CT (GCT) to top cyclones (partially or fully) and achieve power saving on PH fan (ID fan).

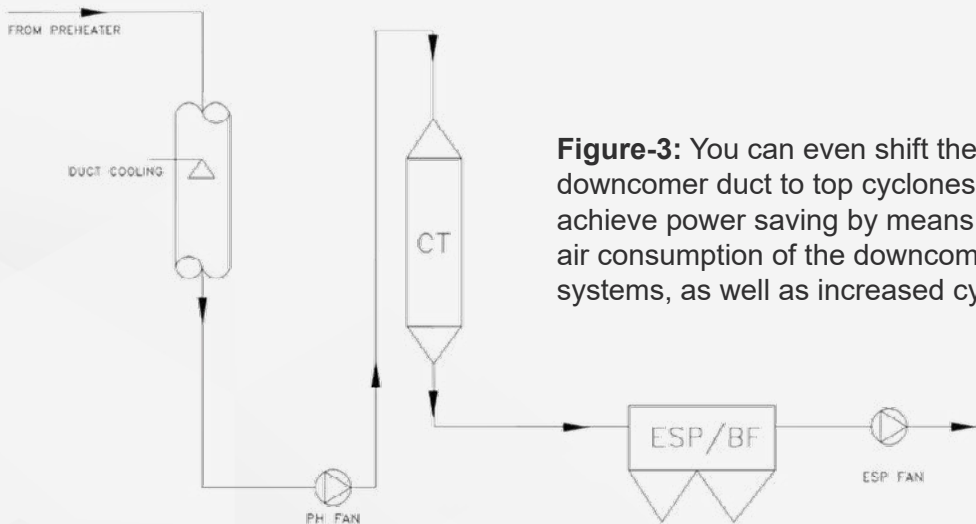


Figure-3: You can even shift the gas cooling duty from downcomer duct to top cyclones (partially or fully) and achieve power saving by means of removing compressed air consumption of the downcomer duct gas cooling systems, as well as increased cyclone efficiency.

CO₂ Emission Reduction:

Beyond its immediate operational advantages, the CYCLONECOOL™ system aligns with environmental stewardship by reducing carbon dioxide emissions, a crucial topic for all heavy industries like cement production. The efficient cooling of gases in the top cyclones directly translates into lower energy requirements for the ID fans and filter fans, resulting in decreased overall power consumption. This

energy efficiency not only leads to cost savings but also contributes to a substantial reduction in the carbon footprint associated with the cement production process. Besides, improved cyclone duct collection is improving the energy transfer from the burning fuel to raw-meal, which means lesser fuel/raw material ratio, hence lower CO₂ emission.



Case Studies and Real-World Applications:

Several case studies where the CYCLONECOOL™ system has been implemented, showing not just theoretical benefits but real-world applications and improvements. One case study highlighted an 19% capacity increase and significant reductions in cyclone exit temperatures and

power consumption. The latest application of the system in a plant in Turkey, belongs to a major international cement group successfully eliminated the ID fan related problems of the line, and R.O.I is realized within months. COOLING CONTROL® is awarded by order of the second system for the same plant.

PARAMETERS	BEFORE CYCLONECOOL™	AFTER CYCLONECOOL™	REMARKS
Kiln Feed	167 tph	199 tph	~19% capacity increase
Cyclone Exit Temperature	322 °C	214 °C	~100 °C temp. reduction
O ₂ Content	6.94 %	5.21 %	
ID Fan speed	786 rpm	686 rpm	
ID Fan Energy Consumption	918 kW	711 kW	~22% energy reduction
Hybrid Bag DP	199 mmWC	180 mmWC	~10% DP reduction

Table-2: The case-study figures are reported by the plant officials after their standalone trials. A ground breaking 19% capacity increase is achieved by installation of CYCLONECOOL® system.

Conclusion:

As industries strive to enhance efficiency and reduce environmental impact, innovations like the CYCLONECOOL™ system offer a promising path forward. By turning a traditional cost center into an opportunity for savings and productivity gains, COOLING CONTROL® is setting a new standard in industrial process optimization.

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Digitalizing the supply chain with 3D LIDAR

3D LiDAR provides real-time bulk material inventory information, contributing to improved deliverability, cost savings, and process automation.

More and more industries are using 3D LiDAR (Light Detection and Ranging) sensor technology to measure the volume of bulk materials. Here's how it works: Laser pulses are used to create a three-dimensional image, a so-called point cloud, of the surface of the stored bulk materials, from which software can calculate the current volume of the inventory at any time and register additions or withdrawals in real-time. Employees thus have precise inventory information at their disposal at all times. Therefore, they can inform customers about currently available quantities and always send trucks to warehouses with sufficient stock, thus avoiding unnecessary journeys.

Previous measurement methods were inaccurate

Until now, companies have mostly estimated their bulk material volume by eye, weighed incoming and outgoing material on conveyor wheels or weight bridges, or taken only point measurements with laser scanners or drones. All these methods involve considerable effort for data collection and retrieval and personnel costs and are also prone to error.

Many industries benefit from 3D LiDAR

3D LiDAR-based methods, on the other hand, offer accurate data collection and analytics at all times and the ability to have up-to-date, on-demand information at hand in digital form. Many industries use 3D LiDAR already:

- The construction industry benefits from continuously recording the volume of asphalt, concrete and raw materials.
- The waste industry uses 3D LiDAR for efficient waste and recycling management of light, heavy, or wood waste.
- Mining industries profit from volumetric monitoring of mined and excavated materials such as minerals and ores.
- Agricultural companies improve their efficiency by monitoring the inventory of materials such as fertilizer, feed, grain, and wood chips with 3D LiDAR.



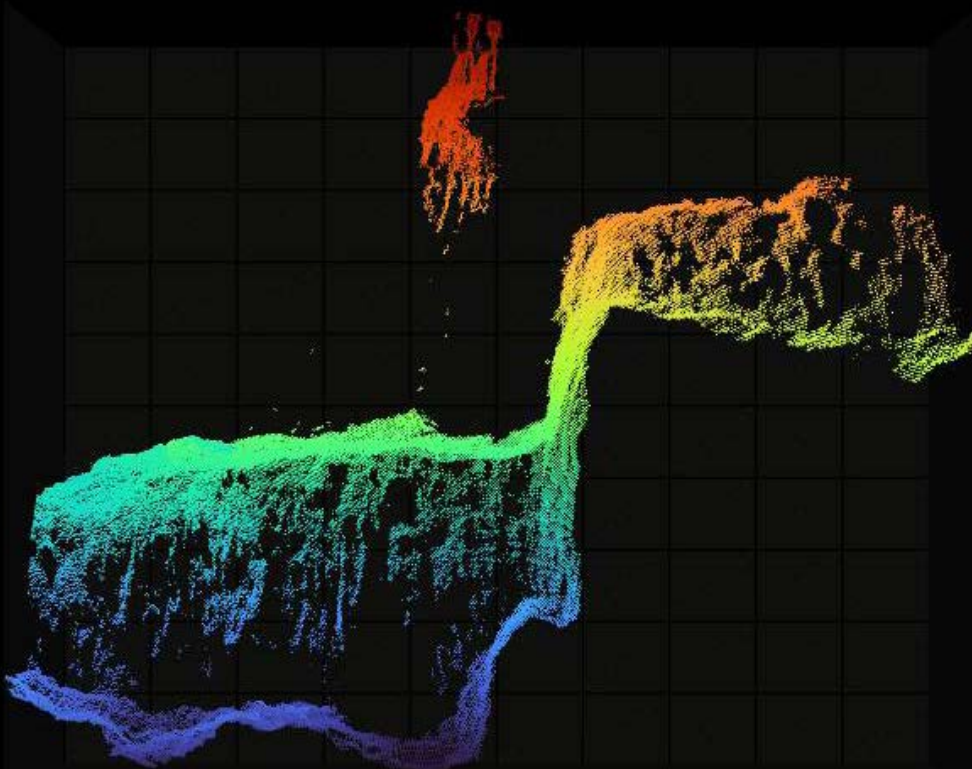
How 3D LiDAR works

3D LiDAR sensors emit hundreds of thousands of laser pulses per second over a wide field of view. When the laser light hits an object, it is reflected by it and detected again. Its distance is measured from the time the laser light needs to return to the sensor (time-of-flight principle). The high number of distance points creates a fine-grained virtual network of, for example, a pile of gravel from which software calculates the volume very precisely. The digital data can feed automatically into the company's IT systems, such as the ERP. Based on this real-time volume data, companies can improve many processes:

- Inventory accounting can perform its tasks correctly, knowing the exact bulk quantity.
- Accurate reporting reduces legal and underwriting risks.
- It reduces the cost and effort to report stock quantities.
- They avoid production interruptions due to missing deliveries of input materials and the associated loss of income.
- Logistics planning becomes more precise and efficient through the more reliable planning of trading in input materials, the optimally coordinated distribution of materials to several locations, and automating processes such as invoicing.

Digitalize the supply chain with 3D data

For the digitalization and automation of supply chain processes, it is an essential prerequisite that, as far as possible, all status and process data relevant to logistics are available in digital form. For the first time, 3D LiDAR solutions are now making such data available for bulk materials at any time in an up-to-date and automated form in company software such as ERP. Employees across all locations have an accurate and reliable overview of material stocks at their fingertips at all times for analyzing, planning, executing, controlling, and implementing their processes. Thus, companies can make their inventory management more efficient and further digitalize and automate their supply chain.



Examples of the application of lidar

Example: managing waste flows in line with demand

EEW Energy from Waste GmbH (EEW) has implemented a volume measurement solution based on Blickfeld LiDAR and can now control waste flows according to demand. EEW stores waste in a bunker that can hold up to 10,000 m³ of material. Blickfeld LiDAR sensors have replaced previous measurements, such as monitoring inventory via scales and the height position of the waste grabber, and continuously recording the volume of stored waste. Only three Blickfeld Cube 1 LiDAR sensors were needed to have an overview of the large bunker in its entirety. EEW relates the volume data to the mass of the material, which gives a good approximation of the energy content of the waste. All data is made available in a specially developed mobile app, which EEW uses to control the waste flows according to demand and to optimize plant operation economically.



Example: planning logistics across sites in mining

Hudbay Minerals, a Canadian multi-site mining company, has traditionally relied on employee estimates or manual methods to measure raw material inventories in their warehouses. Both proved unreliable, and the inventory information needed to be more accurate and up-to-date. They wanted a new solution to minimize inventory levels and make processes more efficient, so they chose LiDAR solutions from Blickfeld.

Using Blickfeld's LiDAR sensors and Percept software, Hudbay Minerals now takes very accurate volume measurements in real-time with little effort. They plan to extend the system to more warehouses, test the solution outdoors and check whether they can profitably use the technology in other departments.

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ALTERNATIVE FUEL ASSESSMENT

Identifying the scope and strategy for AFs

3

PRODUCT STRATEGY

Development of cements to reduce clinker content

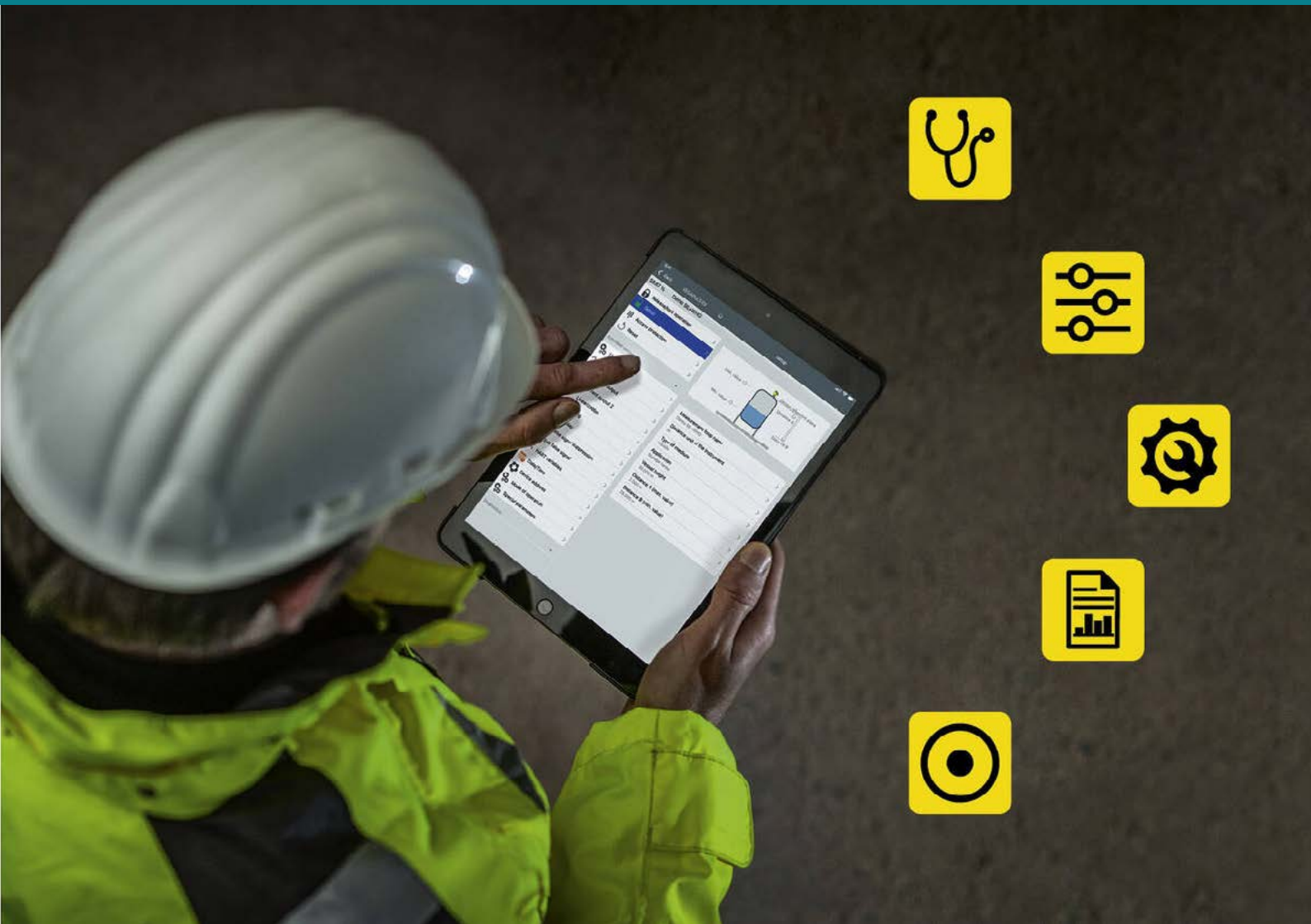
4

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Data security free of charge in the VEGA tools app

New backup & restore solution reliably secures and saves data from vega sensors

When a level or pressure sensor is taken out of service and replaced, it takes countless important sensor settings and data with it into retirement. However, the settings and measured values are not lost, because a new VEGA software tool saves everything that matters.

Smartphones and tablets are now standard equipment in industrial plants. Almost 40 percent of all VEGA sensors for level, point level and pressure are parameterised, read out and serviced via Bluetooth and the VEGA Tools app. To be sure, lots of "real work" still has to be done on site, but the adjustment of sensors in hazardous zones or hard-to-reach measuring points is made considerably easier with these wireless tools, as it can be performed from a safe distance of up to 50 metres.

Wireless is now the standard

But even in less demanding "standard applications", wireless operation via app is increasingly gaining acceptance. VEGA product manager Philipp Ketterer knows the reasons: "For Industry 4.0, there has to be fast, continuous data communication." Besides continuous transmission as required by IIoT, it includes above all an increase in convenience and speed. "Actually, the same arguments for Bluetooth in industry apply to the private use of wireless: It saves an enormous amount of wiring and time, and ultimately, costs."

Backup & restore for better processes

Universally accessible process data is one of the most important prerequisites for reliable, cost-effective production. Sensors monitor the status and quality of the individual production steps and store important information on settings, diagnostics and the status of machines and systems. The users of these sensors, in turn, need the certainty that they have access to all sensor parameters at all times and that backup solutions are available if a worst-case scenario occurs.

To provide the best possible support for users, VEGA offers an innovative cloud solution. "Backup & Restore" is the name of a new software tool that VEGA customers can now use permanently free of charge and, as the name implies, offers them the option of backing up and restoring their sensor data.

No limits on security

Convenient access to this service is provided by both the instrument DTMs and the VEGA Tools app. With the app, VEGA sensors can be directly controlled and adjusted via smartphone or tablet. New here under "Instrument adjustment" is the function "Backup & Restore". Behind the serial numbers, which appear listed here via mouse click, the available backup data can be called up and – if you so choose – reinstalled. "Our customers can access all the data ever collected, because the number of backups is not limited," says Ketterer. "We thus offer a unique free service that brings significantly more efficiency to automated processes."

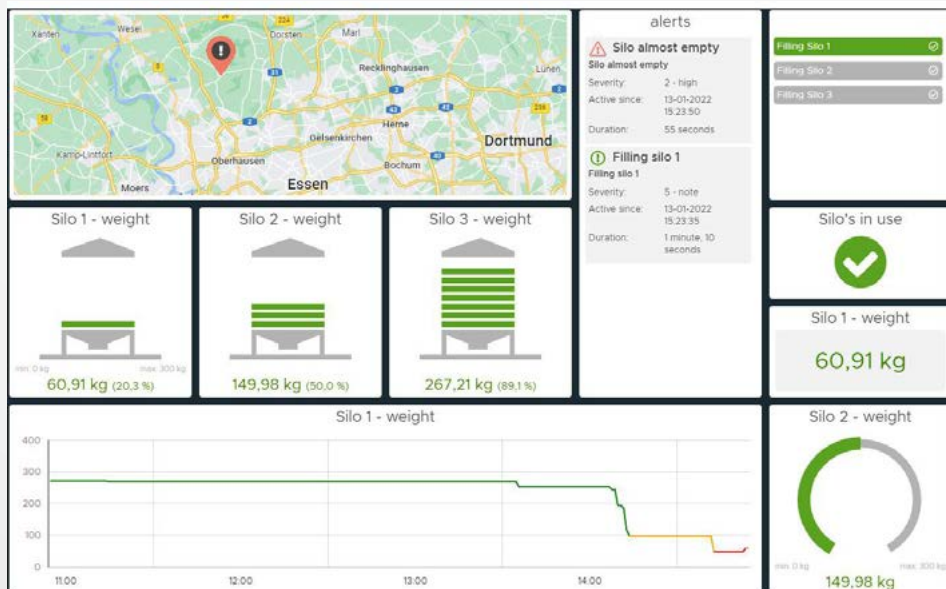
Far more than just storage

In the industrial environment, too, data backup now means much more than just storage. Flexible backups and quick restores are important for ensuring that valuable process data are available for immediate reinstatement of device settings, diagnostics or process analysis. With the software tool "Backup & Restore", VEGA has solved the problem many companies have, namely, keeping enough storage space available for ever larger quantities of data. All parameters can be saved securely in the VEGA cloud at regular intervals. For medium-sized and small companies, as well as others, this is an ideal option for permanently securing their complex, ever-growing data flow.

PENKO'S easily accessible cloud solutions

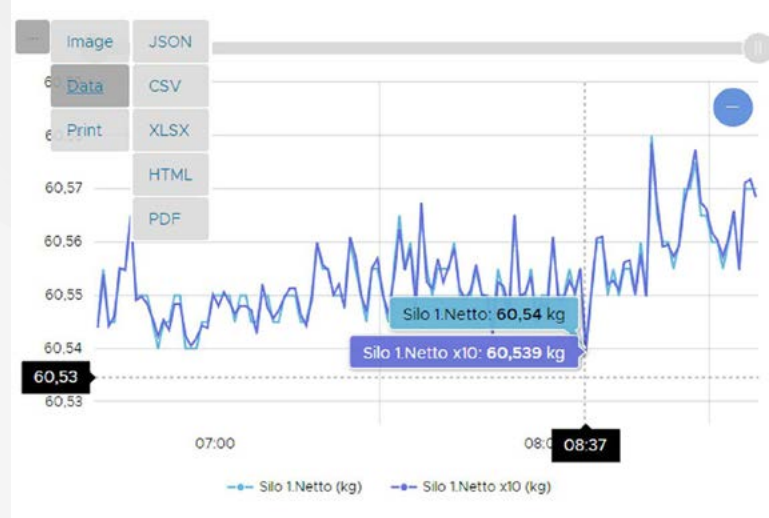
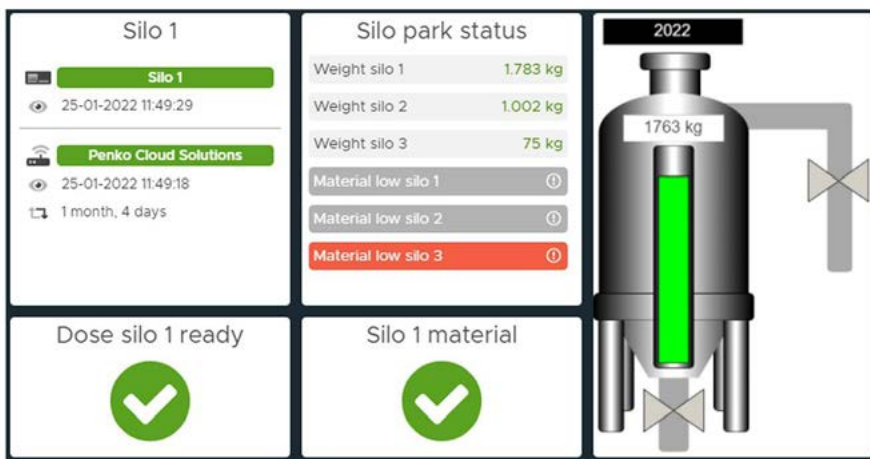
PENKO's Cloud Solutions are easily accessible solutions for uploading your data to a collective accessible platform.

With our product, you can access the data at any time from any place. The Cloud Solutions can also monitor the efficiency of your machine and check-in on the status of your production process etc.



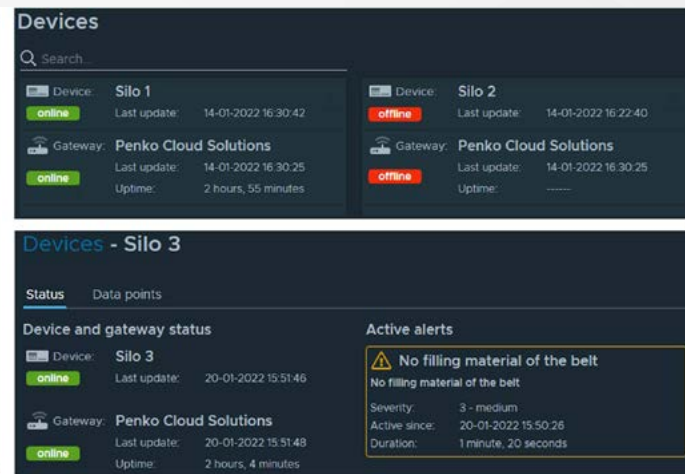
Our Cloud Solutions require internet access. If internet access is already available, a Data Transfer module is used for uploading the data from your PENKO instrument to the remote platform. For places where no internet access exists, a Gateway can be coupled with the PENKO instrument for uploading your data to the cloud platform.

The Data Transfer module also makes it possible to couple our Cloud Solutions with MQTT protocol. This protocol allows for a reliable and safe internet connection.

The dashboard for Silo 1 includes the following information:

- Silo 1**: Status 'Silo 1' (online), last update 25-01-2022 11:49:29.
- Penko Cloud Solutions**: Status 'Penko Cloud Solutions' (online), last update 25-01-2022 11:49:18, uptime 1 month, 4 days.
- Silo park status**:
 - Weight silo 1: 1.783 kg
 - Weight silo 2: 1.002 kg
 - Weight silo 3: 75 kg
 - Material low silo 1: (warning icon)
 - Material low silo 2: (warning icon)
 - Material low silo 3: (warning icon)
- Visuals**: A central image of a silo with a green fill level indicator showing 1763 kg. Below it are two status boxes: 'Dose silo 1 ready' and 'Silo 1 material', both with green checkmarks.



The dashboard for Devices and Silo 3 includes the following information:

- Devices**:
 - Device: Silo 1 (online), last update 14-01-2022 16:30:42
 - Device: Silo 2 (offline), last update 14-01-2022 16:22:40
 - Gateway: Penko Cloud Solutions (online), last update 14-01-2022 16:30:25, uptime 2 hours, 55 minutes
 - Gateway: Penko Cloud Solutions (offline), last update 14-01-2022 16:30:25, uptime: —
- Devices - Silo 3**:
 - Status: Data points
 - Device and gateway status:
 - Device: Silo 3 (online), last update 20-01-2022 15:51:46
 - Gateway: Penko Cloud Solutions (online), last update 20-01-2022 15:51:48, uptime 2 hours, 4 minutes
 - Active alerts:
 - No filling material of the belt** (warning icon)
 - No filling material of the belt
 - Severity: 3 - medium
 - Active since: 20-01-2022 15:50:26
 - Duration: 1 minute, 20 seconds

Predictive maintenance

With the PENKO Cloud Solution for predictive maintenance you can monitor multiple critical machine parts of all of your coupled machines located globally. Knowing when critical parts of your machine need to be replaced before they are worn out and cause machine failure reduces machine downtime and costs. Advising your maintenance department or customer when to plan the maintenance of the machine, including which parts need to be replaced, increases the service level you're offering.

Our solution also offers the option of sending an automated e-mail or text message when a preset alarm occurs saving your business time and potential costs.

Reporting and monitoring

For a more complete and concise overview of the wellbeing of your (global) production process, PENKO's Cloud Solutions offer live monitoring of your production lines or processes of multiple locations worldwide, in one place. The ability to quickly respond to any abnormalities in your global production process reduces product spillage and contributes to maximizing the efficiency of your lines and processes.

The Cloud Solution also offers access to your own preset graphs, showing only the relevant information for you, saving time in analyzing your businesses performance. The preset graphs can be exported for further use in many formats, including pdf or jpeg.



Pulsar new software to control your production processes

PAYPER's new cloud-based software solution "Pulsar" gives you full control over your production and filling processes with a single click.

This solution enables bulk material producers to digitise their bagging and packaging equipment and take control of their production to the next level. This all-in-one digital solution enables advanced management of production and service.

The machine controls are networked with each other and are connected to a server with all production and maintenance information.

Pulsar S: Smart Customer Service and Maintenance

Optimise your production line with Pulsar. The various modules enable plant managers/maintenance supervisors and machine operators to work together to increase the effectiveness and service life of the machines. The following measures can be carried out:

- Preventive maintenance: risk management, task planning and guidance to reduce maintenance costs and machine downtime.
- Rapid spare parts management: ordering, viewing stock levels and deliveries. Access to machine documentation, spare part availability and delivery status.
- Direct communication with customer service: omnichannel support.
- Remote training and technical support with augmented reality.
- Data-driven decisions: KPIs and analyses in real time.

Encoder-Flex 1024 - Innovative digital rotary encoder

4B has introduced the Encoder-Flex 1024, designed to monitor the position of rack and pinion gates, as well as shaft speed and angular position of distributors.

4B Group has introduced the Encoder-Flex 1024, designed to monitor the position of rack and pinion gates, as well as shaft speed and angular position of distributors. The new, ATEX-approved Encoder-Flex 1024 is changing the way slide gates are monitored. This compact rotary shaft encoder uses advanced technology to deliver a precise position from 0 to 100%.





With a compact, sleek design, the Encoder-Flex 1024 removes the bulkiness associated with traditional shaft encoders and adds the benefit of easy calibration. There is no need to open up the unit; simply apply an external magnet briefly to calibrate. Providing even more flexibility, resolution can be programmed for 1 to 1024 pulses per rotation.

All electronics on the Encoder-Flex 1024 are housed in a sealed stainless steel enclosure and are encapsulated in epoxy, protecting the device from moisture and the elements and providing maximum reliability in the field.

In addition, the Encoder-Flex 1024 provides 4-20 mA, quadrature-pulsed and Modbus RTU outputs in one single model, giving the user the versatility and flexibility to connect many different controllers and displays.

“This product is simple to install and operate and features elegant calibration”, explains 4B. “Compared to competitive products, it’s less bulky and more robust with fewer limitations. The resolution can even be set in the field from 1 to 1024 pulses per revolution to suit virtually any application.”

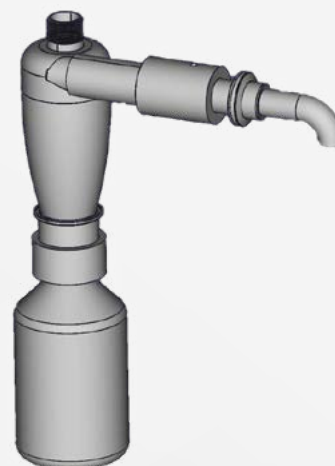
Innovative non-mechanical bulk sampler

For applications with critical (abrasive) bulk solids, we have developed the new VacFlow, which has no mechanical components.

The VacFlow system enables the sampling of bulk materials (powder or granules) from containers and silos without mechanical components and moving parts. Pressureless storage containers above bagging plants and sending vessels are typical plant components in which the VacFlow can be used.

The resting product is sucked in and conveyed by a blast of air via a cyclone into a sample bottle.

The VacFlow is particularly suitable for bulk materials that are abrasive and whenever other mechanical systems do not work. It has no mechanical moving parts that could block and is characterised by its uncomplicated installation and reliable operation.



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HOW THEY BECAME

TOP BUSINESS TYCOONS





Parker launches new QuickShip Program for DustHog Dust Collectors

The Industrial Gas Filtration and Generation Division of Parker Hannifin Corporation, a global leader in motion and control technologies, announced a new QuickShip Program for the DustHog® SFC, the three most popular models of its flagship dust collector.

Parker ships directly to the customer's location within 20 days of purchase. All three models will be available for non-combustible or combustible dust (Kst) applications, including industry-best Protura® filtration media, and each will include a range of standard features and accessories.

The proprietary pulse cleaning technology delivers 25% more cleaning power, greater air capacity and quick and easy maintenance. The SFC uses external filter tracks to support the filters instead of internal filter “yokes” that interfere with cleaning, obstruct airflow and add costly static pressure. The track system also serves as a static dissipative - filter grounding system that provides a path from the filter cage to the endcaps to the filter track to the chassis ground. The optimized nozzle and venturi filter cleaning system design allows unobstructed airflow and increased cleaning power with less energy, lower pressure drop, and longer cartridge life.

“Easy to order and faster delivery to your facility,” said Tim Rosiek, product engineer, Industrial Gas Filtration and Generation Division. “We understand that sometimes you want a dust collector that you know will work and need it now. We created a program just for this type of situation.”



With QuickShip, customers get simplicity and speed to meet their immediate needs, including new part numbers that incorporate all components required for a complete dust collection solution.

ЦЕМЕНТ

и его применение

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equipment producers**

The Russian-language periodical professional publication devoted to the production of cement and other binders, concretes, dry mixes and their applications, as to research and design.

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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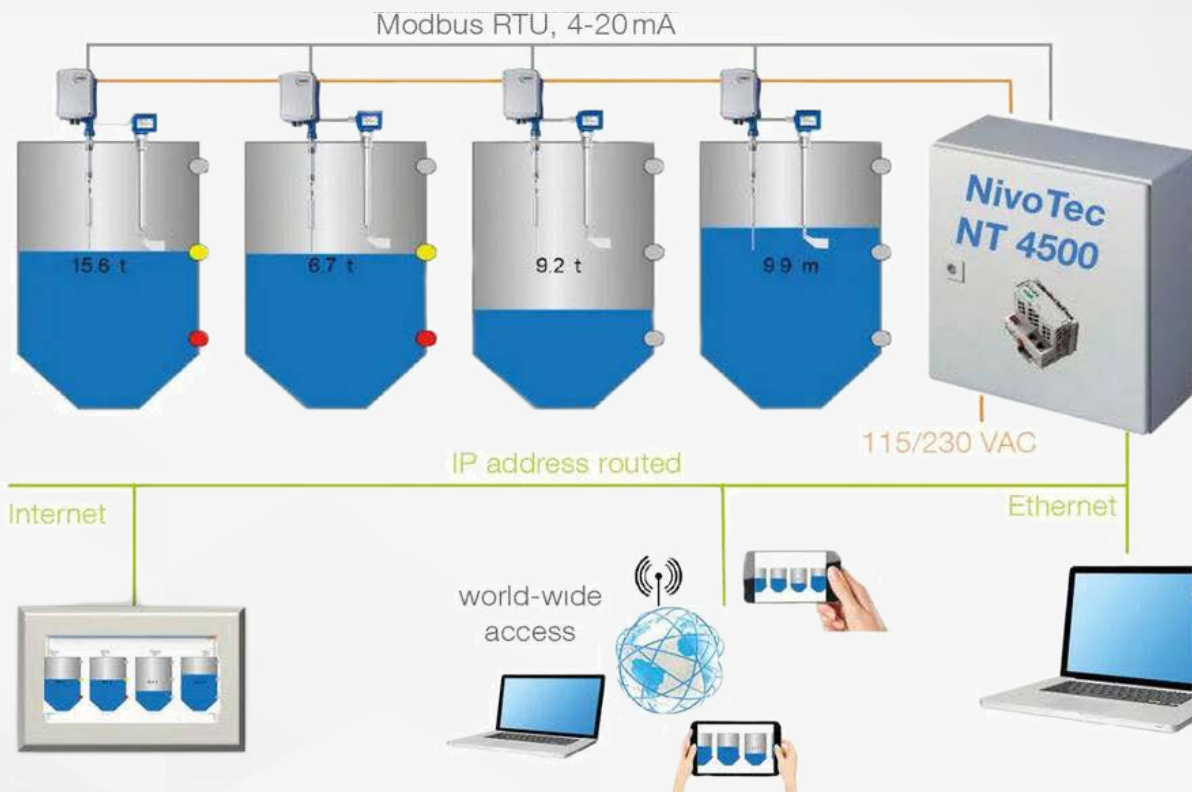


NivoTec®- level monitoring and visualization system





Choose your suitable system for level monitoring & visualization from the UWT NivoTec® product portfolio



Various technologies are available for level indication. Simple LED digital displays for the evaluation of a 4-20 mA signal for installation in control cabinets or up to wall mounted touch panels and web server modules with visualization software. These can then be configured on a project by project basis and adapted to customer requirements.



UWT has standardized product versions of the NivoTec® NT 4000 series, which meet many requirements of a level indicator and monitoring at a cost effective price. The NT 2000 series includes control cabinet modules with local display and control elements, which is useful for a limited number of containers. The NivoTec® NT 3000 series can be individually adapted to the customer's project. This web server solution meets all requirements of modern silo level monitoring.

 Füllstandsüberwachung NivoTec® - NT 2000 Vergleichen Zum Produkt	 Füllstandsüberwachung NivoTec® - NT 3500 Vergleichen Zum Produkt	 Füllstandsüberwachung NivoTec® - NT 4500 Vergleichen Zum Produkt	 Füllstandsüberwachung NivoTec® - NT 4600 Vergleichen Zum Produkt
 Füllstandsüberwachung NivoTec® - NT 4700 Vergleichen Zum Produkt	 Füllstandsüberwachung NivoTec® - NT 4900 Vergleichen Zum Produkt		

Machine learning for efficient simulation

Artificial Intelligence (AI) is a key to enormous leaps in efficiency; numerical simulations and engineering processes are ready to be put to use.

Simulation specialist CADFEM has brought PI Probaligence on board as a partner with outstanding solutions and expertise to provide customers with targeted support as they move into the world of AI.

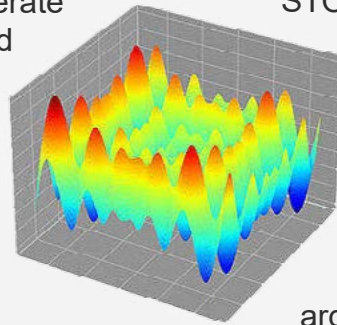
The megatrend of artificial intelligence (AI) is on everyone’s tongue these days. Huge amounts of information are processed in artificial neural networks using high-performance computers and cloud computing in order to interpret or generate texts and images.

Other AI approaches have specialized in design optimization, experimental planning, or the disclosure of important correlations. These include machine learning (ML), which is an AI approach that learns by training on experiments, simulations, and other engineering data. As a result, ML offers enormous potential for using an existing data pool to massively accelerate and improve development and decision-making processes.

Machine Learning (ML): AI for Engineering

CADFEM, the specialist for simulation and digital engineering, aims to support customers in implementing the new technology in their digital process infrastructure so that its potential can be fully and sustainably utilized. This includes, for example, real-time applications for digital twins, autonomous decision-making processes, or intuitive workflows that make it very easy to use AI for individual issues.

CADFEM has established the necessary technical expertise. They are complemented by the close exchange with ANSYS, Inc., which includes the new Ansys AI solutions in the CADFEM portfolio. In addition, CADFEM relies on a proven strategy: for major future-oriented topics, the company’s own network is expanded to include specialized partners and their expertise. This takes place under the umbrella of the international CADFEM Group, so that the additional know-how can be used worldwide.



Probaligence: AI experts who understand simulation

When selecting a network partner for AI, PI Probaligence GmbH quickly emerged as the perfect option for CADFEM and the requirements identified by CADFEM customers. The primary deciding factors were:

- the clear focus of PI on ML in combination with effective stochastic methods
- the PI philosophy of close integration of innovative research and industrial practical relevance, which suits CADFEM
- the unique PI algorithm STOCHOS, which combines expert independence, efficient utilization of computing resources, and high quality results.

Thanks to the combined approach of neural networks and Gaussian processes, STOCHOS offers outstanding prediction accuracy even with a small database.

STOCHOS is also characterized by its ability to reliably evaluate real and noisy data from a wide variety of sources, including measured values, simulation results, and relevant key figures, and even combine them in a meaningful and resource-efficient way.

Last but not the least, the already existing proximity of PI to simulation is another strong argument. On the one hand, PI already works together with ANSYS, Inc. and on the other hand, the founders of PI are very familiar with simulation methods due to their previous professional and scientific activities.

About PI Probaligence

PI Probaligence GmbH, based in Augsburg, was founded in 2018 as a spin-off of the Institute for Modeling and High Performance Computing at Niederrhein University of Applied Sciences. The focus is on developing powerful combinations of machine learning and stochastic analysis – Probabilistic Engineering Intelligence. The STOCHOS software is used to address complex engineering problems from the industrial sector. PI Probaligence not only develops and transfers machine learning solutions, but also supports their customized implementation.

The CADFEM Group has held a stake in PI Probaligence since the end of 2023. As a solution partner for AI and ML, the company supports CADFEM and its customers in the efficient implementation of AI technologies in simulation and engineering processes

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- **Data services:** statistical and data research tools offering industry practitioners a wealth of cement supply and demand data





New OCTAPLANT® Allows Customers to Reduce Implementation Time and Adapt to Changing Market Conditions

Advancing urbanization is driving infrastructure demands for residential and industrial space, also spurring increased demand for cement. For cement producers, flexibility and, above all, proximity to the market and speed in logistics are the keys to success and profitability.

In response, HAVER & BOECKER developed the OCTAPLANT®, a visionary packing concept. The OCTAPLANT®, an innovative and comparatively compact system for packing and loading cement in bags, consists of a modular design incorporating high quality technology and prefabricated components to allow for quick installation and adaptability.

OCTAPLANT® sets new standards in terms of time and cost optimization as well as risk minimization - especially during the implementation phase. The concept is also impressive in terms of sustainability because it can be reassembled and used at another location and features HAVER & BOECKER's cutting-edge packing technology. In addition, the OCTAPLANT® occupies a very small footprint.

Equipped for tomorrow's requirements

Over the past 20 years, the shipping of clinker and cement has steadily increased driven by increased construction in formerly agrarian countries. In the future, plants and terminals that are currently located on the outskirts of cities may have to give way to infrastructure for trade, industry and people.

As urbanization evolves and construction grows, mobility, speed and responsiveness will be essential for success in the cement industry. OCTAPLANT® gives producers the ability to be the first at the point of sale to serve exactly where the demand exists when conditions change, creating an enormous competitive advantage.



Project implementation in the fast lane

Significant time saving is the main advantage that OCTAPLANT® offers in comparison to conventional systems. With all components on the shelf and many of the assembly tasks completed before the system ships, the construction phase of the plant is significantly reduced. Less construction needed on site translates to fewer potential errors and reduced labor demands for installation. It also comes into play at the very start of the planning phase. Engineering that is completely planned and finalized down to the last detail accelerates project implementation and ensures the best possible planning security with regard to expected costs, yields, equipping buildings and technology. Moreover, standard delivery of all the tools required for assembly avoids expensive delays that could occur due to missing or incompatible devices and systems. The simple, modular design decreases the need for crane lifts to erect the plant by 80% over the installation of conventional systems. A plug-and-play design, allows for individual elements to simply connect and be operational quickly reducing overall installation time and facilitating quick relocation of the plant based on business potential or demand.

The installation time from planning to the start of production is reduced by three and a half months compared to conventional systems, allowing for lower finance costs and a rapid return on investment.

Well thought out for all requirements

An OCTAPLANT® building consists of three segments. The heart is the eponymous octagonal “OctaTower” that houses the HAVER & BOECKER ROTO-PACKER® RVTs packing system, including a foreign body screen, pre-hopper and spillage return system. These elements are shipped in a simplified and cost-optimized manner in seven standard sea containers, from which the adjacent container building is erected after unloading. It provides space for the bag discharge line, the fully automatic RADIMAT® bag applicator, the system control and the compressor unit. The final section is a lightweight hall where the filled cement bags are loaded onto trucks. The HB 10 system for rear loading and the HB 17 system for loading open trucks are available here. Moreover, a photovoltaic system can be installed on the roof and thus generate sustainable electricity for the plant.



The OCTAPLANT®'s efficient design is adapted to the extreme site conditions of the target markets. The containers are reinforced and reliably withstand wind speeds of up to 200 km/h and earthquake loads. The light-colored façade reflects solar radiation in the best possible way. In addition, the air flow from the packing machine's dust extraction system not only creates a low-dust environment, but also provides measurable temperature regulation. The OctaTower and container building can also be sufficiently insulated for colder climates.

Resource-saving concept

Thanks to its mobility and space-saving design, the OCTAPLANT® saves on resources and materials. Existing system components and high-quality technical equipment can be easily reused at another location. Space-optimized transport and a high degree of prefabrication also contribute to a reduced ecological footprint. Finally, the integration of QUAT2RO® products and the PROcheck life cycle approach minimize greenhouse gas emissions, energy consumption and the use of materials during plant operation.

Fulfilling the highest standards

In order to control, monitor and optimize all processes, all the workflows are networked in the best possible way using QUAT²RO® System Intelligence. With the PROcheck life cycle approach, HAVER & BOECKER guarantees comprehensive support: from selecting the right equipment with the right empty bags to offering spare parts and comprehensive services.

When developing the space-optimized and relocatable system, the focus was on ease of operation and maintenance. The OCTAPLANT® offers maximum efficiency not only in terms of planning and building design, but customers can also count on maximum output and high quality from the HAVER & BOECKER packing machines when it comes to technical equipment and efficient operation.

The engineering for the OCTAPLANT® concept was completed by HAVER & BOECKER so that project planning and production could take place immediately.



Customized system solutions from HAVER & BOECKER

Another system solution for special requirements is the SMART PLANT from HAVER & BOECKER. It offers a modern and customized packing solution with high-quality standard equipment. The compact and space-saving layout is ideal for applications in small spaces. The standardized, preconfigured concept makes the SMART PLANT particularly cost-effective to manufacture and operate, is quickly available and installed and is extremely flexible thanks to its modular design.

About HAVER & BOECKER

HAVER & BOECKER is a family-operated, medium-sized company with its headquarters in Oelde, Westphalia, Germany. Under the umbrella of HAVER & BOECKER oHG, we find the Wire Weaving and Machinery divisions. Together with over 50 subsidiaries and 150 agencies on all five continents, HAVER & BOECKER has around 3,000 employees worldwide. In 2020, the company generated a sales turnover of 473 million euros.

The Wire Weaving Division manufactures woven wire cloth and processes it into engineered woven wire products. They are used for screening and filtration in the chemical, plastics and automotive industries, aerospace, electronics, industrial and analytical screening and food industries, and for architectural applications.

With its technology brands HAVER & BOECKER, HAVER & BOECKER NIAGARA, IBAU HAMBURG, SOMMER, FEIGE FILLING, BEHN + BATES, AVENTUS, NEWTEC BAG PALLETIZING, QUAT²RO and HAVER Engineering, the Machinery Division specializes in the processing, transport, storing, mixing, filling, packing, palletizing and loading of loose bulk materials.

The product range includes packing and loading systems for powdered and granulated bulk goods, packing machines for filling food and pet food as well as filling stations and entire filling lines for liquid and pasty products. This range is supplemented by screening machines, washing systems, pelletizing plates, agitators and mixers, palletizing and loading technology, silos and ship loaders and unloaders. The QUAT²RO[®] SYSTEM INTELLIGENCE links the individual process steps to create a transparent and efficient process.

Contact:

Guido Neu, Area Sales
Manager HAVER Cement



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USR universal speed relay

Universal speed relay for all speed monitoring applications; offering intuitive user configuration using control buttons and LCD display, as well as relay and solid state outputs with individual speed range monitoring.



4B's USR Speed Relay is a microprocessor controlled digital speed monitor for use with 2, 3, 4 wire NPN/PNP sensors, 4B's WDA range of sensors or contact sensor inputs, with a user programmable electro-mechanical relay and PhotoMOS Solid State Relay (SSR) outputs. The Speed Relay has a 160x80 pixel LCD display to provide information, and 3 front panel buttons to program settings.

The USR Speed Relay reads input pulses and displays the calculated pulse frequency in a range of selectable units. The user can set the Electromechanical Relay and PhotoMOS Solid State Relay outputs independently, with their own thresholds and output behaviors, and have the Alarm LED indicate the state of one of the outputs. The Electromechanical Relay can be set to trigger when the input speed is outside the chosen range. The PhotoMOS Solid State Relay can provide a trigger output or can be configured to provide a pulsed output that matches the input pulse frequency. One LED (Input LED) shows input status of the sensor's pulses, and another LED (Alarm LED) shows the state of the assigned output.

Dynamic image analysis the fast alternative to sieving

Results in less than 5 minutes in a measuring range from 5 µm – 20 mm



If you perform many and frequent sieve analyses, the Particle Sizer ANALYSETTE 28 ImageSizer is the ideal, time-saving alternative in just three steps: Add the sample, start the measurement, read the result. Without a preparatory and concluding weighing, assembling the sieve stack and time-consuming cleaning. And with substantially reduced follow-up costs, as there is no need to calibrate or purchase new sieves. Additionally, you receive besides the equivalent results about the particle size distribution, also valuable statements about the particle shape. The measuring time depending on the sample quantity, is under 5 minutes and the result is available immediately digitally for further processing.

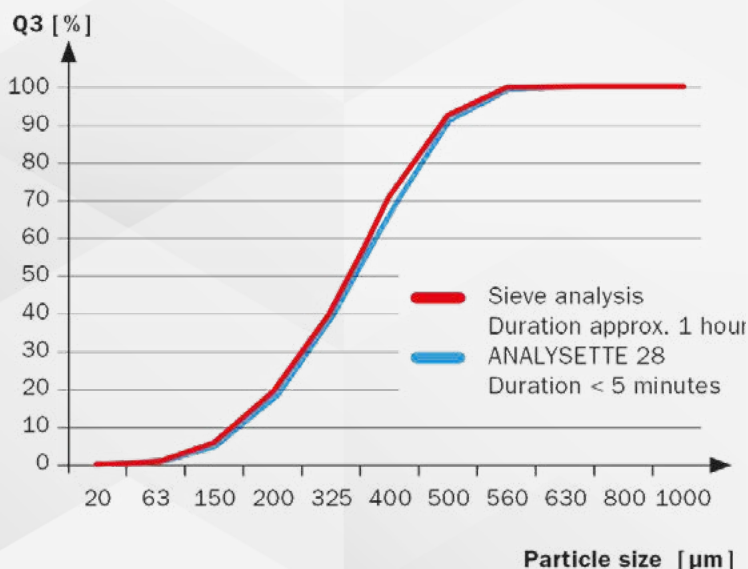
Particle Sizer ANALYSETTE 28 ImageSizer for measurement of powders, solids, suspensions and emulsions

Your advantages compared to classical sieve method

- Short measuring times of less than 5 minutes
- No time-consuming manual weighing
- Fast and safe cleaning of the measuring system
- Result immediately available due to the software
- Easy handling

Display of measurement results according to your wishes

The freely configurable report generator enables the automatic display of the results clearly arranged on the screen – either as a Cloud, as a cumulative curve, as a bar chart or in tabular form. Or define a layout according to your sieve analysis. The displayed results can be printed out as you set it up on the screen.



Fast alternative to sieving Sieve analysis: 1 hour versus < 5 minutes

Different samples can be compared immediately

Display several measurements simultaneously in one graph and immediately see the differences between the respective samples. Direct visual evaluation - ingeniously simple, uniquely flexible.

Wide range of applications

- Dry measurement of powders and bulk solids - measuring range 20 µm up to 20 mm
- Wet measurement of suspensions and emulsions - measuring range 5 µm up to 3 mm

Easily print your UHF/NFC RFID labels on the fly

Redoing missing tags and flagging up cables on the fly has never been easier. Brady introduces new UHF and NFC RFID labels which can be printed as and when needed.

The New UHF Label

Brady's new label is not just a barcode label but also contains a UHF RFID chip and antenna. Portable printers such as the tried and tested Brady M610 recognize this label as one of the standard labels and perform printing as usual.

Two gaps are closed with this product: Firstly, this is an easy emergency solution which allows warehouse staff to replace an RFID label that has fallen off. They quickly redo one label rather than an entire batch of labels. Secondly, this label also represents a comfortable entry into the world of RFID for users who have not used it so far.

"It's a plug and play kind of application", explains Louis-Emile Lammertyn, EMEA Senior Product Manager at Brady. "This way, customers can start testing the possibilities of RFID without having to buy all the expensive hardware for a complete installation."



A Two-Step Process

The UHF RFID label works in conjunction with a portable printer and a handheld reader. In the first step, the label is prepared for printing using apps such as Nordic ID's Encoding Toolbox which are installed on the reader. The human readable text which can include a barcode or QR code is then printed.

In the second step, the software on the reader is used to encode the label. The barcode, for example, can be married with the EPC value, or other information is put on the label. Asset management represents an ideal typical use case for this. "Imagine a big office building, for example", says Louis-Emile Lammertyn, "in which a new open-plan office needs to be set up. With this system and the new label, staff label everything as they go, encode the labels and generate digital lists which detail exactly which item goes into which cubical. It's very simple."

Also Out Now: The New NFC Cable Label

In order to support the neat identification of cables and thus nullify all potential confusion, Brady has now launched an NFC Cable Flag Tag. It is shaped like a trapezium and can easily be folded around a cable. "We chose NFC for this label", explains Louis-Emile Lammertyn, "because the reading distance is only 2 centimeters. With NFC, you can really know for sure that you have the correct cable."



Redi-liners modular lining system

Kryptile ceramic liners combine the properties of aluminium oxide ceramics with the huge impact resistance and toughness of Kryptane polyurethane.

Ceramic material is highly abrasion-resistant, but is vulnerable for breaking due to impact at an angle of 90/60°. The impact energy is not absorbed and the ceramic could crack. Kryptile ceramic liners combine the properties of aluminium oxide ceramics with the huge impact resistance and toughness of Kryptane polyurethane. This protects the very fragile ceramic against a direct impact at an angle of 90/60° and is ideal for impact situations with large quantities of sharp and coarse product. This is the ultimate solution for aggressive applications.



Kryptile liners are all designed in line with the customer's requirements and can be supplied in the exact shape of, for example, a chute, bin or hopper and ensure a perfect fit. This prevents unnecessarily long installation downtime. The standard panel dimensions can be supplied in the exact dimension of 300 x 300 mm. This includes a cast steel plate with welded nut. The so-called Redi-Liners are fitted at the place of impact, and can be exchanged with each other over time so each part is fully utilised.

Redi-Liners are available with Kryptile KS, KC and KT. Download the technical datasheet for more information



April 2024

18-19

Cementitious Materials International Technical and Trade Congress

(EMEA and Americas)

 **Marriott Hotel, Casablanca, Morocco**

Industry Link
Tel.: +40726 497 448



22-23

16th Global Slag Conference, Exhibition & Awards

 **Le Meridien Dubai Hotel & Conference Centre, Dubai, UAE**

Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838



23-24

23rd Asia CemenTrade Summit

Decarbonizing Asia's cement industry amid shifting market dynamics

 **Manila, Philippines**



May 2024

5-9

66th IEEE-IAS/PCA Cement Industry Technical Conference


 **Gaylord Rockies, Denver, USA**



14-15

1st Global CemCCUS Conference/Exhibition/Awards

Carbon capture use/storage for cement and lime with Brevik CCS plant visit

 **Oslo, Norway**

Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838



15-16

Women in Cement and Construction International Congress

 **Dublin, Ireland**


Industry Link
Tel.: +40726 497 448



June 2024

29-31

Cemenergy VI international conference


 **Grand Hotel Europe, Saint Petersburg, Russia**

For more information, please contact:
Ms. Svetlana Chudinovskikh, Exhibition Manager
Tel.: +7 812 3806572 (ext.211)



02-05

Cemtech Asia 2024
Advancing decarbonisation technologies in Asia

 **Shangri-la Hotel, Jakarta, Indonesia**



26-28

CEMENTTECH 2024
The 25th China International Cement Industry Exhibition

 **Wuhan International Expo Center, China**

For more information, please contact:
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14-15 May 2024

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18-19 September

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CONFERENCE / EXHIBITION

Reducing CO₂ emissions from cement

Brussels,
Belgium

3-4 December

www.CemFuels.com



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18-19

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22-25

14th CCC Central European Congress

“Concrete structures - design, construction and rehabilitation in the transition period”

 **Hotel Galant, Mikulov, Czech Republic**

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



October 2024

16-17

17th Global Insulation Conference and Exhibition - 2024

 **Maritim Hotel, München, Germany**

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



October 2024

16-17

CarbonZero Global Conference and Exhibition

 **Madrid, Spain**

For more information, please contact:
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 Tel.: +40726 497 448



18

Sustainability and ESG International Summit

 **Madrid, Spain**

For more information, please contact:
Industry Link
 Tel.: +40726 497 448



November 2024

6-8

9th International VDZ Congress

 **Düsseldorf, Germany**


For more information, please contact:
Ms. Sybille Matthäi
 Tel. + 49 211 45 78-342



November 2024

13-14

22nd Global Gypsum Conference, Exhibition & Awards

 **Royal Orchid Sheraton Hotel, Bangkok, Thailand**

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



December 2024

3-4

5th Future Cement Conference and Exhibition 2024

Reducing CO₂ emissions from cement and concrete production

 **Pullman Brussels Centre Midi Hotel, Brussels, Belgium**

For more information, please contact:
Dr. Robert McCaffrey
 Tel.: +44 1372 743837
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17-19

XXVI International Construction Forum

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07th October 2024

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(6-Week Online Training)

15th April 2024
01st July 2024
07th October 2024

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(6-Week Online Training)

08th April 2024
08th July 2024
14th October 2024

Cement Factory Maintenance
(6-Week Online Training)

08th April 2024
08th July 2024
14th October 2024

Cement Kiln Pyroprocessing
(6-Week Online Training)

08th April 2024
08th July 2024
14th October 2024

Grinding and Milling Systems
(6-Week Online Training)

22nd April 2024
17th July 2024
21st October 2024

Cement Factory Quality Control
(6-Week Online Training)

22nd April 2024
17th July 2024
21st October 2024

Cement Kiln Refractories
(6-Week Online Training)

22nd April 2024
08th July 2024

Calcined Clay Cement
(3-Week Online Training)

15th April 2024
01st July 2024
21st October 2024

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29th April 2024
14th October 2024



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 10-14

ACHEMA 2024


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June 2024
 25-28

Ceramics China

38th China International Exhibition for Ceramics Technology, Equipment and Product

 **Poly World Trade Center Expo, Guangzhou, China**



September 2024
 24-27

TECNA 2024

The International Exhibition of Technologies and Supplies for Surface

 **Rimini Expo Centre, Italy**



April 2024

23-25


Future days

 **Congress Park Hanau, Germany**



24-25

ChemProTech INDIA

 **Halls 1, 2 & 3, Bombay Exhibition Centre, Mumbai, India**



May 2024

15-16

12th Annual Modular, Prefab & Construction Tech Senate

 **Manila, Philippines**

For more information, please contact:

Aimi Najwa


Tel: +60327750000 ext.514



21-24

14th ERBIL BUILD EXPO

14th Erbil International Building & Construction & Machinery Exhibition

 **Erbil International Fairground, Iraq**

For more information, please contact:

International Sales & Marketing


tel.: +90 506 1269692



June 2024

5-6

SOLIDS Parma

 **Fiere di Parma, Hall 8, Italy**



10-11

International Conference for Dispersion Analysis & Materials Testing 2024


 **Berlin, Germany**



10-14

ACHEMA 2024

World Forum and Leading Show for the Process Industries


 **Frankfurt am Main, Germany**



September 2024

19

8th Central and South European Drymix Mortar Conference cedmmc8


 **Çırağan Palace Kempinski Hotel, Istanbul, Turkey**



24-27

InnoTrans 2024

The future of mobility: International Trade Fair for Transport Technology

 **Berlin, Germany**

25-27

Big 5 Construct Egypt

 **Egypt international exhibition center (EIEC), Cairo**



October 2024

9-10

SOLIDS Dortmund 2024

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مجلة عالم الإسمنت ومواد البناء

جدول موضوعات المجلة لعام 2024

المناسبات	الموضوعات	العدد
	<ul style="list-style-type: none">* 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	يونيو/حزيران 2024 (العدد رقم 96)
المؤتمر والمعرض العربي الدولي السابع والعشرون لصناعة الإسمنت ومواد البناء تونس الجمهورية التونسية نوفمبر/ تشرين الثاني 2024	<ul style="list-style-type: none">* تصنيع الإسمنت الأبيض* الإسمنت المخلوط* الإسمنت متعدد المكونات* إسمنت الخبث* إنتاج الإسمنت الأخضر* خلانط 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	سبتمبر/أيلول 2024 (العدد رقم 97)
	<ul style="list-style-type: none">* المبردات* المراوح* مدافع الهواء* الصحة والسلامة المهنية* تكنولوجيا الطحن* الطواحين العمودية* زيادة إنتاج مطحنة الإسمنت* التكسير* مساعدات الطحن والطحن* استعادة الحرارة المفقودة	ديسمبر/كانون أول 2024 (العدد رقم 98)



	<p>* 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 المستعاد</p>	
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آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات لأعداد عام 2024:

1. عدد يونيو / حزيران : 30 مايو / أيار 2024
2. عدد سبتمبر / أيلول (عدد خاص) : 20 سبتمبر / أيلول 2024
3. عدد ديسمبر / كانون أول : 5 ديسمبر / كانون أول 2024

الإعلانات

(بالدولار الأمريكي)

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

أبعاد الإعلان: A4

أبعاد الإعلان على الغلاف الخارجي: ارتفاع 20 سم وعرض 20 سم

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الإمارات العربية المتحدة

«أركان» و «ماجسورت» الفنلندية تتعاونان لإزالة الكربون في مصنع إسمنت العين

وقال كالي راسينماكي، الرئيس التنفيذي لشركة ماجسورت: «نركز على الاستفادة الشاملة لخبث الحديد من خلال زيادة استخلاص المعادن، فضلاً عن إعادة تدوير المواد المعدنية بكميات كبيرة لاستخدامها كمواد خام لإنتاج الإسمنت». وتسعى كل من حديد الإمارات أركان وشركة ماجسورت على أن تكون هذه المبادرة بمنزلة نموذج للممارسات المستدامة في صناعة مواد البناء في دولة الإمارات العربية المتحدة. ويؤكد التعاون على الجوانب العملية والفوائد المترتبة على إزالة الكربون في الإسمنت، مع تسليط الضوء على أهمية بناء مستقبل مستدام يتماشى مع أهداف الاستدامة العالمية.

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أعلنت شركة «حديد الإمارات أركان» عن تعاونها الاستراتيجي مع شركة ماجسورت الفنلندية بهدف تنفيذ مبادرة مبتكرة لإزالة الكربون في مصنع الإسمنت التابع لها في مدينة العين.

تأتي بهدف تعزيز الاستدامة في مصنع العين للإسمنت بما يتماشى مع أهداف مجموعة حديد الإمارات أركان لإزالة الكربون، فضلاً عن تمهيد الطريق لنهج تحويلي لإنتاج الإسمنت الأخضر في المنطقة.

وسيسهم هذا التعاون في إطلاق أول مشروع تجريبي صناعي واسع النطاق في مصنع العين للإسمنت، والذي يستهدف تقليل انبعاثات ثاني أكسيد الكربون بنسبة تصل إلى 15% من خلال استخدام حلول شركة ماجسورت الخاصة لمعالجة خبث الحديد (مخلفات صلبة تنتج عند صهر الحديد) مع تقليل استهلاك الحجر الجيري والطاقة.

قال المهندس سعيد غمران الرميثي، الرئيس التنفيذي للمجموعة: «تعد حديد الإمارات - أركان - من الشركات الصناعية التي تتبنى الحلول الخضراء التي تساعد على إزالة الكربون من سلسلة القيمة في القطاع. ويؤكد هذا المشروع على الدور المحوري الذي تلعبه حديد الإمارات أركان في مجال إزالة الكربون من قطاع الإسمنت بما يتماشى مع أهداف مشاركتها في مؤتمر الأطراف (COP28) في دبي ديسمبر/ كانون الأول الماضي والتزامها باستراتيجية الإمارات للحياد المناخي الرامية للوصول إلى صافي انبعاثات صفرية بحلول عام 2050. وستعمل وحدتا الأعمال (الصلب ومواد البناء) على التعاون فيما بينهما للمساهمة في تحقيق الممارسات المستدامة على مستوى الصناعة من خلال معالجة خبث الحديد الذي تنتجه شركة حديد الإمارات واستخدامه في مصنع العين للإسمنت، ما يعد مثلاً استثنائياً لتحقيق الاقتصاد الدائري في دولة الإمارات العربية المتحدة».

فيما قال هوغو لوسادا، الرئيس التنفيذي لشركة مواد البناء، إحدى الشركات التابعة لمجموعة حديد الإمارات أركان: «يهدف هذا المشروع التجريبي الأول من نوعه في منطقة الشرق الأوسط وشمال أفريقيا إلى تحقيق أهداف إزالة الكربون من مصنع العين للإسمنت بحلول عام 2026 بدل الهدف المحدد وهو العام 2030، ما يعزز من مكانة مجموعة حديد الإمارات أركان كشركة رائدة ومستدامة في الصناعة».

«عُمان والاتحاد للقطارات» توقع مذكرة تفاهم مع «حديد الإمارات أركان»

وقعت شركة «عُمان والاتحاد للقطارات»، المُطور والمُشغل لشبكة السكك الحديدية التي تربط بين سلطنة عُمان ودولة الإمارات، مذكرة تفاهم مع شركة «حديد الإمارات أركان»، أكبر شركة لإنتاج الحديد ومواد البناء في دولة الإمارات العربية المتحدة، وذلك لتصدير المواد الخام من سلطنة عُمان إلى دولة الإمارات.

وبموجب هذه الاتفاقية، ستتولى «عُمان والاتحاد للقطارات» تقديم الحلول اللوجستية لعمليات نقل الحجر الجيري الخام الذي تعتمده شركة «حديد الإمارات أركان» استيراده من سلطنة عُمان إلى مصانع الإسمنت التابعة للشركة في مدينة العين بدولة الإمارات.

وستقوم شركة «عُمان والاتحاد للقطارات» بتوفير الدعم اللوجستي وحلول الشحن لخطط شركة «حديد الإمارات أركان» من خلال نقل مواد خام عالية الجودة من سلطنة عُمان بكميات تتراوح بين 4 - 6 ملايين طن سنوياً إلى مدينة العين بإمارة أبوظبي في دولة الإمارات، الأمر الذي سيدعم «حديد الإمارات أركان» في إنتاج وتصدير 2 - 3 ملايين طن سنوياً من منتجاتها النهائية إلى الأسواق في المنطقة.

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شراكة بين سيمكس الإمارات وستار للإسمنت لتعزيز الاقتصاد الدوار في صناعة مواد البناء

ومن خلال الشراكة، ستقوم كلا من الشركتين بنشر وإيجاد حلول جديدة لإدارة وإعادة استخدام المخلفات الخرسانية من خلال الممارسات المتطورة والأمانة بيئياً. وعلاوة على ذلك سوف تقوم شركة سيمكس الإمارات بإمداد شركة ستار للإسمنت بالمنتجات الثانوية منخفضة الكربون مما يساهم في الحد من البصمة الكربونية في صناعة البناء.

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أعلنت شركة سيمكس الإمارات العربية المتحدة عن توقيع اتفاقية تعاون مع شركة ستار للإسمنت ذ.م.م، وهي إحدى شركات أتراتك المحدودة للإسمنت بالهند، التابعة لمجموعة أديتيا بيرلا. وتهدف هذه الشراكة إلى إعادة تدوير المخلفات الخرسانية في صناعة البناء والحد من الانبعاثات الكربونية وتقليل التأثير البيئي العام لمشاريع البناء.

المملكة العربية السعودية

«إسمنت الشمالية» توقع اتفاقية شراكة مع «الديار العراقية» بقيمة 43.95 مليون دولار

أعلنت شركة إسمنت المنطقة الشمالية «إسمنت الشمالية» عن توقيع اتفاقية شراكة مع شركة الديار العراقية للاستثمارات، بقيمة 43.953 مليون دولار.

وقالت الشركة في بيان لها إن «إسمنت الشمالية» اتفقت على دخول شركة الديار العراقية للاستثمارات (شركة عراقية) بحصة 49% من استثمارات الشركة في الجمهورية العراقية. وأضافت أن الاتفاقية تهدف إلى الدخول في شراكات استراتيجية تمكن الشركة من التوسع في الاستثمار في الأسواق الواعدة. وأوضحت أن الصفقة تتضمن استثمارات الشركة في مجال صناعة الإسمنت في العراق.

alarabiya.net

إسمنت الرياض توقع عقداً مع Sinoma-CDI الصينية

وقعت شركة إسمنت الرياض في يناير / كانون الثاني عقد تنفيذ مع شركة Sinoma-CDI - إحدى الشركات الصينية في مجال الطاقة وبقيمة بلغت 22.5 مليون ريال، وذلك لتنفيذ نواقل المواد الخام والإسمنت وتغييره من النظام الهوائي إلى النقل الميكانيكي عن طريق نظام مساعد لحمل المواد مما يقلل من تكلفة أعمال الصيانة واستهلاك الطاقة الكهربائية.

ويعد هذا المشروع أحد مستهدفات الشركة لتخفيض استهلاك الطاقة للعام الحالي، ومن المتوقع الانتهاء من تنفيذ المشروع في الربع الأول من عام 2025م.

«إسمنت الشمالية» تباع كامل حصصها في شركة خبراء الإسمنت بالعراق بـ 55 مليون دولار

أعلنت شركة إسمنت المنطقة الشمالية «إسمنت الشمالية» عن توقيع اتفاقية بيع كامل حصصها والتي تمثل ما نسبته 50% من شركة خبراء الإسمنت للتطوير والاستثمار والمالكة 51% من الاستثمار المشترك بمصنع الكبيسة بالعراق إلى شركة إيه إم بي غلوبال تريدينغ الإماراتية، بقيمة 55 مليون دولار.

وقالت الشركة في بيان لها إن القرار يهدف إلى الدخول في شراكات استراتيجية أخرى تمكن الشركة من التوسع في الاستثمار في الأسواق الواعدة. وأوضحت أنها تستهدف استخدام عوائد البيع في استثمارات خارجية ذات فرص واعدة وسداد جزء من القروض مرتفعة التكلفة في ظل ارتفاع معدلات التكلفة التمويلية الحالية. وأضافت أن القيمة الدفترية للأصل تبلغ 42.9 مليون دولار.

شركات بتروكيماويات وإسمنت سعودية تتلقى إشعارات من «أرامكو» بزيادة أسعار اللقيم ومنتجات الوقود

أعلنت 11 شركة إسمنت مدرجة بالسوق السعودي عن تلقيها إشعارات رسمية من «أرامكو» بتعديل أسعار منتجات الوقود المستخدمة في إنتاج الإسمنت ابتداء من 01 يناير 2024. ومن ضمن هذه الشركات إسمنت نجران وإسمنت الجوف وإسمنت المدينة وإسمنت ينبع وإسمنت السعودية وإسمنت العربية.

وأوضحت الشركات في بيانات منفصلة لها أن هذا التعديل سيزيد من تكلفة الإنتاج.

كما أعلنت شركة توزيع الغاز الطبيعي السعودية عن تلقيها خطاباً من «أرامكو» بشأن تعديل أسعار الغاز الطبيعي اعتباراً من 1 يناير 2024.

cnbcarabia.com

«إسمنت العربية»: الانتهاء من إنشاء طواحين جديدة بمصنع رابغ

أعلنت شركة الإسمنت العربية عن آخر التطورات لإنشاء طواحين أسمنت جديدة في مصنعها برابغ، مشيرة إلى أن نسبة الانجاز المتحقق هي 100%.

وقالت الشركة في بيان لها إن مالك المقاول، شركة الصين الوطنية لمواد البناء والاستيراد و التصدير، توصل لاتفاق مع إحدى الشركات التابعة للمجموعة وهي شركة سينوما أوفرسيز للتطوير، وذلك للقيام بتنفيذ باقي أعمال المشروع بالتنسيق مع الجهة المصنعة للمعدات الرئيسية وتسليمه لمالك المشروع وفق شروط عقد الاتفاق القائم بين شركة الإسمنت العربية والمقاول شركة الصين الوطنية لمواد البناء للهندسة العالمية.

alyaum.com

«إسمنت القصيم» تؤكد نيتها تقديم عرض للاستحواذ على «إسمنت حائل»

أعلنت شركة إسمنت القصيم نيتها بشأن تقديم عرض الاستحواذ على جميع أسهم شركة إسمنت حائل، وذلك من خلال تقديم عرض مبادلة أوراق مالية.

وبحسب بيان لهما، فإن الشركتين الشركتان تعملان على استيفاء الشروط اللازمة لإتمام الصفقة، بما في ذلك الحصول على الموافقات النظامية ذات الصلة.

ومن المقرر أن يكون عرض الاستحواذ بناءً على معاملة المبادلة النهائي المتفق عليه والبالغ 0.21 سهم في إسمنت القصيم، مقابل كل سهم في إسمنت حائل، وسعر الإغلاق لسهم إسمنت القصيم البالغ 63.20 ريال، كما في تاريخ 21 ديسمبر من العام الماضي 2023.

يأتي ذلك فيما ذكرت «إسمنت القصيم»، أن إتمام الصفقة غير مؤكد، ولا تزال خاضعة للشروط المشار إليها في إعلان الصفقة.

وستقوم إسمنت القصيم بعد الحصول على الموافقات النظامية اللازمة بنشر تعميم لمساهميها يتضمن جميع التفاصيل المتعلقة بزيادة رأس المال، كما ستقوم إسمنت القصيم بنشر مستند العرض لمساهمي إسمنت حائل، والذي سيتضمن معلومات معينة تتعلق بالصفقة.

وسيقوم مجلس إدارة إسمنت حائل بنشر تعميم إلى مساهميها يتضمن رأي مجلس إدارة إسمنت حائل بشأن الصفقة، فيما اتفقت الشركتان بعد ذلك على القيام بدعوة الجمعية العامة غير العادية الخاصة بكل منهما للتصويت على الصفقة.

إسمنت الشرقية توقع عقداً لإنشاء خط إنتاج جديد في مصنع الشركة بقيمة 270.53 مليون دولار

أعلنت شركة إسمنت المنطقة الشرقية توقيع عقد مع شركة سينوما سي دي أي الصينية لمشروع إنشاء خط إنتاج جديد في مصنع الشركة بمنطقة الخرسانية بقيمة 270.53 مليون دولار.

وقالت الشركة في بيان لها إن مدة العقد 26 شهراً، حيث تم تسليم المفتاح الكامل مقابل تصميم وتوريد وبناء وتشغيل خط إنتاج إسمنت بطاقة 10 آلاف طن كلنكر في اليوم في مصنعها الحالي وفقاً لأحدث ما توصلت له التكنولوجيا في مجال صناعة الإسمنت.

وأضافت أنه من المتوقع أن يساهم هذا المشروع في رفع استغلال كفاءة الطاقة الأمر الذي سينعكس إيجاباً على تكاليف الإنتاج، وذلك اعتباراً من تاريخ التشغيل التجاري.

وبهذه المناسبة صرح الرئيس التنفيذي لشركة إسمنت المنطقة الشرقية فهد بن راشد العتيبي، أن الغرض من المشروع هو إحلاله محل بعض خطوط الإنتاج ذات الكفاءة المنخفضة، الأمر الذي سيساهم في تحقيق مستهدفات المملكة لرفع كفاءة استغلال الطاقة.

وأوضح أن المشروع يعتبر إضافة لمسيرة النمو الاستراتيجي الذي تنتهجه الشركة والذي يستهدف النمو وتعميم العوائد لمساهميها وكذلك تلبية الطلب المحلي وتنويع المنتجات تماشياً مع رؤية المملكة 2030.

eyeofdubai.ae

«إسمنت الجوف» توقع عقداً لتصدير الكنكر لـ «ربوع الطيبة» الأردنية

وقعت شركة إسمنت الجوف عقداً لبيع وتصدير مادة الكنكر لشركة «ربوع الطيبة» الأردنية لمدة ستة أشهر قابلة للتجديد. وقالت الشركة في بيان لها إن العقد تم توقيعه يوم 4 يناير الجاري وقيمه 30 مليون ريال، تزيد على 10% من إجمالي إيرادات الشركة وفق آخر قوائم مالية مراجعة.

وتصل مدة العقد ستة أشهر تبدأ من تاريخ 4 يناير 2024 وتنتهي بتاريخ 3 يوليو 2024م، وتوقعت «إسمنت الجوف» أن ينعكس أثره المالي الإيجابي على القوائم المالية للشركة ابتداءً من الربع الأول لعام 2024 وحتى الربع الثاني 2024.

alarabiya.net



«إسمنت اليمامة» تعلن عن حفل تدشين مصنعها الجديد

أعلنت شركة إسمنت اليمامة عن تدشين مصنعها الجديد في 7 مارس / آذار. ويمثل هذا المشروع خطوة هامة نحو تعزيز قدرات الشركة في قطاع الاسمنت. ويتميز مصنع اسمنت اليمامة بقدرة إنتاجية 20 ألف طن كلنكر/يومياً؛ بتقنيات متقدمة ومعايير جودة عالية، مما يجعله من أحدث وأكثر المصانع كفاءة واستدامة على مستوى العالم.

ويعتبر تدشين مصنع اسمنت اليمامة خطوة نحو تحقيق رؤية الشركة في أن تصبح رائدة في صناعة الإسمنت على المستوى المحلي والعالمي، علماً أنه تم التشغيل التجاري للمصنع بتاريخ 01 نوفمبر 2022.

جاز العربية تعلن ترسية عقد مع إسمنت اليمامة بقيمة 35.3 مليون ريال

أعلنت شركة جاز العربية للخدمات ترسية عقد من شركة إسمنت اليمامة لتوريد أجهزة القياس ومحطات تخفيض الضغط وغيرها وبناء خطوط أنابيب الغاز بقيمة 35.3 مليون ريال غير شامل ضريبة القيمة المضافة.

أوضحت الشركة في بيان لها أن العقد يتضمن التوريد والبناء المتعلق بخط أنابيب الغاز/إمدادات الوقود لمصنع إسمنت اليمامة الجديد.

argaam.com

الجمهورية العربية السورية

إعادة تشغيل المعمل 3 لدى الشركة العامة للإسمنت بحماة

مادة الإسمنت حيث سيتم قريباً البدء بأعمال صيانة للمعمل رقم 2، سيما الفرن، ورفع طاقته الإنتاجية إلى نحو ألف طن يومياً، مضيفاً أن مبيعات الشركة منذ بداية العام الحالي تجاوزت 90 ألف طن فيما كان إنتاجها نحو 70 ألف طن من مادة الكلنكر إلى جانب إنتاج 108 آلاف طن من مادة الإسمنت.

وأشار مدير المعمل رقم 3 إلى أنه قد تم إجراء صيانة شاملة لقسم تحضير المواد الأولية والمطحنة وقسم الفرن مع العمل على تحسين المواصفات الفنية للمنتج وتحديث وتطوير الآلات لمواكبة التطورات الفنية والتكنولوجية في مجالات الصناعة.

أعدت الشركة العامة لصناعة الإسمنت ومواد البناء في محافظة حماة المعمل رقم 3 إلى العمل والإنتاج بعد إنهاء أعمال الصيانة الشاملة لآلات ومعدات المعمل والتي بدأت في العشرين من يناير/كانون الثاني الماضي.

وبين مدير عام الشركة أن أعمال الصيانة التي استمرت حتى الأول من مارس/آذار تمت بسبب انتهاء العمر التشغيلي لعجلات الطحن و الفرن، لافتاً إلى أن تلك الاعمال تم تنفيذها بخبرات وكوادر وطنية ومحلية من العاملين في الشركة من ذوي الخبرة والاختصاص، منوهاً بأن الشركة مستمرة بتطوير العملية الإنتاجية لمعاملها لتلبية احتياجات السوق المحلية من

العراق

شركة الدوح للصناعات الإسمنتية تباشر العمل بمعمل سمنت الدوح (2)

أعلنت هيئة استثمار المثنى عن مباشرة شركة الدوح للصناعات الإسمنتية بتنفيذ مشروع معمل سمنت الدوح (2) بطاقة إنتاجية تصل إلى (6) آلاف طن يومياً.

ومن المقرر أن تصل الطاقة الإنتاجية لمعملي سمنت الدوح (1)، (2) إلى (11) ألف طن يومياً، حيث ينتج معمل سمنت الدوح حالياً (5) آلاف طن يومياً ذات مواصفات عالمية معتمدة، والتي من العلامات المطلوبة في هندسة الإنشاءات العراقية ويغطي الآن حاجة السوق في المحافظة وعدة محافظات أخرى.

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تنفيذ أنبوب الغاز الجاف المغذي لمعمل سمنت النجف الأشرف

أنجزت شركة خطوط الأنابيب النفطية أعمال مشروع مد أنبوب الغاز الواصل إلى معمل سمنت النجف الأشرف، حيث تمكنت الشركة من إنجاز مشروع مد أنبوب الغاز الجاف قياس 10 عقدة المغذي لمعمل سمنت النجف الأشرف وبطول 1200 متر، وهو أول عمل تقوم به شركة خطوط الأنابيب النفطية لصالح شركة أخرى بصيغة عقد تجهيز وتنفيذ وتشغيل (EPC) وبمعدات ربحية تضاف الى واردات الشركة.

سلطنة عُمان

«صحار الصناعية» توقع عقداً
استثمارياً مع شركة عمران
لإنتاج الإسمنت الأبيض

وقّعت مدينة صحار الصناعية، التابعة للمؤسسة العامة للمناطق الصناعية «مدائن» عقداً مع شركة عمران لإنتاج الإسمنت الأبيض لإقامة مشروع متخصص في صنع الإسمنت بكافة أنواعه بحجم استثمار يصل إلى مليون ريال عماني، ويقام على مساحة 11250 متر مربع.

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جمهورية مصر العربية

الشركة العربية للإسمنت تكشف النقاب عن
أحدث مبادراتها البيئية4 شركات تتنافس للاستحواذ على مصنع
سبيجيكو للإسمنت

تنفذ الشركة العربية للإسمنت مبادرة بيئية رائدة، من خلال تحويلها من الاعتماد على مرشحات تنقية الهواء الكهروستاتيكي (ESP Filter) واستبدالها بالمرشحات النسيجية الحديثة (Bag Filter) لتجميع جزيئات الغبار الناتجة عن خطي إنتاجها. ولتنفيذ هذا التعديل، أعدت الشركة تقرير الأثر البيئي لعملية التحول وقدمته لجهاز شؤون البيئة، ثم حصلت على الموافقات البيئية اللازمة لتنفيذ مشروع التحول على مرحلتين، حيث تتضمن المرحلة الأولى تحويل مرشحات تنقية الهواء الكهروستاتيكية لخط الإنتاج الأول، تليها المرحلة الثانية لتنفيذ نفس العملية للخط الثاني. تستهدف الشركة من هذه الخطوة الاستراتيجية التأكد من التزامها بشكل استباقي بالقواعد والمعايير الحالية والمستقبلية لانبعاثات الغبار على المستويين المحلي والعالمي.

تم اختيار شركة Redecam Group S.p.A لتجميع والتحكم في انبعاثات الغبار، لتنفيذ هذا المشروع الحيوي. يشمل نطاق هذا المشروع الذي يتم تسليمه كمشروع متكامل (turnkey)، قيام المجموعة بأعمال التصميم والهندسة وتوريد المعدات والتشغيل، حيث من المتوقع استكمال هذا المشروع في غضون عام فقط، وخفض انبعاثات الغبار للمرشح الرئيسي لأقل من 5 مليجرام/م³.

يشار إلى أن هذه المبادرة تتوافق أيضاً مع خارطة الطريق المتكاملة لتحسين الأثر البيئي للعربية للإسمنت، حيث لا يلتزم هذا المشروع فقط بأعلى المعايير البيئية والتشريعية الخاصة بخفض انبعاثات الغبار، ولكنه سيتمكن أيضاً من تعزيز استخدام الوقود البديل والمساهمة في تقليل انبعاثات ثاني أكسيد الكربون.

يمول برنامج التخلص من التلوث في مصر (EPAP) هذا المشروع بشكل جزئي، حيث تصل تكلفته الإجمالية لحوالي 8 ملايين يورو. تعزز هذه المبادرة التعاون الذي بدأ بين العربية للإسمنت وهذا البرنامج في 2014 من خلال مشروع HotDisc لاستخدام الوقود البديل (AF).

نبذة عن الشركة العربية للإسمنت

الشركة العربية للإسمنت من الشركات الرائدة في إنتاج الإسمنت بالسوق المصري. يقع مصنع الشركة في محافظة السويس. ينتج حتى 5 ملايين طن سنوياً من الإسمنت عالي الجودة، وهو ما يمثل 8% تقريباً من إجمالي الإنتاج المحلي في مصر. وخلال السنوات الماضية، حصلت الشركة العديد من شهادات الجودة، منها ISO 9001 للجودة و ISO 14001 للتوافق البيئي و OSHAS 18001 لمعايير الصحة والسلامة و ISO 50001 لإدارة الطاقة.

تتنافس 4 شركات من جنسيات مختلفة على شراء مصنع الإسبانية المصرية للإسمنت «سبيجيكو» بالمنطقة الحرة بمحافظة بورسعيد، إحدى المصانع التابعة لمجموعة سعدالدين للغازات.

وتسعى المجموعة خلال الفترة الحالية إلى التخرج من بعض القطاعات البعيدة عن النشاط الرئيسي للشركة وهو قطاع البترول والغازات.

وكانت الشركة قد ضخت 30 مليون جنيه عام 2022 لزيادة الطاقة الإنتاجية ورفع كفاءة المصنع، إلا أن القيود التي فرضتها الدولة على قطاع الإسمنت لم تمكن المصنع من استعادة العمل بكامل الطاقة الإنتاجية.

ويقع المصنع على مساحة 42 ألف متر مربع، باستثمارات مليار جنيه، ويضم مجموعة من خطوط الإنتاج والتعبئة والتغيف بطاقة إنتاجية تصل إلى 600 ألف طن سنوياً.

ومد جهاز حماية المنافسة ومنع الممارسات الاحتكارية، في يوليو / تموز الماضي، قرار خفض الطاقات الإنتاجية لـ 23 شركة إسمنت عاملة في السوق المحلي لمدة عام ينتهي في 23 يوليو 2024.

وبدأت شركات إنتاج الإسمنت في يوليو 2021 تخفيض الطاقة الإنتاجية بشكل مؤقت بنسب تتراوح بين 30% و 35% كحل لأزمة القطاع الذي شهد زيادة كبيرة في المعروض.

وبلغ إنتاج مصر من الإسمنت خلال العام الماضي 45.8 مليون طن، في حين تصل الطاقة الإنتاجية الفعلية للشركات إلى 82 مليون طن سنوياً، بينما حجم الاستهلاك المحلي 44.9 مليون طن، بحسب شعبة الإسمنت باتحاد الصناعات المصرية.



المؤتمر والمعرض السنوي لتكنولوجيا
صناعة الإسمنت 2024

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العقاري: دفع النمو وتعزيز الريادة

الدار البيضاء، المملكة المغربية



2024 16-13 مايو / أيار

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