



CEMENT & BUILDING MATERIALS REVIEW

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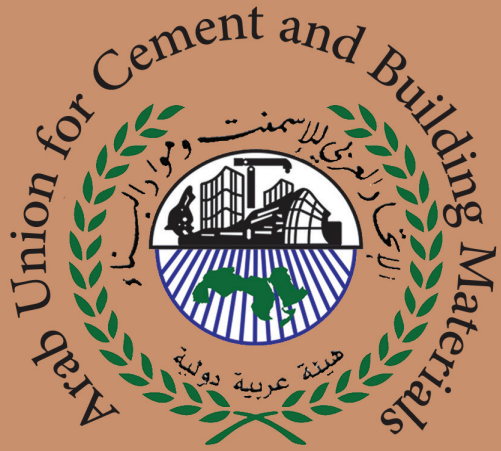
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Cement and Building Materials Review

Arab Album

International News

New Products

Technical Articles

Diary Dates

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- *The Magazine editorial staff welcome the contribution of experts to enrich the contents of the magazine .*
- *Articles are not to be returned to authors .*
- *Points of view expressed in the magazine do not necessarily express points of view of the AUCBM or the magazine itself . It is rather the opinion of the author. The AUCBM does not bear legal liability or responsibility from any article .*

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- Game Changing Technology for Energy Path in Cement Industry
By: Eng. Osama Aly Ahmed, Egypt
- On the possibility of radical decrease of Co2 emissions and cost of fuel at cement production
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AUCBM's *Quarterly Cement and Building Materials Review (CBMR)*

EDITORIAL SCHEDULE FOR 2019

ISSUE	THEMES	EVENTS
June 2019	<ul style="list-style-type: none"> - Bagging, Packaging & Dispatch - Loaders & Unloaders - Feeder Technology - Bulk Storage and Handling - Storage of fuel - Conveyors, Bucket Elevators - Occupational Health & Safety - Coal Preparation and Firing 	
* September 2019	<ul style="list-style-type: none"> - New types of cement - Low carbon cement - White cement - Concrete - XRF and XRD analysis - Chemistry of cement - Cement additives - Silo Cleaning & Blockages - Silo design consideration - Drive systems - Weighing technologies - Sampling Techniques & Samplers 	<p>AUCBM's 24th Arab International Cement Conference and (Exhibition (AICCE24</p> <p>Cairo, Egypt November 24-26 2019</p>
December 2019	<ul style="list-style-type: none"> - Lubrication Systems - Maintenance in Cement Plants <ul style="list-style-type: none"> - RCM (Reliability Centered Maintenance) - Computerized Maintenance System CMS - Repair and welding techniques - Spare-parts Management - Vertical Mills - Crushers - Coolers - Burner Technology - Refractories & testing of refractories 	

* September is a bonus issue that will be distributed to the Conference participants

Deadlines for receiving articles, press releases, or advert materials for 2019 issues are as follows:

June issue: **28th May 2019**

September (bonus) issue: **30th August 2019**

December issue: **6th December 2019**

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ALGERIA

GICA to open new factory on March 2019

Cement production to start at the Sigus plant, located in Oum El Bouaghi, in March 2019.

The Algeria Cement Industry Group, or GICA, invested DZD 51 billion to set a new cement factory with the capacity to produce 2.2 million tons per annum. Production at the Sigus cement plant is scheduled to start in March 2109.

Cemweek

Aïn Touta Cement buys filter for plant

The Aïn Touta Cement (SCIMAT) plant near Batna has spent US\$10m on a new filter. The investment is part of a group of improvements intended to increase production at the unit in 2019. The company is also implementing a new integrated administration system.

Global Cement

Algeria exports cement to western Africa

The Algerian Minister of Commerce announced that a new cargo of 35,000 tons of clinker was heading to Côte d'Ivoire. The clinker was produced by CILAS's factory in Biskra wilaya and exported through the Port of Annaba.

The same company has already exported clinker to Niger and Mauritania through the border city of Guezzam, in southeast Algeria. CILAS aims at exporting two million tons per annum by 2020.

Cemweek

El-Hamel Sidi Moussa starts exporting cement to Niger

El-Hamel Sidi Moussa group's Timegten cement plant has made its first 2000t export to Niger. The Chinese-

Algerian joint venture used the Freight Transport and Logistics Group (Logitrans) to make the delivery overland via the In-Guezzam border crossing. The 1.2Mt/yr plant plans to target other countries, including Mali, Mauritania and Burkina Faso.

The Euro156m plant was commissioned in 2017. It is being run under a seven-year cooperation agreement where the Chinese partners manage the unit until the local workforce is trained. The plant also manufactures oil well cement.

Global Cement

Algeria targets cement exports of US\$500m by 2023

Minister of Industry and Mines says that the government is aiming for cement exports worth US\$500m by 2023. This is based on a surplus of 10 – 15Mt of cement by this time. Cement exports reached 1Mt in 2018. This is expected to grow to 2Mt soon with 1.2Mt supplied by GICA Group.

Global Cement

Aïn El-Kebira Cement Company wins Algerian Quality Award

Aïn El-Kebira Cement Company has won the Algerian Quality Award for 2018. The government-issued award includes a prize of around Euro15,000, a trophy and a diploma of honour. The 1Mt/yr integrated cement plant is part of GICA Group, according to the El Moudjahid newspaper. The unit plans to start producing oil well cement in 2019. GICA Group exported 0.2Mt/yr of cement in 2018 and it plans to increase this to 0.8Mt/yr in 2019.

Global Cement

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



EGYPT

Arabian Cement to set solar power plant

Arabian Cement Company to set solar power plant. In a partnership with SolarizEgypt, Arabian Cement Company will set a solar power plant with the capacity to generate 16 gigawatt-hour per annum at the Suez Governorate, an investment of USD 5.56 million.

SolarizEgypt, a company that has been setting solar power plants across Egypt since 2013, will be responsible for building and operating the project for 25 years. The new solar farm will be commissioned during the second quarter of 2019.

Cemweek

Yingli Solar and Misr Asset Management to sell solar energy to Building Materials Industries

China's Yingli Solar and Misr Asset Management (MAM) are planning to build a 100MW solar plant in order to sell electricity to Building Materials Industries Company (BMIC). Technical and economic studies have been completed for the US\$80m plant but final approval is still awaited, according to Egypt Daily. The project will also receive US\$50m in finance from the Asian Development Bank. BMIC operates a 1.5Mt/yr integrated cement plant at Assiut.

Global Cement

Helwan Cement sells white cement plant

Emaar Industries is the new owner of the plant

CemWeek

IRAQ

MAN Energy commissions generators at Iraqi cement plant

Germany's MAN Energy has commissioned six MAN 18V32/40 generator sets for Kairat Al Abar Iraqi's new cement plant in Samawa. The engines will supply 54MW of electrical energy for the plant.

Global Cement

KUWAIT

ACICO Cement orders new grinding unit from Cemengal

For a second time, Cemengal will supply a grinding station to Kuwaiti manufacturer ACICO Cement. The 5,200-kilowatt ball mill will be fully engineered by Cemengal, which will also supply the peripheral equipment.

The order includes a fourth generation classifier from Magotteaux XP4i-130 that allows the production of high-strength cements. The new grinding unit is expected to be commissioned in the first half of 2020 with the capacity to produce one million tons per annum.

Cemengal will be responsible for engineering and complete supply of mechanical, process, electrical and automation equipment, as well as steel manufacturing from the raw materials handling areas up to the silos cement discharge. It will also deliver site supervision, training, and commissioning activities.

CemWeek

LIBYA

Libya to build a new cement plant in Nalut

The executive director of the Libyan Fund for Internal Investment and Development, Bader Ben Othman, and the chairperson of the Board of Directors of National Building Materials Company Abdul Aziz Al-Malik signed an agreement regulating the construction of a new cement plant in Nalut.

The future cement plant will have the capacity to produce 1.6 million tons of cement per annum. The project is part of the efforts of the Presidential Council of the National Reconciliation Government and the Central Bank of Libya to boost the domestic economy.

CemWeek

New cement unit in Zliten, Libya

Libya's National Company for Cement inaugurated a new production line at the Zliten cement plant with the capacity to produce one million tons per annum.

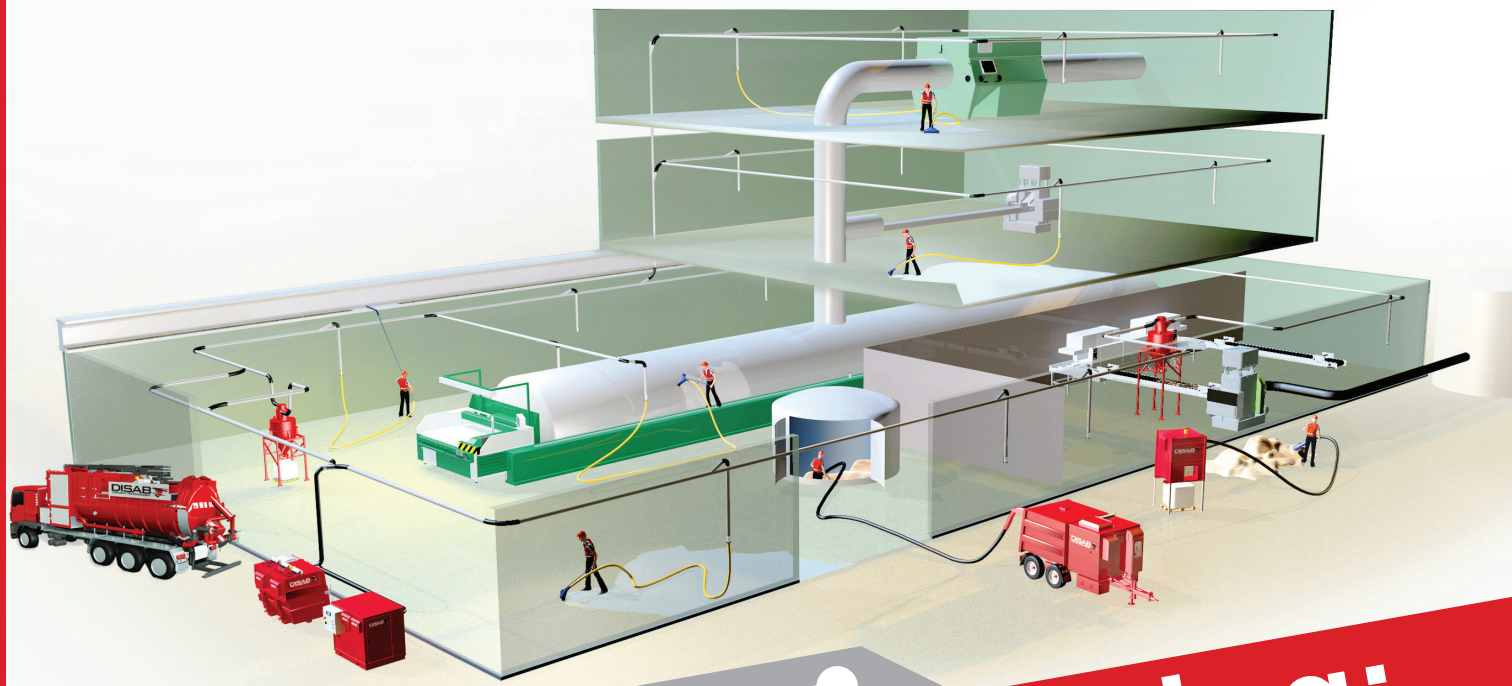
The new line will enable the National Cement Company to raise the total capacity of its production to more than four million tons annually, for the first time.

CemWeek

MOROCCO

HeidelbergCement reduces stake in Ciments du Maroc

HeidelbergCement has sold a 7.8% share of its stake in Ciments du Maroc to an unnamed local investor for around Euro140m. Following the transaction, the German building materials producer retains a controlling share of 54.6% in its subsidiary. It has reduced its stake in Ciments du Maroc as part of its action plan to optimise its portfolio and improve cash generation. The group has a target of Euro1.5bn of asset divestments by the end of 2020.



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“HeidelbergCement is fully committed to remain the long-term majority shareholder of CimENTS du Maroc, a key strategic asset within the group’s portfolio,” said Bernd Scheifele, chairman of the managing board of HeidelbergCement.

Global Cement

OMAN

Raysut Cement preparing to buy Sohar Cement

Raysut Cement has signed a letter of intent with the shareholders of Sohar Cement to buy all of its shares. The terms of the acquisition are being discussed. Sohar Cement runs a 240t/hr grinding plant at the Sohar Industrial Estate. Sohar Cement holds a 70% stake in the business, with UAE-based Fujairah Cement Company owning the remaining share.

Global Cement

Raysut Cement launches digital projects

Raysut Cement has launched the use of SAP S4/HANA and SAP Success Factors as part of a change to its human resource (HR) digital business processes. SAP S4/HANA is a resource-planning package and SAP Success Factors is used to manage HR functions. The project has been supported by Fujitsu International. The implementation phase is intended to run until mid-2019.

Global Cement

Raysut Cement modernizes clinker cooling system

Raysut Cement signed an agreement with Ayoki Engineering for the upgrade of the clinker cooler line number 3 at the Salalah cement plant. The equipment for the modernized line will be sourced from IKN, in Germany.

“The upgrade of clinker cooler is in line with Raysut’s strategic plan to install the latest in production technology to reduce costs as well as to scale up its plants with state-of-the-art equipment,” said the company CEO.

Ayoki Engineering will take the existing grate cooler and replace it with an IKN Pendulum clinker cooler with the designed capacity to handle 4,000 tons per day. The company will deliver civil works, supply, and installation.

CemWeek

QATAR

QNCC preparing to export cement

Qatar National Cement Company (QNCC) is preparing to export clinker, grey cement and white cement.

Following the completion of its 5000t/day Plant 5, the company is considering targeting countries like Yemen and Iraq. The cement producer has a production capacity of 16,000t/day. In 2018 it produced 2.9Mt of Ordinary Portland Cement (OPC) and Sulphate Resistant Portland Cement (SRC). It also intends to add new cement products to its portfolio in 2019.

Global Cement

SAUDI ARABIA

Saudi Arabian cement production drops by 10.5% to 42.1Mt in 2018

Data from Yamama Cement shows that national cement production fell by 10.5% year-on-year to 42.1Mt in 2018 from 47.1Mt in 2017. Cement production fell at the majority of local producers with the notable exceptions of Saudi Cement, Southern Cement and others. Clinker production dropped by 3% to 48.3Mt from 49.9Mt. Local deliveries of cement decreased by 13% to 41Mt from 47.1Mt. However, exports of cement rose to 1.1Mt from 0.16Mt and exports of clinker increased to 3.2Mt from no exports in 2017.

Global Cement

Saudi Arabian cement demand expected to fall in 2019

Demand for cement is forecast to fall in 2019. A report by Al Rajhi Capital expects this due to reduced government spending on infrastructure projects and growing construction costs. Cement producers will focus on pricing rather than volume in this environment. Exports are also expected to increase. Local sales volumes of cement decreased by 13% year-on-year in 2018.

Global Cement

Tabuk Cement exports to Yemen

Saudi manufacturer Tabuk Cement exported 6,950 tons of cement to Yemen on January 15, 2019.

According to the company, the financial impact of the shipment will be reflected in the results of the first quarter of 2018 and the first quarter of 2019.

CemWeek

SYRIA

Rastan Cement resumes activity

After being halted for seven years due to the war that has been ravaging Syria, Rastan Cement Company, based in northern Homs, has now resumed production. The government says that hostilities at the site ceased in the summer last year.



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TUNISIA

Tunisia to start building new cement plant in March 2019

France's United Cement Investor will start building a new 1.5Mt/yr cement plant at Bir Thlathin in southern Tataouine in March 2019. The project has a cost of around US\$320m. Local investment will total around US\$95m.

Global Cement

New Carthage Cement tender to launch in June

Three months following the announced lack of tender success for the sale of the shares held by the Tunisian state in the capital of Carthage Cement, a financial restructuring, including the transfer of a block of shares representing 50.52 per cent of the capital, is being implemented at the cement plant to launch a second call for tenders by June 2019.

To restore financial stability and encourage compliance with future banking commitments of the cement

producer, Al Karama Holding and the banks have started talks with the Central Bank of Tunisia after it recommended banks to record provisions for their claims on the cement producer. Debts of Carthage reached more than TND428m (US\$140.5m) on 30 June 2018. Al Karama and the banks were able to convince the central bank to suspend its recommendation as the company is implementing a financial restructuring plant with the banks as stakeholder.

The five investors who are pre-qualified for the financial offers phase of the first call for tenders launched by Al Karama Holding in December 2017 are still showing interest in the cement business.

TunisianMonitorOnline

UAE

Arkan Building Materials sells closed Emirates Cement plant for US\$13.6m

Arkan Building Materials has sold the closed Emirates Cement plant for US\$13.6m. The unit was originally

closed in late 2016 on a temporary basis due to rising gas and electricity costs. It later decided to permanently close the plant. The company continues to run its Al Ain Cement plant.

Global Cement

RAK Cement buys Newtech plant and quarry for US\$123m

Ras Al Khaimah (RAK) Cement has purchased the Newtech cement plant and the Al Banna quarry from Mohammed Ali Omar Saleh Al Buraiki for around US\$123m. RAK Cement operates an integrated plant at Ras Al Khaimah.

Global Cement

Fujairah Natural Resources to build US\$150m clinker plant in UAE

Fujairah Natural Resources plans to build a clinker plant at a cost of US\$150m at Habbab in Fujairah. Production at the site will start in December 2019. The project is intended to boost the cement industry in Fujairah.

Global Cement

Fives sets up new subsidiary in Middle East

Fives Group's Mineral Business Line has set up a new subsidiary in the Middle East to support customers with services and technical assistance. Based in Dubai and referring to the Services Department, the new division aims to support Fives' customers through a local presence and by offering its services including upgrade and revamping projects, technical assistance, supply of spare parts, on-site machining and so on.

Global Cement



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YEMEN

Investors study reopening of Batis cement plant

Cement plant in Abyan, Yemen, prepares return to operations.

A delegation of Turkish businesspersons has visited the Batis cement plant, in the Yemeni governorate of Abyan, to discuss the next steps on requalifying and reopening the factory.

Operations at the plant have been suspended for several years. Prior to that, the Batis cement plant supplied several governorates in the country with cement.

Cemweek

The Will for Living – Cement Plant Restoration

This Article narrates the story of Syrians, who acquired the living will, the high competence for building their country, self-dependence, the faith and the ability in reviving hope, in order to make life really fantastic.

We will talk about the Portland Cement Plant in Al-Muslumieh – Aleppo, Syria. It was established within a standard period of time – less than a year. Great abilities were employed at that time for executing that project. It was actually commissioned in 1982. The factory was manufactured by the German company BÜHLER Miag. The quarries of the raw materials which are used in the production process are in the neighborhood of the plant, this advantage reduced expenses of materials transportation from the quarry to the plant. The quarries may provide raw materials to the factory for more dozens of years.

Moreover, there is a railway station for supplying the liquid fuel to the plant (which is the main fuel used in burning process), and it is also used to transport the finish cement to provinces for sale.

The building process kept advancing steadily, without any fatigue, achieving high economic revenues. The plant product (Portland Cement) has achieved ISO certificate, and scored the first status in the respect of environment conservation, by keeping the environment clean and free from gases and dust.

They used the state-of-the-art dust collection and precipitation techniques, and so on.

Suddenly, silence prevailed instead of the active noise... it is the awful dirty war...

In the mid of 2012, the production flame went off. The result was an entire destruction in some places, and partial destruction in others. During that bad times none of the plant staff could reach there.

Five years later, the truth hour had knocked, the plant finally is free from all destruction and war tools.

In the beginning of 2017, a specialized group from our remaining engineers, technicians and

workers performed the hard mission of making an inventory of all components and requirements for all departments.

A schedule was established for the whole maintenance and restoration works (electrical, mechanical, technological and civil).

The restoration started with the cement mill, packing department and their equipment accessories (transformation station 66KV. / 6.6KV., performing the maintenance for service transformers, air compressors, water supply system and packing silos that supply cement for bags and bulk packing to the consumer.

It was an incredible feeling of pleasure with a marvelous endeavor... all the teamwork had done well, and they all got the good results.

By the same enthusiasm and will, a courageous decision was made to launch the second stage of plant restoration for the following departments:

- The quarry
- Limestone & Basalt crushers, along with the departments involved; namely, stackers, scrapers, raw material mill and the related accessories, such as cooling tower, electrostatic precipitator and gas suction pipes.
- Fuel supply system, fuel tanks, rotary kiln system, clinker cooler, gravel bed filter, main fan system 400, sematic control PLC in accordance with the up-to-date system (PLC-S7).

Depending on the local skill staff, we achieved the second mission. This stage lasted one year. This significant job was fulfilled during a record period of time. It is a testified work on all scales, especially that it was performed by local experts of our engineers, technicians and workers.

The general administration of Milihouse Establishment has its influential role in helping, overcoming the difficulties and in supporting the process by supplying the equipment and, mainly, by their persevering to fulfil the dream. They support the technical staff who had done the whole job at considerable low costs.

CNBM and Fives seal their agreement

Expertise and key technologies are at the heart of this cooperation agreement

Fives' performing technologies are acknowledged by CNBM

On January 26th, 2019, CNBM and Fives signed a cooperation frame agreement to open avenues of collaboration.

Through this frame agreement, CNBM and Fives defined areas of collaboration to benefit from either party expertise or technologies. The parties will explore projects together, in plant upgrade, plant expansion and new plants to implement Fives technologies, such as FCB Horomill® grinding system, FCB Pyro-line and Pillard burners to reach the highest level of energy efficiency, emission controls and product quality. The scope is international.

By partnering with Fives, an international engineering group, CNBM, the largest comprehensive building material industry group in China with a leading position in cement production & plant construction, acknowledged Fives' ability to develop sustainable technologies providing unsurpassed performances in electrical consumption and CO₂ emissions. CNBM and Fives' complementarity will create opportunities to collaborate, aiming at improving plant energy efficiency, reducing thereof CO₂ footprint, preserving natural resources, while increasing cement quality and reducing total cost of ownership.

The ceremony gathered several top level representatives from both companies, including Mr Song Zhi Ping, Chairman of CNBM and Mr Frédéric Sanchez, President of Fives. This agreement was the occasion to reaffirm their strong commitment to multilateralism, which is the right direction to develop collaboration between Chinese and European enterprises, meeting both interest.

With full-line services covering scientific research, manufacturing and logistics, CNBM is the largest building materials manufacturer in the globe and world leading comprehensive service supplier. With total assets of € 77 billion, CNBM has a workforce of 250,000 employees and generates an annual income of € 38.5 billion. The Group also owns 15 listed companies, including 2 listed abroad. The Group produces 530 million tons of cement clinker, 460 million m³ of ready-mixed concrete, 2.2 billion m² of plasterboard, 2.24 million tons of fiberglass, and 16 GW of wind turbine blades per year, all of which rank the first in the world. The Group is also the No.1 player in the international cement engineering market and the international waste heat recovery market. New materials business is a new rising force of the Group, and CNBM has transformed from a building materials enterprise centered on cement business into a comprehensive building materials and new materials industry investment group integrating cement, new material and engineering technical service.

About Fives

As an industrial engineering Group with a heritage of over 200 years, Fives designs and supplies machines, process equipment and production lines for the world's largest industrial players in various sectors such as steel, aerospace and special machining, aluminium, automotive and manufacturing industries, cement, energy, logistics and glass.

The effectiveness of its R&D programs enables Fives to design forward-thinking solutions that anticipate industrials' needs in terms of profitability, performance, quality, safety and respect for the environment.

In 2017, Fives achieved a turnover of €1.9 billion and employed close to 8,700 people in about thirty countries.

www.fivesgroup.com

AUMUND supplies full clinker conveying equipment to cement plants in Algeria

The successful partnership between AUMUND France and AUMUND China has resulted in large orders for AUMUND in Algeria for two new cement plants at Zahana and Bechar. Decades of customer support, in particular strong after-sales service by AUMUND France in Algeria, as well as the close relationship of AUMUND China to the Sinoma Group, have culminated in this achievement.

The two orders together comprise 26 Belt and Chain Bucket Elevators, two Bucket Apron Conveyors, ten Pan Conveyors and ten Drag Chain Conveyors.

five AUMUND Pan Conveyors (cc 18.3 -106.8 m, capacity 300 - 360 tph) in conveying clinker. The ten AUMUND Drag Chain Conveyors with centre distances

with their centre distances ranging from 11 to 102.9 m will convey raw meal, cement and clinker with capacities from 70 to 480 tph. The five Pan Conveyors, with centre distances from 22.2 to 89.8 m, will convey their loads at up to 480 tph. The AUMUND Bucket Apron Conveyor in Bechar (center distance 88.5 m, capacity 200 tph) will also convey clinker.



Example application of an AUMUND Drag Chain Conveyor, type LOUISE, in a cement plant (Photo AUMUND)

The Société des Ciments de Zahana (SCIZ) plant, which has a capacity of 4,500 tpd, is near Oran, around 450 km from the capital Algiers. Here three Chain Bucket Elevators with centre distances ranging from 22.5 to 34.9 m, and capacities from 50 to 220 tph, will be used to convey cement and clinker. Eleven Belt Bucket Elevators (cc 22.5 -116.1 m) will convey raw meal, cement and clinker with capacities between 190 and 680 tph. The AUMUND Bucket Apron Conveyor with a centre distance of 61.1 m and a capacity of 360 tph will join the

between 6.1 and 33.8 m will be used in clinker dust extraction and are designed for conveying capacities from 15 to 80 tph.

The second order for Algeria, for the Bechar cement plant, was placed by CBMI to AUMUND Beijing with support from AUMUND France. This plant has a capacity of 3,200 tpd and will operate 15 AUMUND Belt and Chain Bucket Elevators, five AUMUND Pan Conveyors and an AUMUND Bucket Apron Conveyor for its bulk materials handling. The Bucket Elevators

About the AUMUND Group

The AUMUND Group is active worldwide. The conveying and storage specialists have special expertise at their disposal when dealing with bulk materials. With their high degree of individuality, both its technically sophisticated as well as innovative products have contributed to the AUMUND Group today being a market leader in many areas of conveying and storage technology. The manufacturing companies AUMUND Förder-technik GmbH (Rheinberg, Germany), SCHADE Lagertechnik GmbH (Gelsenkirchen, Germany), SAMSON Materials Handling Ltd. (Ely, England), as well as AUMUND Group Field Service GmbH and AUMUND Logistic GmbH (Rheinberg, Germany) are consolidated under the umbrella of the AUMUND Group. The global conveying and storage technology business is spearheaded through a total of 15 locations in Asia, Europe, North and South America and a total of five warehouses in Germany, USA, Brazil, Hong Kong and Saudi Arabia.



SITI B&T acquires the whole minority share of Projecta Engineering

SITI BT Group S.p.A., manufacturer of complete systems for tiles and sanitary ware, listed on the AIM Italia market (ticker: SITI) has reported the acquisition of 48% of the share capital of Projecta Engineering, the group company that operates in digital decoration technologies, consolidating its holding at 100%. Projecta Engineering also holds 62.5% of Digital Design, the company involved in design and graphic research services.

“We have today consolidated ownership of a company – Fabio Tarozzi comments, Chairman and Chief Executive Officer of SITI BT Group - that is one of the cornerstones of our Group. Since it was purchased, basically a start-up in 2010, Projecta Engineering has become one of the reference companies for digital decoration technologies on the ceramic market. The constant technological innovation of products and the introduction of cutting-edge ideas and solutions allows us to offer excellence in the look of the final product”.

Projecta Engineering 2017 has booked turnover of 35.6 million euros, achieving EBITDA of 3.7 million euros. The Net Financial Position as at 31.12.2017 was 5.2 million euros with Shareholders' Equity of 11.5 million euros (figures include the share held in Digital Design).

The transaction was performed for a value of 4.7 million euros, of which 3.375 million euros payable in three annual instalments of 1.125 million each.

Projecta Engineering has a staff of 74, of whom 22 in the Research and Development Department alone; it holds 17 patents with investments in R&D worth in excess of a million euros per year.

Recently, Projecta Engineering has launched numerous innovative products on the market, such as the Full Digital Decoration line, designed with water-based environmentally-friendly technology (with efficient, environmentally-friendly waterbased inks), the

Industry 4.0 supervision unit and the Innova® family of large format digital printers.

In 2018, an internal development centre was opened, dedicated to the decoration of on-ceramic surfaces (glass, wood, plastic, bricks, cements, etc.), which allowed for the first products to be launched on the market in January 2019.

SITI BT Group

SITI BT Group, listed on the AIM Italia market since March 2016, a supplier of technology and complete plants serving the world ceramics, tiles and sanitary ware industry, with a capillary presence in all markets and the industry's most complete range of technologies, offers solutions of excellence and innovative services, with particular attention to issues of energy efficiency and the look of the finished product. It guarantees customers a complete, personalised service, from the study of the finished product design through to the turnkey manufacture, including the maintenance and modernisation of production lines.

The SITI BT Group operates through the following operating units: “Tile” (complete plants for tiles), Projecta Engineering (digital printers), Digital Design (design and graphic projects), Ancora (lines for the surface finishing of ceramic products) and “b&t White” (complete systems for sanitary ware). In 2017, SITI BT Group recorded sales volumes of 203 million euros, with export accounting for 83% and investments in R&D for 7 million euros.

www.sitibt.com

Duravit: the rewarding partnership with SACMI-Gaiotto continues in Tunisia

Like its counterpart in Egypt, the production facility in Zarzouna (Biserta, Tunisia) has made a major technological investment, resulting in the installation and final testing of a robotized glazing cell assisted by a GA2000 robot

The German multinational manufacturer of high-end sanitaryware has now turned its attention to Tunisia, where a new robotized glazing cell was recently tested at the Duravit plant in Zarzouna (Biserta).

Consisting of a GA2000 robot and a 4-position glazing carousel, this cell represents a hugely innovative step forwards for Duravit's operations in Tunisia and highlights the multinational's strong focus - in this country, as in others - on reliability, quality and environmental sustainability. With regard to the latter, in fact, the installed unit features a dry filtration booth, a solution that reduces emissions of glaze dust by recycling nearly all of it.



SACMI-Gaiotto technology has a worldwide reputation for performance, reliability and less waste. Hence our pivotal role in this German giant's investment decisions and the increased efficiency and performance of its global manufacturing operations.

ENERGIEKER joins forces with SACMI to focus on the large slab market

New, complete plant became operational just before the start of Cersaie. At its heart lies SACMI Continua+ technology, with a full complement of downstream decoration, handling and firing solutions.

The goal? To reposition the EnergieKer brand towards the promising large decorated ceramic slab market. The partner? The SACMI Group, which supplied the Pavullo-based company with a complete plant for the manufacture of slabs as large as 1200x2400 and 1600x3200, the plant being the last stage of an ambitious plan to invest in the best available large slab technology launched back in 2013.

The new plant was installed and started up last summer, just in time to present the new EnergieKer product range at the international Cersaie fair in September. Needless to say, at its technological heart lies a Continua+ line, the SACMI solution that sets the worldwide standard for the manufacture of ceramic slabs of different size and thickness. SACMI also supplied all the digital decoration, glazing, handling and sorting systems, plus a latest-generation EKO kiln equipped with every possible feature to maximise quality and minimise consumption.

Downstream from the compactor, the DHD 1808 digital printer by SACMI-Intesa plays a pivotal role: equipped with 8 colour bars, it belongs to that latest generation of SACMI solutions that has opened the way towards deep digital decoration (i.e. complete digitalization of the glazing line and unmatched on-tile tactile and depth effects). With the new plant now up and running, EnergieKer is looking to intercept a broad swathe of market segments thanks to its new-found ability to work continuously with different sub-sizes and top-quality finishes.

This plant sees SACMI strengthen its partnership with EnergieKer, a union begun 8 years ago when the firm purchased its first traditional pressing lines, kilns, dryers, complete glazing/sorting lines, spray dryers and continuous grinding mills.

East African cement markets: “Land of opportunity” in theory, but challenging market dynamics in reality

Dom Pavlopoulos and Claudia Stefanoiu of CemBR – Cement Business Research provide a market analysis of the cement industries in East Africa

Introduction

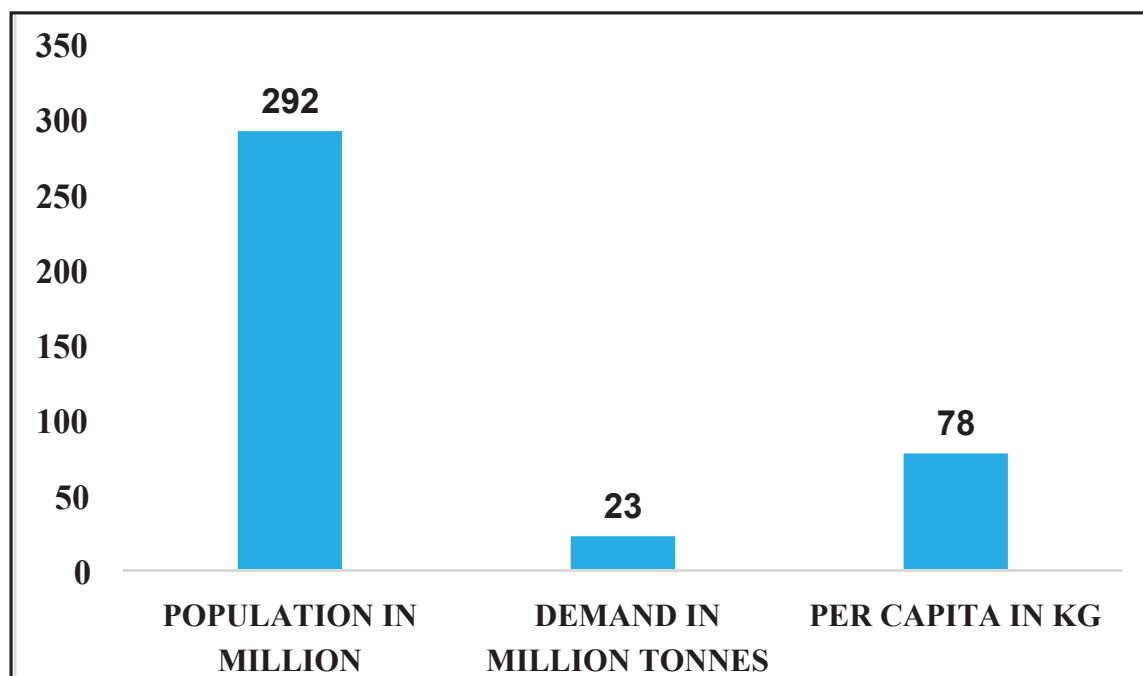
This article offers a regional review of five East African cement industries based on a recently published report by CemBR – Cement Business Research. CemBR is a research firm addressing the global cement sector. The markets assessed in this regional report are: Ethiopia, Kenya, Mozambique, Tanzania and Uganda.

The current situation

The region has one of the lowest cement consumptions per capita globally whilst exhibiting strong urbanisation growth. This offers an opportunity for the region to grow significantly assuming that certain conditions are satisfied.

Currently, the region has a population of 292 million and a cement demand of just 23 million tonnes. As a result, the regional average per capita consumption is only 78 Kg.

FIGURE 1: POPULATION, DEMAND AND PER CAPITA CONSUMPTION



M/s. Allan Smith Engineering Pvt. Ltd. is a reputed name in Rotary Kiln Industry. We offer specialized maintenance services includes: Hot Kiln Alignment, Diagnostic maintenance, Assistance in Kiln and components erections, etc. We are a professionally manage company with an aim to emerge as principal in the field.

Our engineering services are designed and implemented at par with international standards with the consistent upgradation. Our ethical business practice and professional attitude has earned trust of client, with repeated business.

Our Services:

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 - Hot Kiln Alignment
 - Shell ovality analysis
 - Hidden crack detection
 - Hidden crack detection in Kiln Shell
 - Support roller shaft etc
- Grinding
 - Kiln Tyre
 - Support Roller
 - Thrust Roller & Thrust Face Grinding
- Repair & Maintenance
- Kiln and components Erection
- Kiln Diagnostic Maintenance
- Kiln and Component Design

Supply:

- Kiln Shell
- Kiln End Duplex Graphite Seal
- Tyre and Support Rollers
- Chairpad Lubrication Bar
- Isostatic Graphite Block
- Design & supply of Full floating Chairpad

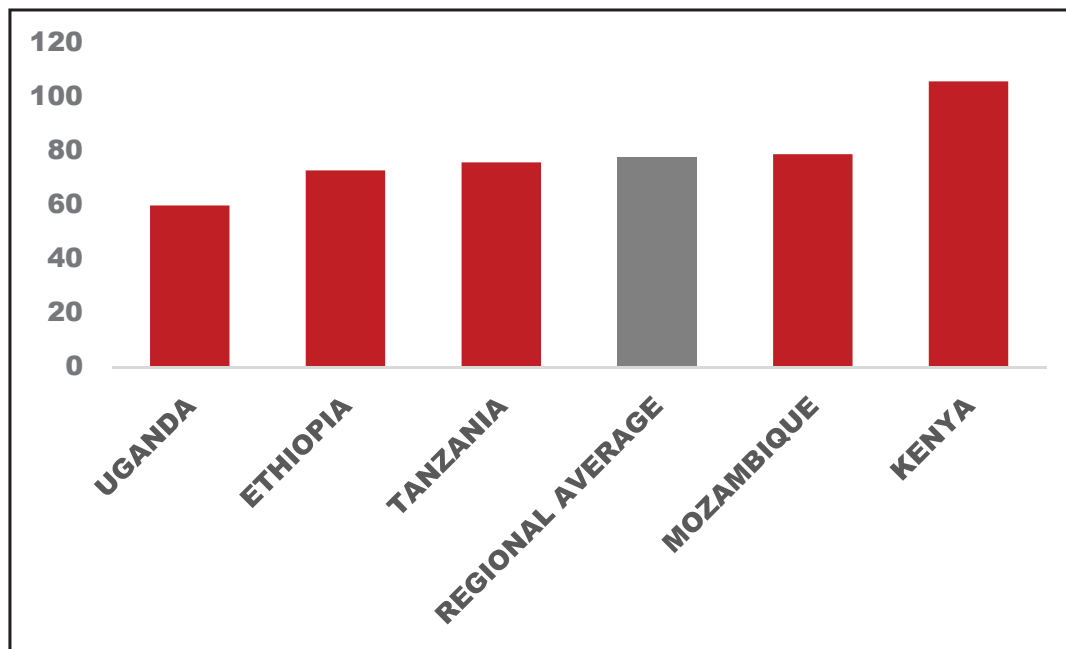


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Email: admin@smithengg.in, ase@eurokiln.com | Web.: www.smithengg.in



FIGURE 2: PER CAPITA CONSUMPTION IN THE REGION – 2017

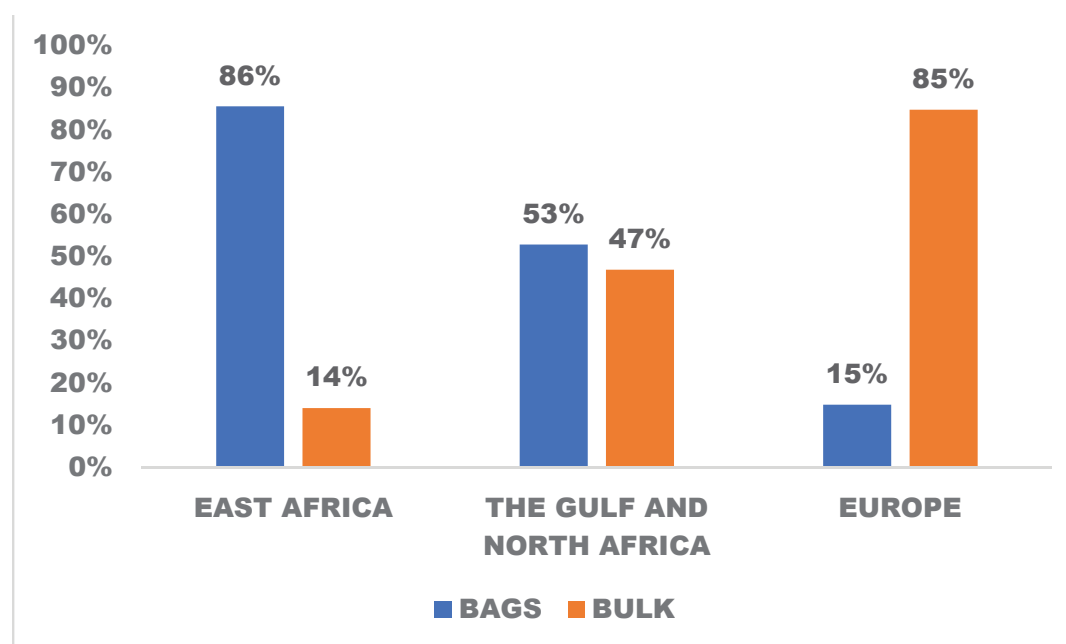


The per capita consumption throughout the region is low – one of the lowest globally. Some markets are higher consumers than others, with Kenya outperforming the rest by a significant margin and Uganda lagging behind.

The current demand of 23 million tonnes is met by a regional supply of approximately 51 million tonnes from 30 integrated plants and 34 grinding plants. These figures result in a Domestic Capacity Utilisation Factor (DCUF™ – domestic demand/domestic capacity) of 45%. The individual markets exhibit varying supply – demand characteristics, although interestingly their DCUFs are all fairly similar, with the exception of Mozambique (DCUF™ of around 37%).

Vertical integration in the region is fairly low with the ready-mix concrete (RMC) market being under-developed in most markets examined and on-site mixing still prevalent. Cement is sold in both bags and bulk; however bulk cement sales are a relatively new concept for the region and are still significantly lower than bagged sales. The region is at the low end of development regarding the bags v bulk split. The figure below shows the percentage of sales of bag and bulk for East Africa, the Gulf and North Africa and Europe.

FIGURE 3: BAGS V BULK REGIONAL PERCENTAGES

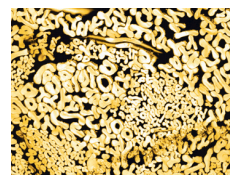
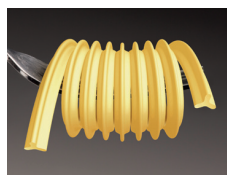


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Demand projections

The future outlook for the region in terms of cement demand is overall positive. As a result, the DCUFT™ for the region is projected to improve from 45% in 2018 to 52% in 2023 as demand is expected to grow at a slightly higher rate than supply. The increase in demand is expected to go from 22.8 million tonnes to 36.9 million tonnes, as accompanied by an increase in supply from 50.9 million tonnes to 71.5 million tonnes. The various markets within the region are projected to grow at similar rates of demand with the exception of Mozambique which is expected to grow at a slower rate than the rest of the region. On the other hand, capacity additions vary considerably within the region. If all mooted cement plant projects are commissioned, Tanzania could double its existing capacity over the next five years whereas Ethiopia and Mozambique are expected to add much smaller levels of capacity.

The demand projections are risk adjusted by asking the following questions: Is there a need for such growth? Does the country/industry have the capability to deliver such growth? and Is funding available to support such growth? The results from these assessments vary from country to country. In some, demand projections are judged to offer upside potential whereas in others the risk on the downside. Using Ethiopia as an example, the country's cement market is expected to grow significantly over the next five years on the back of robust economic growth driving a clear need for increasing cement consumption. However, there are issues facing the capability to deliver the expected demand as well as issues surrounding the required funding. These issues are detailed in the report.

International Trading Assessment Matrix (ITAM™)

Similarly, to other regions around the world, the last few years of capacity additions has led to significant oversupply. Because of this, the report assesses the ability and potential of each market to export its excess capacity. For this purpose, the report examines the International Trading Assessment Matrix (ITAM™) tool. This tool is also applied to imports where needed (e.g. clinker, coal imports). The criteria examined in ITAM™ are the following:

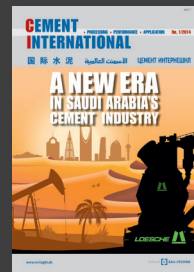
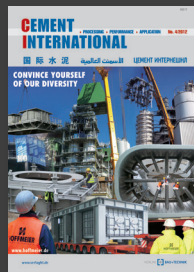
- Trade supporting legislation
- Port infrastructure and capacity
- Existence of coastal plants
- Cost of haulage
- Economics of trading

FIGURE 4: INTERNATIONAL TRADING ASSESSMENT MATRIX - RESULTS



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The individual markets in this report have varying ITAM™ scores for several reasons. For example, Uganda’s ITAM™ is lower than others in the region due to the fact that it is landlocked and therefore is unable to benefit from seaborne trade. Kenya, on the other hand, has a higher ITAM™ score which is driven by its streamlined access to clinker and coal imports. However, when exporting, Kenyan cement companies are restricted to land transportation, which limits their competitiveness when compared to cheaper Asian imports or regional competitors that report higher economics of trading overall.

An overall assessment was made for each country. A graphical representation for the ITAM™ findings for the region is shown below:

The DCUF™ and ITAM™ combined examine the propensity and ability of each market to export/import. In addition, CemBR assesses each industry’s existing or potential destination markets to see whether exporting excess capacity is a viable solution.

In many cases in this region, exporting large quantities of cement is challenging. There is an overall excess capacity in the region, which implies that deficit destination markets in the vicinity have dried out. Furthermore, as a result of the regional excess capacity, all exporting markets face fierce competition from traditional exporters as well as each other. As a result, exporting may prove difficult for the region.

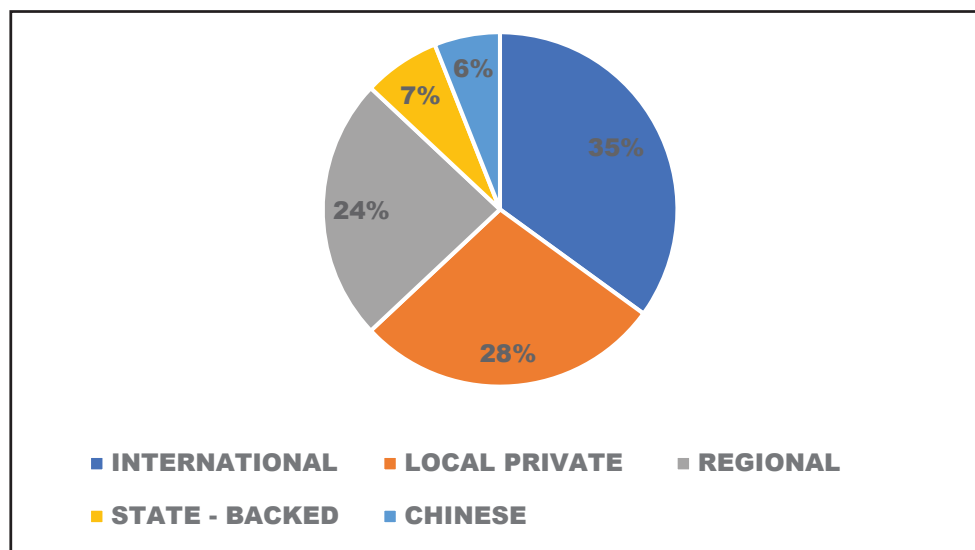
Industry Structure and Dynamics (ISD™)

ISD™ examines in detail the nature of participants, the consolidation index of the industry and the cost structure and dynamics of the industry. The findings of the ISD™ are extremely informative and insightful. The nature of participants determines their behaviour in a given market whereas a highly consolidated industry provides useful messages regarding prices going forward. The industry cost structure and dynamics shows the current situation of the industry in terms of technology, improvement potential and industry profitability. Some of the regional findings of ISD™ are shown below:

The nature of participants provides some very useful insights into each industry. For example, the prevalence of international players should signify a high level of vertical integration. With international players representing 35% of regional capacity, higher levels of vertical integration would be expected to be seen, however due to the unregulated and underdeveloped RMC market, cement producers have chosen to eschew vertical integration opting for taking control of their distribution channels instead.

The current nature of participants for the region is as follows (this is expected to change over the next five years as new capacity comes on stream):

FIGURE 5: NATURE OF CAPACITY OWNERS IN THE REGION



NB: As calculated by the ownership of cement capacity

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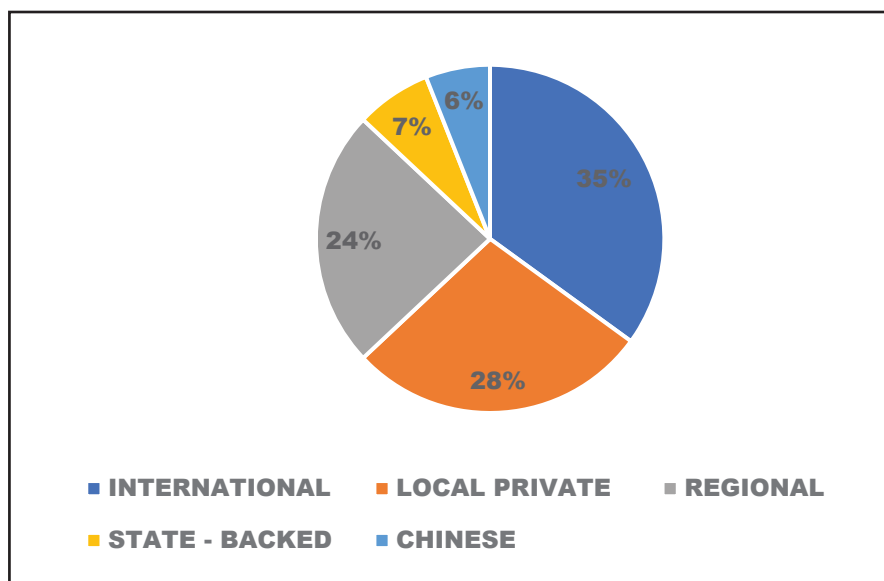


WHITE NIGHTS

A MEETING NOT TO BE MISSED!

Another useful tool within ISD™ is the industry consolidation (Consolidation Index) which provides a view of the competitive situation within a market. The lower the consolidation index, the more fragmented a market is and vice versa. The region exhibits the following consolidation characteristics:

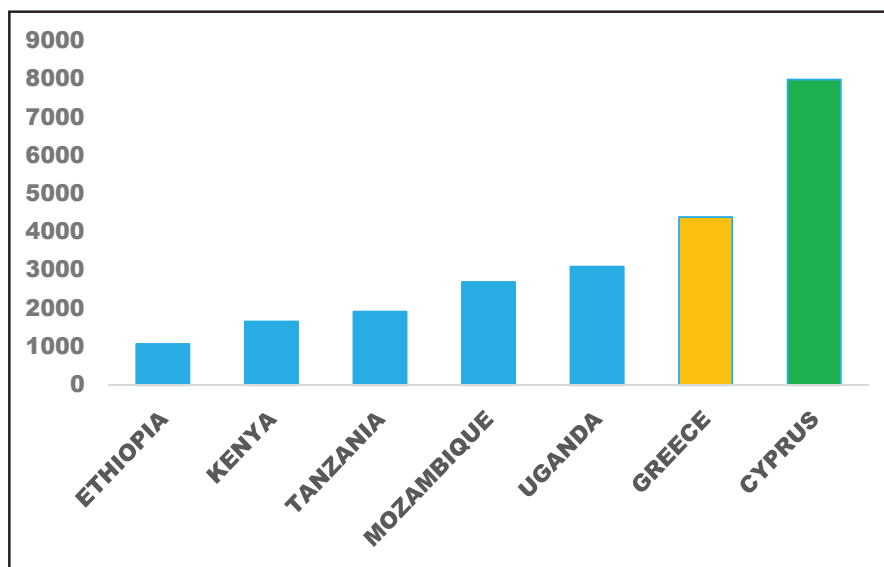
FIGURE 6: CONSOLIDATION INDEX



The graph shows the Consolidation Indexes of all markets in the region, as well as Greece (consolidated) and Israel and Cyprus (highly consolidated). The markets in the region are highly fragmented with Ethiopia being the least consolidated in the region.

At the integrated level, on average the region shows the following production cost breakdown:

FIGURE 7: REGIONAL COST BREAKDOWN



The individual cement markets have different production cost profiles. For example, fuel costs in Ethiopia are more important (47% from total cost versus the average of 34%). Although the country has large deposits of coal and natural gas, they are not extracted at a large scale yet. Consequently, the cement sector is dependent on costly coal imports from South Africa. On the contrary, Uganda's fuel costs are rated below the regional average, being the country with the highest AF substitution rate overall (40%).

The region offers the highest growth potential in the global cement sector. However, recent capacity additions and relatively high industry fragmentation has led to diminishing financial results across the board. The case of Kenya-based ARM Cement, currently in administration, is a stark example of these unfavourable conditions. Looking ahead, the region may need to adopt a more consolidation driven strategy whilst allowing cement growth to absorb the current excess capacity.

About the authors:

Dom Pavlopoulos, Dom has been instrumental in developing and launching CemBR – Cement Business Research where he has assumed roles in both sales and marketing and in research and analysis in the cement sector.

Claudia Stefanoiu, Claudia is the Head of Research of CemBR – Cement Business Research. Claudia has been a senior researcher and consultant in the cement and building materials industries for over a decade, accumulating extensive experience in producing off-the-shelf and bespoke reports for cement companies and financial institutions around the world.

Game Changing Technology for Energy Path in Cement Industry

By: Eng. Osama Aly Ahmed / Engineering Consultant

Abstract:

Cement Industry accounts for almost 40% of total energy-related CO₂ emissions.

This article focuses on the following four distinct “reduction levers” available to the cement industry:

1. Thermal and electric efficiency – deployment of existing state-of-the-art technologies in new cement plants, and retrofit of energy efficiency equipment where economically viable e.g. waste heat recovery schemes for generating electrical power.

We mentioned a lot of ideas in relevant articles

2. Alternative fuel use – use of less carbon-intensive fossil fuels and more alternative (fossil) fuels and biomass fuels in the cement production process.

A lot of articles discussed RDF.

3. Clinker substitution – substituting carbon-intensive clinker, an intermediate in cement manufacture, with other, lower carbon, materials with cementitious properties.

A lot of cement types plans, but they differ according to the nature of each plant and nature of each market.

4. Carbon capture and storage – capturing CO₂ before it is released into the atmosphere and storing it securely so it is not released in the future.

In terms of carbon capture technologies for cement production the two key technologies are:

1. Post-combustion technologies; and
2. Oxyfuel technology.

A global energy and climate policy to move toward a low-carbon economy

Recoverable waste heat is available from the burning process

About 32% of the total heat input is in form of recoverable heat (about 60% from the preheater and 40% from the cooler)

Basic operating philosophy:

- Heat generated by diathermic oil is provided to a power production system based on ORC
- High turbine efficiency
- Use of organic working fluid instead of water allows for longer operational life
- Air-cooler to disperse heat in case ORC system is not available and for condensed water cooling

Oxyfuel CCS Technology

This option is based on using oxygen instead of air in the cement process to generate an almost pure CO₂ stream. Two different options for Oxyfuel technology within the cement industry have been proposed:

* Partial capture – this is based on burning fuel in an oxygen/CO₂ environment (with flue gas recycling) in the pre-calciner but not in the rotary kiln in order to recover a nearly pure CO₂ stream at the end of one of the dual preheaters. A simple block diagram showing how partial Oxyfuel CCS technology could be applied at a cement plant is shown in Figure 3.2.

* Total capture – this is based on burning fuel in an oxygen/CO₂ environment (with flue gas recycling) in both the pre-calciner and the rotary kiln to produce a nearly pure CO₂ stream from the whole process. A simple diagram showing the configuration of the Oxyfuel cement plant with total capture that is being investigated by ECRA.

Another method comes from India

Hydro-Oxy rich fuel firing (It is time to understand the power of alumina present in the coal which turn all water to fuel)

In the combustion process the hydrogen content of the fuel is converted to H₂O, which normally leaves the stack as water vapour, carrying with it the heat required to convert it from liquid to vapour. With fuels high in hydrogen, such as natural gas, this is a significant loss, upto of 10-15 % of the energy in the fuel, depending on flue gas temperature. This is time to arrest this loss by splitting these water vapours back to Hydrogen & Oxygen with alumina rich fuel firing. It is needless to mention that complete fuel combustion can help in

saving 10-15% fuel cost, and now with little quantity of alumina you can change your fuel design instantly to improve the kiln performance and upsetting conditions instantly by creating fusion with atomised alumina powder.

Let us understand how coal combustion efficiency is improved with Hydro-Oxy fuel firing. The inventor of Hydro-Oxy rich fuel firing finds that a little quantity of alumina + water can turn bad quality coal to good quality coal by splitting the water vapours back into Hydrogen + Oxygen, which creates a series of chain reaction within the flame and invites formation of various hydrocarbons. In fact, hydrocarbons are composed of nothing but Hydrogen and Carbon. The carbon and hydrogen atoms link together in chains of different lengths and turns into hydrocarbon molecules. The different carbon lengths have different properties and behaviors. For example, a chain with just one carbon atom in it (CH_4) is the lightest chain, known as methane. As the chains get longer, they get heavier. The first five chains - CH_4 (methane), C_2H_2 (acetylene), C_2H_6 (ethane), C_3H_8 (propane) and C_4H_{10} (butane) – are all gases.

A complete combustion is a process burning all the carbon (C) to (CO_2), all the hydrogen (H) to (H_2O) and all the sulphur (S) to (SO_2), which is possible only if there is sufficient oxygen available for converting (C) to (CO_2), hydrogen (H) to (H_2O) and sulphur (S) to (SO_2). Theory of combustion suggests that 2.67 gm oxygen is required for 1 gm carbon combustion, which implies that 2.67C gm oxygen is required for C gm carbon, 1 gm oxygen is required for 1 gm sulfur combustion, which implies S gm oxygen is required for S gm sulfur and 8 gm oxygen is required for 1 gm

hydrogen combustion, which implies 8H gm oxygen is required for H gm hydrogen. Hence 1 gm of coal (fuel) which contains C gm carbon, S gm sulfur and H gm hydrogen, requires $(2.67C + S + 8H)$ gm of oxygen for efficient combustion. The added oxygen enables the combustion of additional fuel, allowing operators to increase feed rates, enhances kiln stability and quick recovery of lost temperature translate into increased production.

Hydro-Hydro-Oxy rich fuel firing can turn $\text{CO}_2 + \text{H}_2\text{O}$ water vapours present in the flame back to fuel instantly and save 10-15% fuel cost by creating Sabatier reaction in the flame with alumina rich fuel firing. This invites formation of series of Hydrocarbon elements within the flame $\text{C} > \text{CO} > \text{CO}_2 > \text{H}_2\text{O} > \text{CH}_4 > \text{C}_2\text{H}_4 > \text{C}_2\text{H}_6 > \dots > 0.3 \text{ Second} > \dots > 3T$ (Time, Temperature & Turbulence).

Do you know that 1 Ton $\text{CO}_2 = 378$ Ltrs. of Diesel, 440 Kg CNG, 410 KG Ethanol, 87 Gallons of Gasoline, 330 kg Heavy Fuel oil?

The best solution is the use of solar energy

AIT BAHA plant CSP project will be discussed as a case story

Setup and test of an innovative renewable energy production technology, demonstrate the effectiveness of an alternative CSP methodology studied for reducing investment and operational costs (low maintenance) and avoiding the recourse to flammable and dangerous hot material fluids with maximizing the use of local materials.

The Long term targets: the diffusion of industrial



scale CSP plants, mainly in the ITC MENA region cement plants to reach Renewable Energy ITC targets, reduction of the dependency on external power supply, and optimization of the overall process efficiency.

The Strategic target: enhancement of high performance and rapid hardening cementitious materials for new and innovative applications.

Technology: linear troughs, Number of modules: 3, Overall dimensions: 215 x 11m, Total active surface: 6000 m², Total plant area: 4,5 ha, Thermal peak power: 3.800 kW, Storage capacity: 12 hours, Start up: October 2014, Total investment: 3 M€.

Yearly production: 1.000 MWh/year * Additional generation of existing ORC generator

A simple example framework for this application would be:

1. While the sun is shining, the load is supplied (via inverter) from the PV directly to the extent that PV power is sufficient to cover the load
2. If the PV power is insufficient to meet the load, the load is supplied from a battery bank (via inverter), as long as the battery storage is not depleted
3. If the PV power exceeds the load, the excess energy charges the battery bank
4. While the sun is shining the CSP collectors charge the TES, until the TES capacity is reached
5. Thermal loads are supplied by discharging the TES
6. If the TES is insufficient to supply the thermal load, a backup (fueled) source is engaged for heat production
7. If TES reaches over temperature limits, the ORC is engaged to convert heat to electricity (except in case 9 below)
8. If the ORC is engaged while the PV is supplying power, its effect is to augment the PV power and conforms to 2 and 3 (above)
9. If the battery bank reaches a full state of charge (SOC) while PV power and/or ORC power is exceeding the load, the excess PV power is directed to a load dump or sections of the array are open circuited, and the ORC is disengaged
10. If the TES reaches over temperature limits while case 9 holds, the CSP collectors are defocused
11. If the battery reaches a low SOC threshold while the TES is charged, the ORC is engaged
12. If the battery reaches a lowest SOC threshold while the TES is discharged and there is no PV power, the backup generator is engaged
13. If the generator is engaged and the battery state of charge or the TES SOC reaches a (design point) recharge threshold, the generator is disengaged.
14. If the generator is engaged and the sun resumes shining, the generator is disengaged (to preserve battery capacity for the solar systems).



The Ait Baha parabolic trough

The module frame rotates during the day following the direction of the sun

The mirror is made of a plastic membrane coupled to an aluminum foil for high reflectance

A transparent membrane (ETFE) is installed above the mirror for protecting the mirror surface

A controlled air pressure maintained between the mirror and the protective cover

The pneumatic system allows to achieve the focusing characteristics of a parabolic trough with high optical efficiency

The membrane is kept in shape by differential pressures with a linear parabolic configuration



Module ready for the installation of the top membrane

Gears are made of concrete



Precast concrete structure on site manufactured

The tilting structure is made of concrete beams in order

to improve the stiffness and resistance of the frame where the membranes are fixed 215 m length/ collector 1700 t/module

Each support of the assembly is provided with an independent electrical motor

Packed bed thermal heat storage

Air as a heat transit fluid

The storage is an underground reservoir filled up with heat resistant gravel

During the heating phase the gravel may reach up to 650°C.

Hot air flows from the top to the bottom during the heating phase and vice-versa during the night

Special heat resistant concrete is used for the construction of walls and roof of the reservoir

Take away on our pilot project Renewable energy ambitions for a high energy intensive industry as cement are a challenge Sustainability means take opportunities from local sources and face environmental constraints

- Partnership is the enabling factor: high profile technology company (solar technology/energy storage) and innovative materials producer.

Conclusion

The 5th industrial revolution has begun; climate change will be combated in two ways:

- 1- Taxation on carbon dioxide emissions
- 2- Open the door to renewable energy sources to reduce carbon emissions

Finally, cement companies should adjust their plans to cope with the new changes.

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Engineering Consultant
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Tel.: +201064170712

ON THE POSSIBILITY OF RADICAL DECREASE OF CO₂ EMISSIONS AND COST OF FUEL AT CEMENT PRODUCTION.

NANOCEMENT

*By: M.Ya. BIKBAU, academician of the Russian Academy of Natural Science, Doctor of Chemistry.
Director General OAO "Moscow IMET International"*

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This article analyzes a new technology for modifying Portland cement into nano cement. This provides for a radical revision of the development strategy of the cement industry. It is possible to reduce by one half to three quarters CO₂, NOX and SO₂ emissions and fuel costs per ton of cement with minimal capital investments. At the same time saving energy, minimizing environmental footprint and producing cement of higher quality at a reduced cost.

A few years ago, the US government forecasted that the world emissions of carbon dioxide will increase by 75% by 2030. Energy Information Administration (the statistical department of the US Department of Energy made this conclusion in their annual forecast. According to the experts, the amount of CO₂ emissions worldwide will increase from 29 billion tons in 2010 to 43.7 billion tons by 2030, unless additional measures are taken to reduce the emissions, Reuters Agency reported.

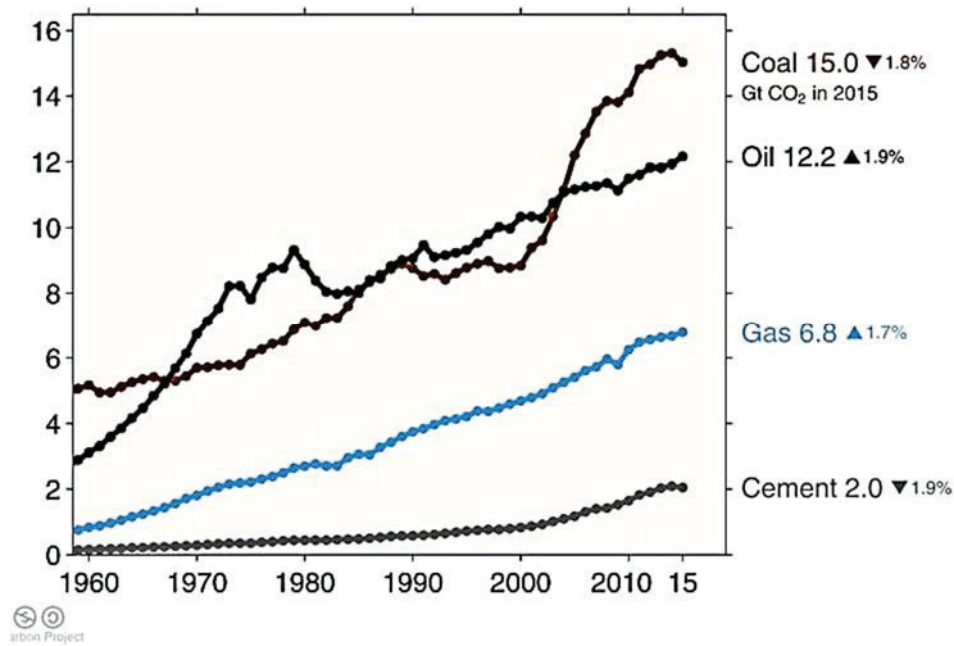
Cement production, especially of significant volumes, requires burning hundreds of millions of tons of fuel annually and is accompanied by the release of significant amounts of heat, CO₂, NOX and SO₂. This contributes to climate change on the planet. While the annual production of cement has exceeded 4.5 billion tons, the volume of emissions into the atmosphere of CO₂ by cement plants is about 1000 kg per ton of cement produced. This amounts to billions of cubic meters of harmful gases annually (Fig. 1). On top of that, new plants are being built in China, India, Latin America and other developing countries, where CO₂ emissions increase much faster proportionally to the increase in cement production, causing an overall increase in CO₂ emissions from the cement industry. As it is well known worldwide, after the signing of the Paris Agreement on Climate Change, there is extreme pressure on reducing greenhouse gas emissions.

The established CO₂ tax in British Columbia of \$ 30 per tonne led to a sharp increase in cement imports and prompted the Canadian government last year to allocate \$ 22 million to help cement enterprises.

Improvement of Portland cement technology is carried out today in two key ways to reduce fuel consumption and CO₂, NOX and SO₂ emissions: 1 - optimize the aggregate design of firing and the use of alternative fuels; 2 - the introduction of Portland cement with milling energy-saving mineral additives.

In the first direction, the world's cement industry has achieved significant success - high-performance equipment, heat recovery systems, air purification systems, etc.. Machine builders produce complete technological lines with

a capacity of 3 to 4 million tons of cement per year.



CO₂ emissions by year

Figure 1. Increase in CO₂ emissions when burning fuel and producing cement during the last half a century

The second direction, unfortunately, has practically stopped in development. The average number of mineral additives introduced into Portland cement in the world is about 15% of its mass. So the amount of mineral additives introduced in 2013 by cement plants in Russia amounted to about 8% of the mass, and significantly decreased over the past decades. At the same time, the world standard cement documents, which comply with the standards adopted in Europe (EN 197-1) and the USA (ASTM), provide for great opportunities for the introduction of mineral additives.

A significant decrease in the properties of cements with mineral additives explains why building organizations prefer to buy non-additive Portland cement.

Experts, nevertheless, suggest an increase in the amount of mineral additives used in cement: by 2020 - 26% by mass, by 2030 - by 27% by mass, and by 2050 - 28% by mass. The improvement of the construction and technical properties of Portland cement produced all over the world has long stopped developing, which for several decades already does not allow increasing the strength of cement above classes 42.5-52.5.

Cement factories around the world for decades produce almost the same product. Russian scientists have developed a technology for modifying Portland cement, which allows to radically increase its construction and technical properties, first of all, strength of cement up to 82.5 and higher, and also to increase the content of mineral additives up to 70%, at that providing for high construction and technical properties of cements (Table 1). The new technology for modifying Portland cement into an energy-saving nanocement during the process of grinding clinker allows, for the first time in the world, to add mineral additives up to 70% by weight ensuring high quality of such nanocement of no less than 32.5 class with a reduction for each ton of cement of fuel costs up to threefold, from 200 kg to 60 kg, and actual CO₂ emissions reduction from 1070 kg to 320 kg.

Table 1.
Construction and technical characteristics of nano-cement tested for compliance with the national RF pre-standard 19-2014
«Portland cement, nanomodified. Technical conditions» In State R&D Institute NIIMOSstroy, Moscow, Russia

Sample name	Strength MPa with normal hardening						Nano shell, width, nm	Unit parameters** per ton of cement, kg	
	age 2 days		age 7 days		age 28 days			Fuel consumption	CO ₂ emissions
Portland cement initial PC-500 D0-N "Oskolcement" lot No. 654	2.9	21.3	-	-	6.4	54.4	ABSENT	200	1070
NANOCEMENT 90* K 82,5	7.1	53.8	8.0	72.6	8.7	82.7	30-120	180	960
NANOCEMENT 75* K 72,5	6.9	54.7	8.0	68.5	8.5	77.8	30-115	150	802
NANOCEMENT 55* K 62,5	6.3	49.3	7.5	65.4	8.2	77.5	15-100	110	588
NANOCEMENT 45* K 52,5	4.8	39.9	6.7	57.4	7.9	68.1	18-95	90	481
NANOCEMENT 35* K 42,5	3.9	30.7	5.8	46.6	7.2	61.4	15-100	70	374
NANOCEMENT 30* K 32,5	3.0	20.4	5.6	46.4	7.6	52.1	14-85	60	321

* The figure hereinafter means the amount of the original Portland cement clinker in the nanocement, the rest is the fine-quartz quartz sand ground together with clinker

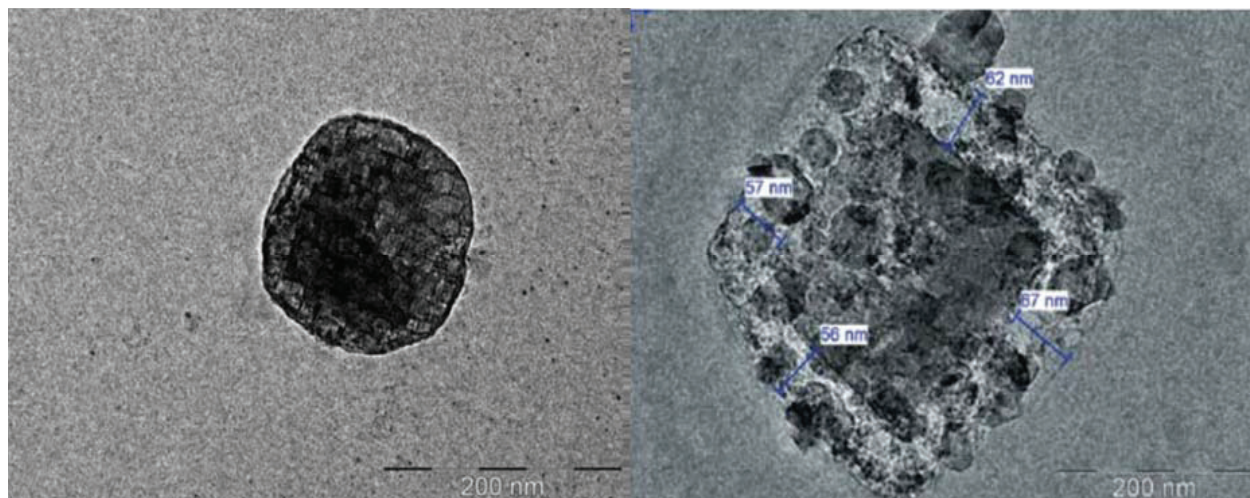
** The materials of mineral additives are considered dry for simplification of calculations, for the base cement the wet production method is considered

Nanocements allow for the addition of mineral additives up to 60-70% by weight with the provision of high quality cements and concretes on the basis of such cements. Using such cements in concrete results in, among other benefits, controlled workability and setting time, yielding additional economic benefits: it eliminates the use of expensive additives.

The essence of the new technology for modifying Portland cement into nanocement lays in the formation of a so-called nano shell on the surface of Portland cement grains during the process of mechanochemical activation taking place within the grinding stage. Nano shells appear to be a continuous capsules-shells of nanosize thickness consisting of a special modifier (Fig. 2), wrapped around cement grains. The scientific and regulatory basis for nanocements has been developed by the Russian scientists. The results of certification tests conducted in 2012-2016, in accordance with the existing GOST (Russian standardization system) standards demonstrated full compliance of nanocements with the Russian national pre standard PNST 19-2014: «Portland cement, nanomodified. Technical conditions». Consequent tests conducted in UAE, Canada and other countries demonstrated compliance of nanocements with the American standard ASTM C1157. For the first time in the world, nanocements were identified as nano-containing products of class B, the presence of nanoshells on cement grains was scientifically confirmed. The product was certified by the Russian Standard Authority and classified into following categories according to cement class: 82.5; 72.5; 62.5; 52.5; 42.5 and 32.5.

Considering the main parameters - rate of curing, compressive and flexural strength, all classes of nanocements

surpass Portland cement in construction and technical properties. This method allows increasing the class of cement from 42.5-52.5 to 72.5-82.5.



The obtained characteristics of the rate of curing and the quality of nano-cement are the highest in the history of the world cement industry.

a) б)
Figure 2. Typical electron microscopic images of grains of Portland cement (a) and nanocement (b). The blocky and mosaic microstructure of the nano cement grains is clearly visible. The dimensions of nano shell are specified on the grain of nano-modified Portland cement (b).

The new technology and nano encapsulation phenomenon significantly changes the concept of the potential of cement as a binding medium, improves efficiency of its application, allows to use finely dispersed mineral additives as an active agent for the formation of cement stone.

Nano-cement technology and nanocements have been tested in the Russian Federation for many years, as well as in China, USA, Canada, UAE, Africa, Kazakhstan and other countries. The new technology was launched this year at the cement plant TURON ECO CEMENT GROUP in Kokand region of Uzbekistan, producing nanocement 45 with a reduction in specific fuel consumption and CO₂ emissions by a factor of two by adding barkhan sand to clinker in the ratio of 1: 1, at that providing high quality cement.

In the forth quarter of this year, construction completion of two cement plants for producing nanocement is planned in Yelabuga, the Republic of Tatarstan and Astana, the Republic of Kazakhstan. The new technology can be implemented on any grinding line of any cement plant with virtually no capital investment.

Conclusion:

The phenomenon of nanoencapsulation of dispersed substances discovered and proved by Russian scientists gives the prospect of changing the strategy for the development of the world cement industry. It provides the possibility to drastically reduce fuel consumption and NOX, SO₂, CO₂ emissions per ton of cement by reducing the content of Portland cement clinker down to 30-35% by weight. It is then modified into a low-clinker nano-cement with preservation of high building and technical properties of the material with increased shelf life from 2 months for Portland cement to one year or more for nanocement. New technology also provides for reduction the cost of cement production by 20-25%.

Safe cleaning with Airchoc®

By: Standard Industrie, France

Cement manufacturers can employ a number of measures to prevent and eliminate material build-ups and improve the overall flow of material throughout the production process. With an array of cement industry installations under its wing, Standard Industrie International explains how build-ups and blockages can be addressed in various locations in a cement plant, improving both plant productivity and safety.

Material build-ups in the cement production process often lead to reduced plant productivity and higher cleaning costs, as well as increased safety risks to maintenance staff. Such issues can be avoided by undertaking measures including:

- blockage and build-up removal
- silo and hopper cleaning.

Having developed expertise in both these areas over the past 40 years, Francebased Standard Industrie has helped a number of cement plants across the world improve productivity, reduce cleaning costs and lower safety risks.

Blockage and build-up removal

Since filing for the patent 1978, Standard Industrie has sold more than 50,000 of its Airchoc® air cannon systems in 90 countries. The Airchoc® can be applied to various locations in a cement plant, examples of which are described below.

Declogging the low level of the cyclone and gooseneck

A cement plant in Tanzania installed Standard Industrie's Airchoc AC51010 air cannons in its gooseneck and other cyclones to address clogging at the low level of the cyclone and the gooseneck.

These had previously involved manual intervention, which presented a serious safety risk. However, the installation of several Airchoc® systems has since helped address this issue and improved plant safety.

Cleaning of a large area of the kiln inlet, smoke chamber and riser duct

A cement plant in Missouri, USA, found that the flow of hot gases rising in the cyclones led to blockages (as the meeting of the colder material with the hot gases resulted in clogging). This modified gas velocity and affected precalcination of the raw meal. To address this issue, the cement producer decided to replace 70 existing guns with Airchoc's air cannons with guillotine insulators to clean part of the kiln inlet, smokebox and riser duct. (see Figure 1)



Figure 1

Preventing snowman formation and free flowing of hot clinker in the cooler

A cement plant in Pakistan was carrying out a new cooler upgrade, lifting plant capacity from 3400tpd to 3900tpd. To prevent the formation of snowmen and the free flowing of hot clinker into the new cooler, Standard Industrie supplied a complete solution comprising seven airchoc® AC515 air cannons with 200l tanks. These blast air every 20 minutes to clear any build-ups. (see Figure 2)



Figure 2

Wireless benefits

Recent developments have seen the conversion of Airchoc® hardwired installations to wireless installations.

Benefits include:

- remote controlled operation (see Figure 3)
- each Airchoc® can be isolated for maintenance in complete safety
- 128 Airchoc® can be operated using a single control panel
- the control panel can be installed in a control room and connected to a plc.

Each remote control is tested in Standard Industrie's workshops and



Figure 3

guaranteed for one year. The Airchoc® uses a zigbee communication system that can be compared to a professional wifi, and is a simple and reliable low-

consumption protocol. It works with the specific frequency that cannot generate any interference. Moreover, each receiver or Airchoc® holds a mac address, assimilated to its own IP address.

Thanks to the savings made in terms of cabling, cable trays, labour and control panels, the wireless solution is more cost-effective than its wired counterpart.

Silo and hopper cleaning services

To reduce the risk of injury to workers during silo clean-out operations, Standard Industrie has developed the Gironet® silo cleaning solution, which accesses silos from the top, eliminating the need for manual intervention (see Figure 4).

A cement plant in South Africa was faced with a considerable build-up in a cement silo, which created ratholing on more than six silos (6m x 25m height).

To clear out the cement dead stock and improve the silo's capacity, Standard Industrie recommended the use of its pneumatic Gironet®. Fully mechanised and remotely controlled, the Gironet® process ensures safe intervention without the need for operators to be present in the silo.

Safe cleaning

The development of wireless air cannons and silo cleaning solutions that can be used without manual intervention at the location where issues occur, has improved safety as well as reduced operational costs. Moreover, preventative action with such tools enables efficient material flow throughout the cement plant, thereby reducing or eliminating costly shutdowns of key equipment and improving plant productivity.



Figure 4

OPTIMISE THE CEMENT AS WELL AS THE MILL

By: Mark Mutter and Lawrie Evans – JAMCEM Consulting, UK

Introduction

There are many articles that have been written about the optimisation of cement milling systems, generally with the focus being on increasing throughput and decreasing specific power consumption. But what many of these articles fail to consider is that in optimising the mill, the final product quality has to also be optimised. Having an efficient milling system in terms of power consumption can be a competitive advantage for the plant, but if the quality of the cement is inferior to the others in the marketplace – especially in an over-capacity market – then the low cost of production is of much less advantage if the customers won't buy the cement. Or the customer may buy the cement but demand a lower price, stating "we have to use a higher volume of your cement to get the concrete strengths required", damaging the plant profit and loss.

Within this article we will look at the quality aspects of cement milling and how the plant profit and loss can be affected by poor milling efficiency. The areas that will be covered are:

- Getting the basics right for the cement mill operations
- The importance of the Rosin-Rammler curve and the effect on cement strengths
- Maximising the additives rate to the maximum allowed in the cement standard
- The bigger picture – the effect in concrete

Getting the basics right

Mill audits are an essential part of the plant testing schedule and should be done on a regular basis and with a process focus. This means that the tests shouldn't just be about measuring the thickness of liners and diaphragms in order to assess when they should be replaced. The process focus must consider the efficiency of the grinding in the mill, which depends on many factors such as:

- The lift from the liners given to the media charge.
- The quantity of media in each of the chambers to optimise the grinding efficiency or achieve maximum mill output, whichever is the required outcome.
- The right proportion of each size of media in the chamber.
- The efficiency of any classifying liner installed.
- Void filling rates.
- The adequacy of the ventilation of the mill.
- The effectiveness of any water injection systems.
- The overall mill automatic control system.
- The effectiveness of any grinding aids used.

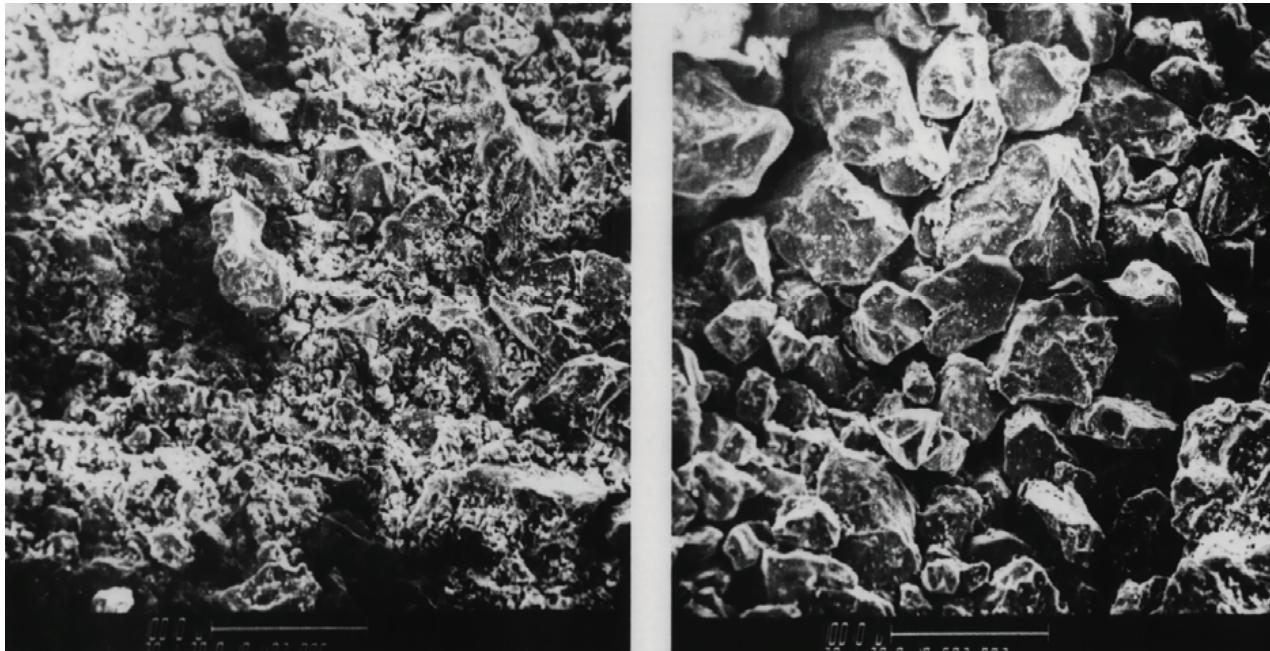
All of these basics need to be kept in optimum state in order for the milling system to operate correctly. Not noted above, however, is the impact that the cement mill separator can have on the overall efficiency of the system but more importantly on the final product quality. It is often forgotten that the separator is a critical part of the cement milling system and in the following section, we discuss the cement mill separator in more detail.

The Rosin-Rammler curve

As the name would suggest, the key function of the separator is to send as much of the cement that is fine enough to be considered as final product out of the system and as much of the coarse material back to the cement mill. We

will never get perfect separation, but we want to maintain this split between fines and coarse particles as efficient as possible. If we get too many coarse particles going to the final product, the final strength of the cement that is produced will drop to the detriment of sales. And if we send too many fines back to the mill, these particles will be over-ground on their second pass through the mill resulting in inefficient grinding. The effect of good separation can be seen – for example – when we compare the rejects stream of a conventional separator with that of a high-efficiency separator, as shown in figure 1. In the conventional separator case, the stream is heavily contaminated with fines whereas the high-efficiency separator rejects show much larger and consistent particles. In the case of the conventional separator, the fines will return to the mill causing decreased efficiency and decreased mill output.

Figure 1: Scanning electron microscope image of separator rejects from a conventional separator (left) and high efficiency separator.



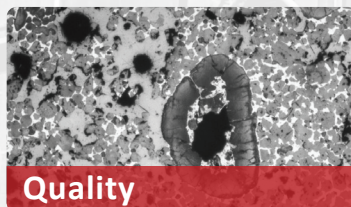
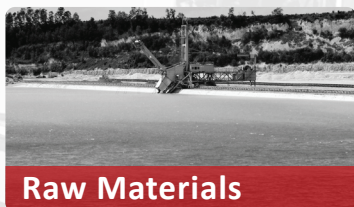
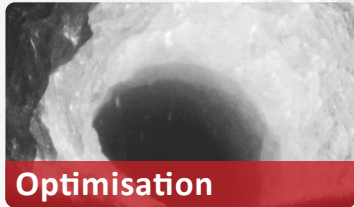
It is worthwhile returning to the first point with regards to coarse particles in the final product. It is known that 32 microns is the maximum particle size at which clinker content in cement is normally expected to fully react and contribute fully to cement strength development in cement mortar / concrete. This means that any particles larger than this will effectively act as an aggregate/filler in the mortar or concrete. One would therefore think that this would be a key control parameter for cement milling. However, whilst many plants measure 32 (or more often 45) micron residues on cement, the main control parameter that is used is very often only the surface areas as the main indication of the fineness of product. This can lead to cement being produced that appears to have to correct quality but then gives poor final strengths.

One key check on the operation of the separator is by considering the Rosin-Rammler distribution and slope of the finished cement produced by the separator. The Rosin – Rammler slope of the fines is a mathematical expression which relates to separator efficiency and is very important for the quality (strength, water demand etc.) performance of the finished cement. A higher Rosin-Rammler slope indicates a narrower distribution of particle sizes in the cement which can be beneficial to final cement strength. However, it can adversely impact on water demand. Limestone, pozzolanic and fly ash cements, which contain components which are much softer to grind than clinker, almost always have relatively poorer Rosin Rammler slopes than Portland cement due to under-grinding the clinker compared with these softer components. By contrast, slag cements usually show the reverse characteristic, with the harder slag component relatively underground compared with clinker.

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European Standard EN 197 – 1	Range of Rosin-Rammler slopes
CEM I	1.30 – 0.95
CEM II/A-L	1.15 – 0.85
CEM II/B-L	1.05 – 0.75
CEM III	1.20 – 0.90

Table 1: Range of typical Rosin-Rammler slopes for various cement types from cement plants

Maximising additives addition rates

The effect of the poor grinding and separation efficiency has another impact on the profit and loss of the cement plant and that is by limiting the quantity of additive material such as limestone, granulated blast furnace slag, fly ash and pozzolan that can be used in the cement. It should be the cement producer's aim to produce cements that have the maximum amount of additive allowable according to the standard whilst still producing cement that is acceptable to customers in their market.

In the same way that efficient grinding and separation can produce a higher strength cement, manufacturers can take some advantage from this by increasing additions rates to the finished cement. This is particularly important with materials such as limestone, most pozzolans and fly ash as they are easier to grind than clinker.

Whilst taken up by very few cement manufacturers of cement, the most beneficial method of maximising the strength of cements in concrete when using higher levels of additives is to separately grind the clinker and gypsum and the additive and then blend with the two together. In this way, each of the materials can be ground to the correct fineness for the optimum cement performance. Examples of this can be found in blending stations, where a type I cement is produced at a different location and transported to the station where it is blended with pre-ground additives to produce a larger range of cements.

The bigger picture

The bigger picture – and the one that matters to all of us whether we directly use cement or not – is the impact that this poor performance of cements has when we consider the impact of cement in the final product concrete. Emissions of greenhouse gases are measured on a kg CO₂/tonne of clinker – produced by a combination of the combustion process and the decarbonation of raw materials – and then is reduced by the proportion of clinker in cement to give the kg CO₂/tonne of cement. The quantity of CO₂ emissions from the concrete that is subsequently produced can then be calculated based on the quantity of cement that is used to make that concrete.

Concrete manufacturers have to produce their concrete to a certain minimum strength and this will dictate how much cement is required in the mix to achieve the minimum strength. So, a poor cement, with a high 32-micron residue which is adding nothing to the final strength in concrete, will require higher cement addition to the concrete mix (measured as kg cement / m³ of concrete) compared to a high performing cement with a low 32-micron residue. Following this through, the first concrete will have a much greater carbon footprint than the second. Cement manufacturers have a real responsibility in this area to improve the performance of cement by ensuring that the maximum strength is extracted from the clinker that is the source of the CO₂ in the first place. Cements with a high 32-micron residue are simply cements that are being sold with un-reactive aggregate contained within them but have a high CO₂ cost attached to them. This should also work financially for the cement producers – ensuring that the clinker is ground fine enough to obtain the maximum reactivity should lead to them being able to maximise the addition of secondary materials which are cheaper than clinker, thus helping the plant profitability.

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Particle Sizer ANALYSETTE 28 ImageSizer for wet measurement of suspensions and emulsions

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Particle Sizer ANALYSETTE 28 ImageSizer for dry measurement of powders and bulk solids

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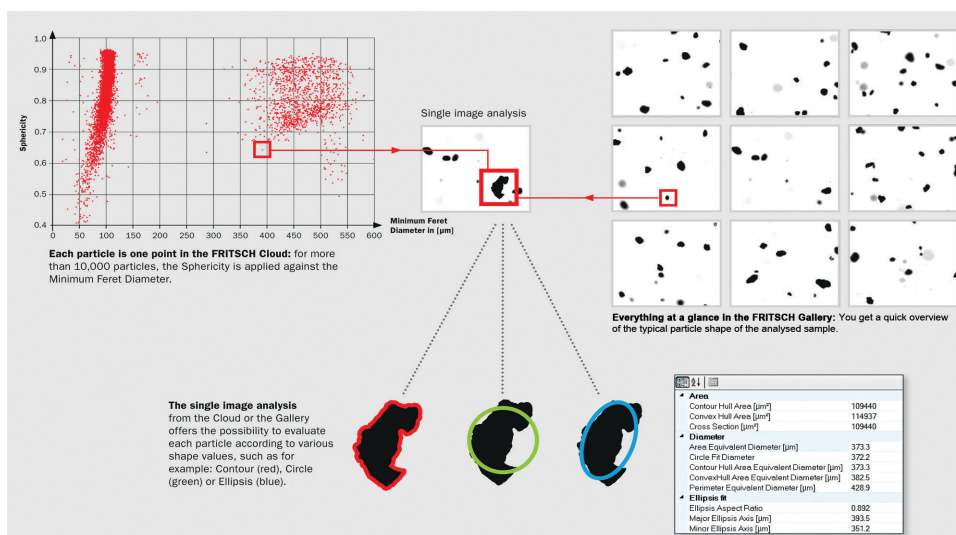
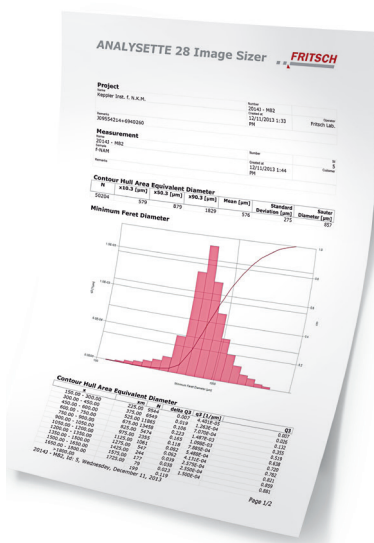
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The platform's key characteristics are:

- e-nizing.io is **simple:** e-nizing.io delights with a very easy and user-friendly usage, which eliminates any need for trainings to work with it. Free accounts can be setup via www.e-nizing.io to test the systems' easiness.
- e-nizing.io is **generic:** you can visualize any data and any machine with one clearly structured user interface.
- e-nizing.io is **safe:** highest security standards ensure that every user can see his own data only. The system is run with end-to-end payload encryption, every device has a unique ID and unique encryption key, 2-factor authentication and certified data security.
- e-nizing.io is **fast:** Machine integration can happen in no more than two weeks' time: a feature, especially mechanical engineers appreciate.

Andreas Evertz, President & CEO Schenck Process and Managing Director e-nizing GmbH, comments: "On behalf of the team I am delighted to announce the launch of e-nizing. The market showed a need for what e-nizing offers for a long time and we are now providing the answer. E-nizing already supports many Schenck Process machines' monitoring, with many more coming soon. We do, what everyone's always talking about. Easy industry 4.0 is now becoming reality."

Michael Paas, Vice President Technology e-nizing GmbH, comments: "I have worked for over 25 years in IT Infrastructure and IT Security including for one of the largest internet service providers. This platform lets users put all doubts to rest. I've rarely seen a product that combines usability, high availability, a strong level of IT security all based on the newest IT Technology on one platform, as e-nizing does."

Jan Krall, Vice President e-nizing GmbH, adds: "Mid 2017, we started with a Presentation showing our vision.

Building a solution to so many people's needs, which is as simple, fast and customer-centric as e-nizing.io, in this short amount of time is only possible with an extraordinary team and many customers, giving their feedback into the development process. We have talked about our platform with many customers in the past six months exclusively. The learnings of that phase have been included into the tool, which is finally available to the public now. We are looking forward to continue to help customers to dramatically improve their operations."

Behind the e-nizing® brand is a company with start-up spirit, whose team combines mechanical engineering with IT background and emerged from the Schenck Process' future lab, an award-winning project.

Want to learn more? www.e-nizing.com





Custom-tailored motors for system integrators

Menzel Elektromotoren not only provides electric motors to end users directly, but is also a supplier and partner of drive manufacturers, distributors, and maintenance companies. The German manufacturer carries a large stock including many unusual motor versions and is highly experienced in customized motor adaptations. Other manufacturers and integrators therefore rely on Menzel as a trusted source. In many cases, Menzel can assist in the short term, if end customers have particularly challenging demands. Many repeated orders are proof of highest quality and reliability. A Canadian system integrator has recently placed its third order: Menzel was to supply a spare motor for a cement plant and had to meet very exacting requirements. The new slipping motor must be able to replace three existing crusher motors in case of a failure. To ensure smooth commissioning at the installation site, which is characterized by very tight space restrictions, Menzel's project manager took the measurements in Canada himself. Menzel chose a 4.5 MW motor from stock, built an extended shaft, and furthermore fitted adapter plates with mounting holes for all three locations as well as brackets for plug and play

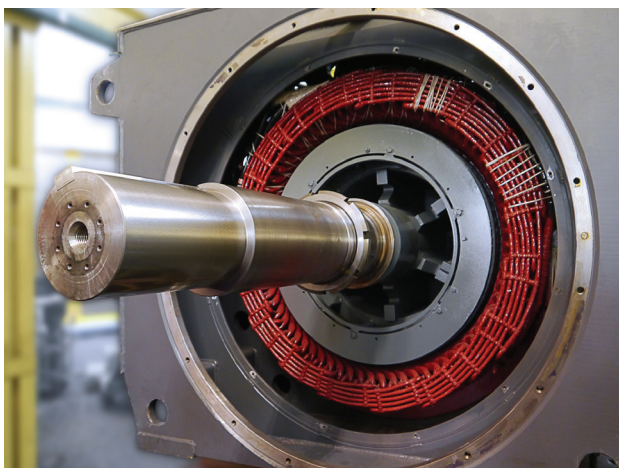


Illustration: Custom-configurations such as this extended shaft make Menzel the motor manufacturer that other drive specialists trust

mounting of vibration sensors for condition monitoring. In addition, the terminal box was fitted with long feeder cables to facilitate the third-party connecting-up.

An overview of Menzel's slipping motor range is available at <https://www.menzel-motors.com/slipping-motor/ic611-ic616-ic666/>.

About Menzel Elektromotoren

Based in Berlin, Menzel Elektromotoren GmbH has been manufacturing and distributing electric motors for more than 90 years. The medium-sized company specializes in the delivery of large electric motors, including special models, within the shortest possible time. The product range comprises high and low voltage motors, DC motors, transformers, and frequency inverters. Services include motor production and short-term adaptation of stocked motors to application-specific requirements. In order to ensure fast deliveries to the customer at all times, the company maintains a very extensive inventory including more than 20,000 motors with a maximum performance of up to 15,000 kW. Qualified engineering, experienced staff, and state-of-the-art production and testing facilities help Menzel provide excellent reliability. Menzel operates subsidiaries in the UK, France, Italy, Spain, and Sweden, and cooperates with numerous partners worldwide.

Contact:

Menzel Elektromotoren GmbH

Mathis Menzel

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10553 Berlin

Germany

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Fax: +49 30 / 34 99 22 - 999

Email: info@menzel-motors.com

WWW: www.menzel-motors.com



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8-11 EKİM / OCTOBER ANTALYA / TURKEY, 2019

TCMB 2019
Türkiye Çimento Mücadelesi Kurumu

15. TCMB International Technical Seminar & Exhibition 8-11 October 2019 Kaya Palazzo Golf Resort, Belek, Antalya/ Turkey

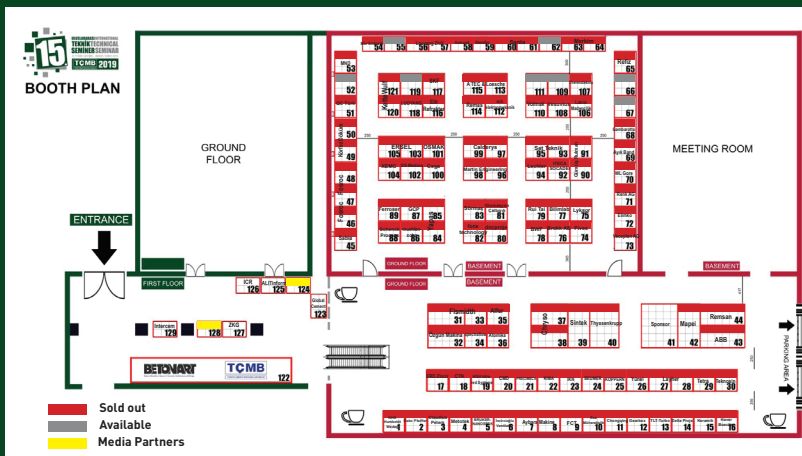
15. TCMB International Technical Seminar & Exhibition

15th TCMB International Technical Seminar and Exhibition will be held in Kaya Palazzo Golf Resort Belek, Antalya, Turkey between 8th and 11th October, 2019.

The program is open for both national and international attendees from cement industry, service and technology providers. The event is important for the manufacturers to follow up the recent developments and creates an opportunity for the participants to consider the new investments while having a chance to benchmark their business for every two years.

14th TCMB International Technical Seminar and Exhibition held in 2017 was found very successful by global cement industry with the participation of more than 576 participants, also 131 foreign and national companies from cement and related industries.

For Registration: tekniks@tcma.org.tr



Official Airline



Turkish Airlines is the "Official Airline" of 15th TCMB International Technical Seminar & Exhibition and special discounts will be offered on certain booking classes.

In order to reach the flight code for the event, please contact with tekniks@tcma.org.tr

TURKISH CEMENT MANUFACTURERS' ASSOCIATION
Tepe Prime Blocks A Floor:18-19 Eskişehir Devlet Yolu 9. km No: 266 Ankara/ Turkey

Powered by SAMSON *The New Generation STORMAJOR®*

The new, updated design promises to improve handling and stability in the loading and reception of all kinds of bulk materials. The New Generation STORMAJOR® from SAMSON Materials Handling Ltd. is available in three models:

- **STORMAJOR® 380 Series:** for materials with a bulk density $\leq 1 \text{ t/m}^3$, such as cereals, fertilizer or alternative fuels
- **STORMAJOR® 450 Series:** for materials with bulk densities from 0.9 to 1.6 t/m^3 , such as additives, light minerals or fertilizer
- **STORMAJOR® 800 Series:** for materials with bulk densities from 1.5 to 2.1 t/m^3 , such as heavier minerals or ores, sand and gravel.

The new STORMAJOR® design is the result of decades of experience with the previous generations of these machines from SAMSON. It combines a mobile truck unloader with a moveable boom. This versatile unit allows the operators of ports, goods depots and stockpiles to receive bulk materials directly from trucks, front-end loaders or other loading equipment and to load them into vessels or railway wagons. As the new STORMAJOR® is fully mobile, it is also ideal for the efficient stockpiling of bulk materials.

In developing the machine, the engineers considered its suitability for dealing with the wide range of requirements in ports and terminals, as well as making it reliable and easy to maintain. The boom is attached below its centre of rotation, so that fines do not collect in the bottom of the machine. The feed section of the main chute is completely decoupled from the conveying sections, which means that if necessary, bulk materials with particularly poor flow

properties can be actively shaken to make the process more efficient. The standard angle of the transfer chute walls is already an effective measure to reduce the danger of bridging when handling different materials which do not flow well.

Each version of the STORMAJOR® has two travel and power options. A wheel-mounted STORMAJOR® will be towed, or a tracked machine will have its own drive. When moving the machine fully loaded, it can be equipped with additional outrigger support.

The new STORMAJOR® is offered with a choice of engine and drives. For example, the conveying sections can be either electrically or hydraulically driven. The self-driven versions can be equipped with diesel generator sets with various emission standards, up to TIR5. The main drive concept depends on off-site power supply or pumps and generators driven by the diesel generator sets. The “Power twin” sets new standards here with an additional distribution gear directly flanged on to the diesel generator set.

Thanks to a large range of extras, each STORMAJOR® can be further tailored to the specific requirements of the application. Examples of these enhancing features are additional transfer chute systems, various lining options for chutes and conveyor, dedusting solutions, additional enclosures for the conveying sections, operation and maintenance platforms, operator cabins and lighting packages.

www.samson-mh.com
sales@samson-mh.com



The New Generation STORMAJOR® from SAMSON Materials Handling Ltd. (Photo SAMSON)

About the AUMUND Group

The AUMUND Group is active worldwide. The conveying and storage specialists have special expertise at their disposal when dealing with bulk materials. With their high degree of individuality, both its technically sophisticated as well as innovative products have contributed to the AUMUND Group today being a market leader in many areas of conveying and storage technology. The manufacturing companies AUMUND Förder-technik GmbH (Rheinberg, Germany), SCHADE Lagertechnik GmbH (Gelsenkirchen, Germany), SAMSON Materials Handling Ltd. (Ely, England), as well as AUMUND Group Field Service GmbH and AUMUND Logistic GmbH (Rheinberg, Germany) are consolidated under the umbrella of the AUMUND Group. The global conveying and storage technology business is spearheaded through a total of 15 locations in Asia, Europe, North and South America and a total of five warehouses in Germany, USA, Brazil, Hong Kong and Saudi Arabia.



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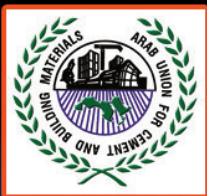
UAE CEMENT FACTORIES

ARAB CEMENT FACTORIES

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www.cmtevents.com

UAE CEMENT PORTAL WEB SITE

www.UAECEMENT.com

info@uaecement.com

Cement Physical Tester Certification from the American Concrete Institute

The American Concrete Institute (ACI) recently launched the Cement Physical Tester certification program, which is offered globally through the ACI sponsoring group network. ACI is working with the Arab Union for Cement and Building Material on program availability in the Middle East.

“The concrete industry has a global impact that continues to evolve. As technology advances and concrete construction grows and changes, it’s imperative that those working in the field meet a certain standard of work,” said John W. Nehasil, Managing Director, Certification, American Concrete Institute. “Proper certification is vital to ensuring the safety and quality of concrete projects.”

The ACI Cement Physical Tester certification is for laboratory staff who test the physical properties of cement and cementitious material. The program requires a working knowledge of the following ASTM test methods and practices:

- ASTM C109—Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
- ASTM C151—Standard Test Method for Autoclave Expansion of Hydraulic Cement
- ASTM C185—Standard Test Method for Air Content of Hydraulic Cement Mortar
- ASTM C187—Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
- ASTM C191—Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C204—Standard Test Method for Fineness of Hydraulic Cement by Air-Permeability Apparatus
- ASTM C305—Standard Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
- ASTM C430—Standard Test Method for Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve
- ASTM C490—Standard Practice for Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar and Concrete
- ASTM C1437—Standard Test Method for Flow of Hydraulic Cement Mortar



To become certified, individuals must pass a written and performance exam.

“Training of technicians for physical testing of Portland cement traditionally occurs on the job, with an experienced laboratory technician guiding the new tester through the ASTM procedures. To supplement this training, ACI has developed the ‘ACI Physical Testing of Cement Training Video’ as a resource for new testers and a refresher for experienced testers,” said Michael L. Tholen, PhD, PE, IOM, Managing Director, Engineering & Professional Development, American Concrete Institute.

The training video is presented in chapters based on the specific test methods, so each one can be reviewed individually. The following tests are included:

- ASTM C109 – Compressive Strength
- ASTM C151 – Autoclave Expansion
- ASTM C185 – Air Content
- ASTM C187 – Normal Consistency
- ASTM C191 – Vicat Time of Setting
- ASTM C204 – Blaine Fineness
- ASTM C266 – Gillmore Time of Setting
- ASTM C1437 – Flow of Mortar

Additionally, there is a brief review of safety, equipment, and the laboratory environment. Each chapter reviews the equipment specific to the ASTM test, the procedure to follow the test, and the calculation of the result. Helpful tips are provided throughout to improve the technicians’ knowledge and technique.

The total run time of the training video is 1:42:51.

ACI continually works with a dedicated team of expert volunteers to create industry-relevant certification programs that measure a candidate’s technical knowledge and skillset related to construction materials testing, concrete quality, handling, installation, and inspection.

ACI currently offers more than 25 certification programs with several more programs in development. Since 1980, ACI has administered exams to more than 555,000 individuals, with more than 100,000 certifications currently maintained by ACI.

For more information, contact:

Julie Webb
Marketing & Communications Coordinator
p +1.248.848.3148

American Concrete Institute | Always advancing
www.concrete.org

Always advancing – The American Concrete Institute is a leading authority and resource worldwide for the development and distribution of consensus-based standards and technical resources, educational programs and certifications for individuals and organizations involved in concrete design, construction and materials, who share a commitment to pursuing the best use of concrete. ACI’s inclusive, individual member-driven structure and valuable, cost-effective benefits result in an essential organization that invites partnerships and welcomes all concrete professionals who wish to be a part of a respected, connected social group that provides an opportunity for professional growth, networking, and enjoyment.

SIEMENS

Compact Industrial PC Simatic IPC127E

connects machines with each other and with the cloud

- **Industrial PC for use as an IoT gateway enables data to be managed directly in the production environment**
- **Based on Windows or Linux, for networking machinery of different manufacturers and of different technological versions**
- **Fitted with up to 3 LAN interfaces for high connectivity**
- **Pre-configured versions available from stock**

Siemens has expanded its product portfolio of Simatic industrial PCs to include the Simatic IPC127E. The newly developed industrial PC is suitable, for example, for use as a gateway and enables data to be managed directly in the production environment. Whether it is based on Windows or Linux, the Simatic IPC127E makes it possible to network existing systems with machinery of different manufacturers and different technological versions. Thanks to the compact enclosure of just 0.3 liters, it can be integrated with a minimum space requirement in the cabinet or directly at the machine.

The Simatic IPC127E is equipped with a powerful 2 or 4-core Atom processor with 2 or 4 GB RAM and a solid state drive (up to 128 GB). The 3 LAN and 4 USB interfaces enable it to be integrated in already existing automation systems. The enclosed allmetal enclosure enables the new industrial PC to be used flexibly and maintenancefree even under harsh conditions.

The newly developed Simatic IPC127E makes it possible to reliably record, collect, process and transfer data directly in the production environment and can also be flexibly used as an IoT gateway between the cloud or the corporate IT level and production. Thanks to pre-configured versions, the right product is available to users in a very short time.

Background information:

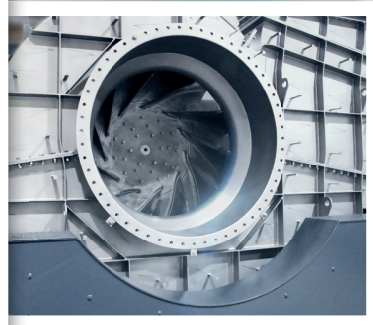
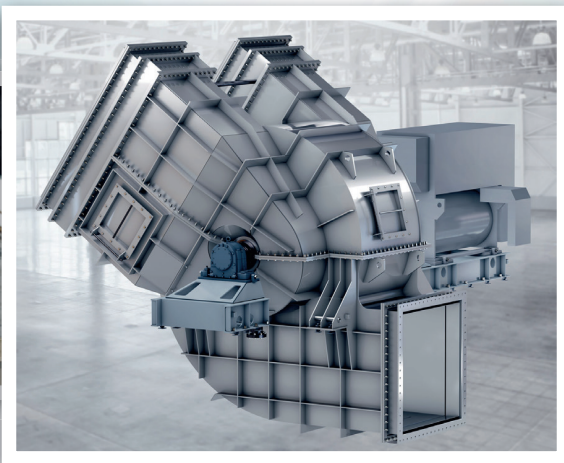
As a result of increasing digitalization, the interfacing of production to the office IT is an ever important component of corporate policy. Machinery from

different manufacturers and on different technological levels does not speak the same data language. Thus the integration of already existing systems often poses a challenge – the solution to this is provided by open IoT gateways that enable future-oriented production concepts to also be implemented for existing systems.

Further information on Siemens at the SPS IPC Drives 2018 at www.siemens.com/sps-ipc-drives and www.siemens.com/press/sps2018



Siemens has expanded its product portfolio of Simatic industrial PCs to include the Simatic IPC127E. The newly developed industrial PC is suitable, for example, for use as a gateway and enables data to be managed directly in the production environment.



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- Energy efficiency
- Low-maintenance and longevity

SIEMENS

Simatic IPC227E: New hardware platform for Edge applications

- **Edge Devices to collect and process large data volumes directly at the machine**
- **Secure, future-proof basis for the execution of Industrial Edge applications**
- **Simple update procedure and software rollouts through secure link to central Edge Management System**
- **Savings through edge computing in the Siemens Electronics Factory Amberg**

Siemens presents a newly developed hardware platform for edge applications as part of its Siemens Industrial Edge concept: The compact Simatic Edge Device works on the basis of the embedded industrial PC Simatic IPC227E, and features integrated connectivity to automation on the machine level. This allows manufacturing data to be captured and processed directly at the point of production.

If there is a change to the framework conditions underlying the industrial application, Industrial Edge offers facility to adjust software applications on the Edge Device, keeping them right up to date using functional, feedback-free updates.

The hardware comes with a closed all-metal housing, ensuring maximum industrial functionality for flexible, maintenance-free use under even the harshest of conditions.

Rapid commissioning is guaranteed using pre-installed Edge software.

Siemens Industrial Edge

Siemens Industrial Edge affords users the opportunity to close the gap between classic local data processing and cloud-based data processing to suit individual requirements. Edge computing enables the local feedback-free processing of large data volumes practically in real time. Industrial Edge also enables users to cut the costs of data storage and transmission, as large volumes of data are processed in advance and exclusively relevant data is subsequently sent to the cloud or the company's own internal IT infrastructure. Siemens Industrial Edge supports cloud transmission protocols for MindSphere, the open cloud-based IoT operating system from Siemens. In future, it will also support Message Queuing Telemetry Transport (MQTT), which will additionally guarantee the flexible exchange of data with other systems and clouds.

Savings through edge computing in the Siemens Electronics Factory Amberg

In the Siemens factory in Amberg, a printed circuit board cutting machine is used for the manufacture of Simatic products. During a milling operation, fine milling dust is produced which exerts an aggressive impact on the machine. This can cause the spindle bearing to jam, and potentially result in unscheduled machine downtime. To prevent this from happening, a number of the machine's operating parameters are analyzed using artificial intelligence with a view to detecting any anomalies in spindle behavior which would indicate the possibility of an impending failure. This is done by transmitting data picked up by the sensors to the Edge device for analysis. A machine learning algorithm calculates the anomaly value in real time. A rise above a predetermined threshold value indicates that a machine failure is imminent. This Edge application enables cases of bearing erosion and machine downtime to be predicted between 12 and 36 hours in advance of an actual failure. In the event of anomalies, the machine spindle can be exchanged as part of the next scheduled service before a failure can cause costly unplanned downtime.

15 - 17 APRIL, MOSCOW, RUSSIA

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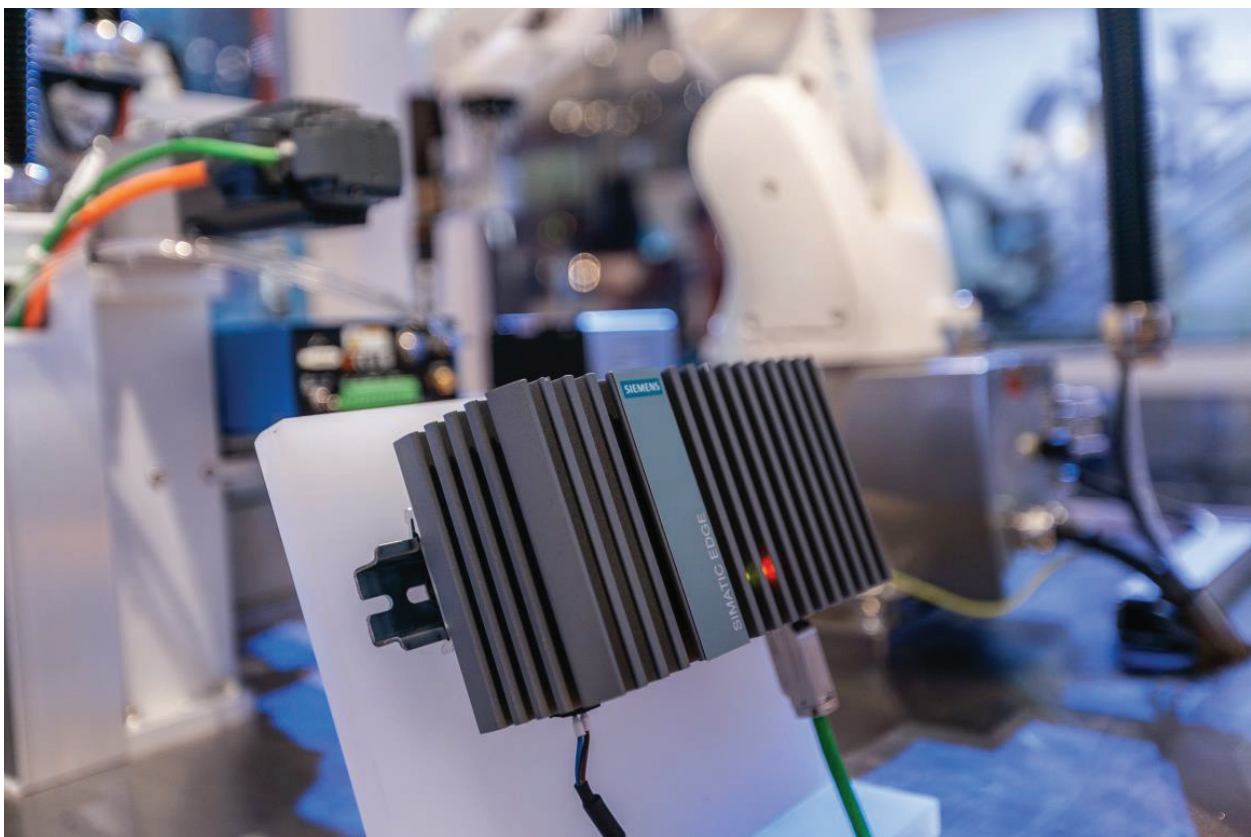
ANDEM:
CEMENT & CONSTRUCTION

Background information:

When it comes to the analysis of production data on the basis of cloud-based solutions, manufacturers are faced with the dual challenge of managing their core task and also finding an efficient, economical solution for associated processes such as update handling and IT security. There are several ways to approach how data is collected and analyzed, and then used to improve processes.

Many are moving away from the classic use of local data processing, one of the drawbacks of which is a high level of outlay for software updating. They are choosing to take the digital route, relying on data processing and analysis based on central IT infrastructures (server farms) in the Internet in the form of cloud computing. This simplifies the task of updating and managing applications, as it allows updates to be installed on all servers via a central cloud management system.

While cloud computing is becoming increasingly established, edge computing is evolving as a logical complement to it. These complementary systems enable production data to be either decentrally or centrally processed. Functionality, intelligence and data are no longer exclusively located in centralized server farms in the cloud, but optionally also on the field level, close to the data source – in the world of automation technology at the edge of the production network. The solution devised by Siemens – Siemens Industrial Edge – is based on proven hardware and software, and on mechanisms used in cloud technology, and integrates the benefits of local and cloud-based data processing.



Siemens presents a newly developed hardware platform for edge applications as part of its Siemens Industrial Edge concept: The compact Simatic Edge Device works on the basis of the embedded industrial PC Simatic IPC227E, and features integrated connectivity to automation on the machine level.

Alternative Fuel Award- Call for participation

Following the successful first presentation of the Alternative Fuel Award to companies from Egypt, Portugal and South Africa in 2018, MVW Lechtenberg & Partner, Duisburg is now announcing the "Alternative Fuel Award" for the second time.

This award will be presented as part of the next "Alternative Fuels Symposium" organized by MVW Lechtenberg & Partner for the 6th time on 23-25 September, 2019.

Companies, cities, municipalities, institutions and individuals who have implemented or are currently implementing projects for the production, use or research on alternative fuels (from waste or biomass) are welcome to apply. According to Dirk Lechtenberg, Managing Director of the company, the aim of this competition is to promote the acceptance of sustainable production and use of alternative fuels in the cement industry, and to identify projects that are considered by the industry to be a successful reduction of fossil fuels service.

The first winning project will be rewarded with 5000

€, in addition to travel costs and participation fee for one delegate to the symposium. The second and third winning projects will receive the "Alternative Fuels and Raw Material Handbook for the Cement & Lime Industry", a comprehensive compendium for the industry, in addition to free participation for one delegate.

At the same time, the winning projects' representatives will present their projects in form of a lecture at the symposium. Further information are published on the company's website:

www.lechtenberg-partner.de/index.php/symposium2/alternative-fuel-award.

The submission deadline for project proposals is May 15, 2019.

Participation documents can be obtained from MVW Lechtenberg & Partner, via email office@lechtenberg-partner.de or by phone +49-203-34 65 16 0.

Best of luck to all the participants!

DIARY DATES DIARY DATES

CEMENT

BusinessCem Moscow 2019
The 30th Anniversary
International Conference and
Exhibition
THE CEMENT INDUSTRY &
THE MARKET

Date : 15 - 17 April 2019

Venue: Moscow, Russia

For more information, please contact:

Tel. +7 495 9774968

Fax: +7 495 977 4495

Email: valev@businesscem.msk.ru

<http://businesscem.ru>

61st IEEE-IAS/PCA Cement
Industry Technical Conference

Date : 28 April - 02 May 2019

Venue: St. Louis, MO, USA

For more information, please visit:
www.cementconference.org

INTERCEM Shipping Americas

Date : 20 - 21 May 2019

Venue: New York, USA

For more information, please visit:
www.intercem.com

2nd Global FutureCem

Date : 22 - 23 May 2019

Venue: Brussels, Belgium

For more information, please visit:
www.futurecem.com

White Nights: V International
Cement Business Conference

Date : 29 - 31 May 2019

Venue: Grand Hotel Europe, St. Petersburg, Russia

For more information please visit:
www.white-nights.info

INTERCEM 100

Date : 24 - 26 June 2019

Venue: Istanbul, Turkey

For more information, please visit:
www.intercem.com

15th International Congress on
the Chemistry of Cement (ICCC
2019)

Date : 16 - 20 September 2019

Venue: Prague, Czech Republic

For more information, please visit:
<http://www.iccc2019.org>

6th Alternative Fuel Symposium

Date : 23 - 25 September 2019

Venue: Wyndham Duisburger Hof

DIARY DATES

DIARY DATES

CEMENT

Hotel, Duisburg, Germany
For more information, please contact:

Mr. Dirk Lechtenberg, Managing Director

Tel: +49 (0) 20334 65 160

Fax: +49 (0) 20334 65 1650

Email: workshop@lechtenberg-partner.de

Website: <https://www.lechtenberg-partner.de/index.php/symposium2/about-the-symposium>

15th TCMB International Technical Seminar & Exhibition

Date : 08 - 11 October 2019

Venue: Kaya Plazzo Golf Resort, Belek, Antalya, Turkey

For more information, please contact Turkish Cement Manufactures' Association

Email: tekniks@tcma.org.tr

3rd International Conference on Calcined Clays for Sustainable Concrete

Date : 15 - 17 October 2019

Venue: New Delhi, India

For more information, please visit:

<http://lc3.cimglobal.net/>

16th NCB International Seminar on Cement, Concrete and Building Materials

Date : 03 - 06 December 2019

Venue: New Delhi, India

For more information, please visit:

<http://www.ncbindia.com>

VDZ Plant Maintenance and Refractories Course

Date : 3 -7 June 2019

TRAINING

Venue: Cement plant in Germany
For more information please visit:
www.vdz-online.de/en/training

VDZ Process Operator Training

Date : 2 - 20 September 2019

Venue: Training centre near Duesseldorf, Germany

For more information please visit:

www.vdz-online.de/en/training

VDZ Crash Course for Young Engineers

Date : 2 -6 December 2019

Venue: VDZ's premises in Duesseldorf, Germany

For more information please visit:

www.vdz-online.de/en/training

26th International Mining Congress and Exhibition (IMCET 2019)

Date : 16 - 19 April 2019

Venue: Granada Luxury Hotel Belek/ Antalya, Turkey

For more information, please visit:

www.imcet.org.tr

Ukrainian Infrastructure Forum '19

Date : 16 - 18 April 2019

Venue: Kyiv, Ukraine

For more information, please visit:

www.a7conf.com

Mining World Russia 2019

Date : 23 - 25 April 2019

Venue: Crocus Expo, Moscow, Russia

For more information, please visit:

www.miningworld.ru

Maintenance Analytics

Date : 24 - 25 April 2019

GENERAL

Venue: Kuala Lumpur, Malaysia
For more information, please contact:

Mr. John Karras

Tel: +603 2775 0001

Email: johnk@trueventus.com

Agile Management

Date : 24 - 25 April 2019

Venue: Kuala Lumpur, Malaysia

Tel: +6032775 0067

Email: amyw@paytoattendthevent.com

INTERPACK 2020

Date : 07 - 13 May 2019

Venue: Dusseldorf, Germany

For more information, please visit:

www.interpack.com

Digital Utilities Europe

Date : 08 - 09 May 2019

Venue: London, UK

For more information, please contact:

Mr. Dimitri Pavlyk

Tel.: +44 203 141 0627

Email: dpavlyk@acieu.co.uk

<http://acieu.co.uk>

Made In Steel 2019

Date : 14 - 16 May 2019

Venue: Fieramilano Rho, Milan, Italy

For more information, please visit:

www.madeinsteel.it

ACI's European Masterbatch Summit

Date : 15 - 16 May 2019

Venue: Dusseldorf, Germany

For more information, please contact:

Marcin Janecki

VDZ Training Courses Overview

June - December 2019

Plant Maintenance and Refractories Course

3 – 7 June 2019

Cement plant in Germany and VDZ

Topics:

- Maintenance inspection and measurement solutions
- Open gear lubrication and application
- Online machinery diagnostic and vibration analysis
- Inalienability of non-destructive testing (NDT) and analysis
- Refractory materials and installation



Process Operator Training

2 – 20 September 2019

Training centre near Duesseldorf, Germany

Topics:

- Raw material extraction
- Material technology
- Raw material preparation
- Clinker production and burning technology
- Raw material and cement grinding
- Environment and emissions abatement
- Refractories
- Simulator training
- Cement plant visit



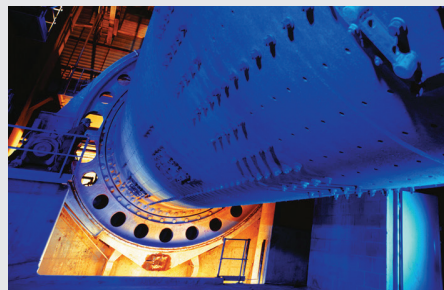
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2 – 6 December 2019

VDZ's premises in Duesseldorf, Germany

Topics:

- Raw material handling
- Clinker production
- Cement production
- Chemistry and mineralogy
- Concrete technology
- Environmental issues
- Product quality assurance
- Plant visit



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or feel free to contact us:

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vdz.

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GENERAL

Tel: 0048 616467047

Email: mjanecki@acieu.net

Managing Multiple Tasks, Priorities & Deadlines

Date : 20 - 24 May 2019

Venue: Capital Hotel, Sandton City,
South Africa

Tel: +27 11051 7282

WhatsApp: +27 72723 8604

Email: registration@acaeglobal.com

**For more information, please
visit:**

www.acaeglobal.com

CBME 2019

China International Bulk Material Conveying & Handling Expo

Date : 29 - 31 May 2019

Venue: Beijing, China

For more information, please visit:
<http://en.bjcbme.com/>

ENERGYCRUISE '19

Date : 31 May 2019

Venue: Rosa Victoria Liner, Kyiv,
Ukraine

Tel: +38 04422727 77

Mobile: +38 096 515 43 90

Email: victoria@a7-group.com

Digital Refining Summit 2019

Date : 05 - 06 June 2019

Venue: London, UK

For more information, please
contact:

Mr. Sam Cormack

Tel: 0048616467040

Email: rafael@acieu.net

5th Annual Argus Mediterranean Solid Fuels

Date : 18 - 19 June 2019

Venue: Istanbul, Turkey

For more information, please

contact:

Ms. Rebecca Bright, Conference
Marketing Executive

Tel: +44 020 7199 6531

Email: [becky.bright@](mailto:becky.bright@argusmedia.com)

argusmedia.com

Biobased Coatings Europe 2019

Date : 19 - 20 June 2019

Venue: Düsseldorf, Germany

For more information, please
contact:

Mr. Dimitri Pavlyk

Tel : +4402031410627

Email: dpavlyk@acieu.net

Mining Week Kazakhstan 2019

Date : 25 - 27 June 2019

Venue: Karaganda, Kazakhstan

For more information, please visit:
www.miningweek.kz

The European Carbon Black Summit

Date : 26 - 27 June 2019

Venue: London, UK

For more information, please
contact:

Mr. Rohan Baryah

Tel: 0048616467022

Email: rbaryah@acieu.net

API Summit

Date : 26 - 27 June 2019

**Venue: Hotel Fort Canning,
Singapore**

For more information, please
contact:

Trueventus

Ms. Amy Wong

Tel: +603 2775 0067

Email: [amyw@](mailto:amyw@paytoattendtheevent.com)

paytoattendtheevent.com

Cloud to Edge Summit

Date : 26 - 27 June 2019

Venue: Hotel Fort Canning,
Singapore

For more information, please
contact:

Trueventus

Mr. John Karras

Tel: +603 2775 0067

Email: johnk@trueventus.com

2nd Annual Industry 4.0

Date : 10 - 11 July 2019

Venue: Kuala Lumpur, Malaysia

Email: amyw@paytoattendtheevent.com

Manufacturing Summit

Date : 10 - 11 July 2019

Venue: JW Marriott Hotel Kuala
Lumpur, Malaysia

For more information, please
contact:

Trueventus

Mr. John Karras

Tel: +603 2775 0067

Email: johnk@trueventus.com

OEM Summit

Date : 10 - 11 July 2019

Venue: Kuala Lumpur, Malaysia

For more information, please
contact:

Trueventus

Mr. John Karras

Tel: +603 2775 0067

Email: johnk@trueventus.com

QA & Materials Testing Summit

Date : 10 - 11 July 2019

Venue: JW Marriott Hotel Kuala
Lumpur, Malaysia

For more information, please
contact:

Trueventus

Ms. Casey Lee

Tel: +603 2775 0067

Email: caseyl@trueventus.com

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paul.brown@propubs.com

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Confirmed presentations:

- 'Low carbon technology roadmap for the global cement sector,' Araceli Fernandez, International Energy Agency
- 'The role of the Global Cement and Concrete Association in promoting future industrial sustainability,' speaker to be confirmed, GCCA
- 'HeidelbergCement's strategy and implementation examples to stay in line with Paris-agreements,' Jan Theulen, HeidelbergCement
- 'Envisioning a carbon-negative roadmap for Dalmia Cement,' Ashwani Pahuja, CSO, Dalmia Cement
- 'Implementation of the EU ETS,' (TBC) Ms Mette Koefoed Quinn, Head of ETS Implementation and IT Unit of the Director General for Climate Action (DG CLIMA), European Commission
- 'Carbon emission cost implications for the cement industry in a decarbonising Europe,' Trevor Sikorski, Energy Aspects
- 'The methodology and potential impact of carbon pricing in the construction value chain,' Michel Folliet, IFC Global Manufacturing
- 'Fossil/biogenic content of cement industry fuels,' Haley Gershon, Beta Analytic
- 'Carbonate cements,' Fred Glasser, University of Aberdeen
- 'New clinker and cement production schemes,' Albrecht Wolter, Technical University of Clausthal
- 'Ecoefficient cement: realistic options for reducing the environmental impact of cementitious materials,' Karen Scrivener, EPFL, Ecole Polytechnique Fédérale de Lausanne
- 'European cement industry - current status and future trends,' (TBC), Koen Coppenholle - Cembureau
- 'Futurecem - A low-CO₂ cement, tested at full-scale in the Danish Green Concrete II Project,' Jesper Sand Damtoft, Cementir Holding S.p.A.
- 'LC3 technology,' Karen Scrivener, EPFL Ecole Polytechnique Fédérale de Lausanne; Anne Dekeukelaere, Cementis
- 'Low CO₂ cements by partial replacement with calcined clays or glasses - insights from solid-state NMR,' Jørgen Skibsted, Aarhus University Interdisciplinary Nanoscience Center (iNANO)
- 'Reduction of CO₂ through optimisation of cement packaging,' Guido Neu, Haver & Boecker
- 'The cement industry's approach towards carbon capture,' Martin Schneider, European Cement Research Academy
- 'The LEILAC project: Demonstrating a novel carbon capture process,' Daniel Rennie, Calix Ltd
- 'No-fuel cement production using renewable-energy plasma technology and co-production of optimised process emissions for CCS/CCU: Results of comprehensive pre-feasibility study in Sweden,' Bodil Wilhelmsson, Cementa AB
- 'All cements are not the same: Selecting the right binders for future concretes,' John Blackstock, banah UK Ltd
- 'Cement plant CO₂ capture for downstream utilisation in ready mixed concrete production,' Sean Monkman, CarbonCure Technologies
- 'Durable Aluminium Reinforced Environmentally-friendly Concrete Construction - DARE2C,' Harald Justnes, SINTEF Building and Infrastructure



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8th Annual Modular & Prefabrication Construction:

Date : 24 - 25 July 2019

Venue: Hotel Fort Canning, Singapore

For more information, please contact:

Trueventus

Ms. Amy Wong

Tel: +603 2775 0067

Email: amyw@paytoattendtheevent.com

BIM Summit

Date : 24 - 25 July 2019

Venue: Singapore

For more information, please contact:

Trueventus

Ms. Amy Wong

Tel: +603 2775 0067

Email: amyw@paytoattendtheevent.com

Data Science Summit

Date : 24 - 25 July 2019

Venue: Singapore

For more information, please contact:

Trueventus

Ms. Amy Wong

Tel: +603 2775 0067

Email: amyw@paytoattendtheevent.com

Next Gen: Quality Assurance and Material Testing

Date : 28 - 29 August 2019

Venue: Bangkok, Thailand

Tel: +603-2775 0067

Email: stevej@strategictruconferences.com

Sensor Tech

Date : 25 - 26 September 2019

Venue: Bangkok, Thailand

Tel: +603 27750067

Email: amyw@paytoattendtheevent.com

European PVC Industry Summit

Date : 25 - 26 September 2019

Venue: London, United Kingdom

For more information, please contact:

Neha Desadla

Tel : +910 2048523143

Email: ndesadla@acieu.net

2019 International Lime and Deep Processing

Technology Equipment Exhibition

Date : 26 - 28 October 2019

Venue: Handan International Conference and Exhibition Center, Hebei Province, China

For more information, please visit:

<http://www.limeexpo.com/>

Hillhead 2020:

Date : 03 - 06 December 2019

Venue: Hillhead Quarry, Buxton, Derbyshire, UK

For **more** information, please visit:

www.hillhead.com

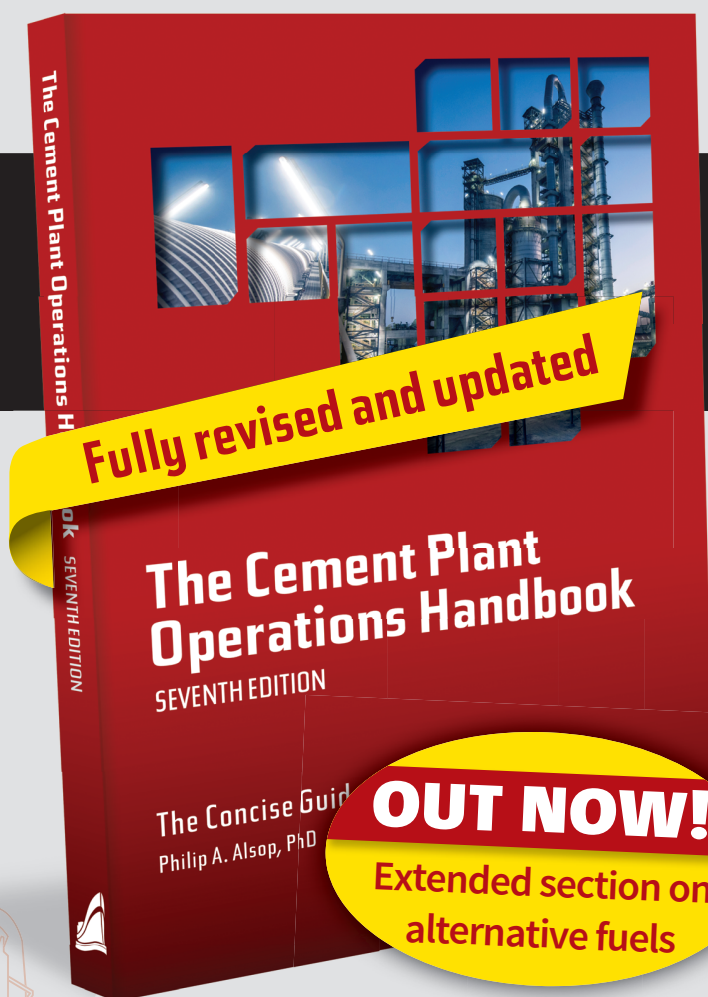
Solids 2020

Date : 01 - 02 April 2020

Venue: Dortmund, Germany

For more information, please visit:

www.easyfairs.com



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المؤتمر والمعرض العربي الدولي الرابع والعتشرون
لصناعة الإسمنت

٢٤ - ٢٦ نوفمبر / تشرين الثاني ٢٠١٩

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VDZ	59	www.vdz-online.de/en/training
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منتجات جديدة

موضوعات تقنية

أخبار عالمية

الملف العربي

رئيس التحرير الأمين العام / المهندس أحمد محمود الروسان
مدير التحرير سها منير كنعان

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أخبار عالمية
منتجات جديدة

الموضوعات :

- أسواق الإسمنت في شرق أفريقيا: «أرض الفرص» من الناحية النظرية ولكنها تشكل تحدياً لديناميكيات السوق في الواقع
إعداد: **Dom Pavlopoulos and Claudia Stefanoiu ، Cement Business Research** – المملكة المتحدة
- تغيير تكنولوجيا مسار الطاقة في صناعة الإسمنت
إعداد: م. أسامة علي أحمد – جمهورية مصر العربية
- إمكانية حدوث انخفاض جذري في انبعاثات ثاني أكسيد الكربون وتكلفة الوقود في إنتاج الأسمنت
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إعداد: **Standard Industrie** – فرنسا
- تحسين الإسمنت وعمل الطاحونة نحو الأمثل
إعداد: **Mark Mutter & Lawrie Evans ، JAMCEM Consulting** – المملكة المتحدة

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Website : www.aucbm.net



مجلة عالم الإسمنت ومواد البناء

جدول موضوعات المجلة لعام 2019

المناسبات	الموضوعات	العدد
	<ul style="list-style-type: none"> * التعبئة والتغليف والتسليم * معدات التحميل والتفريغ من السفن * تكنولوجيا التغذية * تخزين ومناولة المواد السائبة * تخزين الوقود * أنظمة النقل والرافعات الدولية * الصحة والسلامة المهنية * إعداد الفحم وإشعاله 	يونيو/حزيران 2019
<p>المؤتمر والمعرض العربي الدولي الرابع والعشرون لصناعة الإسمنت: القاهرة / جمهورية مصر العربية نوفمبر / تشرين الثاني 2019 / 26 - 24</p>	<ul style="list-style-type: none"> * أنواع جديدة من الإسمنت * الإسمنت ذو النسبة المنخفضة من الكربون * الإسمنت الأبيض * الخرسانة * التحليل بتألق الأشعة السينية (XRF) وبحيود الأشعة السينية (XRD) * كيمياء الإسمنت * مضافات الإسمنت * انسداد الصوامع وتنظيفها * النقاط التي تؤخذ بعين الاعتبار عند تصميم الصوامع * منظومات التحريك * تكنولوجيا الوزن * تقنيات وأنظمة الاعتيان (أخذ العينات) 	* سبتمبر/أيلول 2019
	<ul style="list-style-type: none"> * أنظمة التشحيم * الصيانة في مصانع الإسمنت - الصيانة المتمركزة حول الوثوقية - منظومات الصيانة المحوسبة * تقنيات الإصلاح واللحام * إدارة قطع الغيار * الطواحين العمودية * الكسارات * المبردات * تكنولوجيا الحراقات * الحراقات وفحص الحراقات 	ديسمبر/كانون الأول 2019

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(بالدولار الأمريكي)

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ويتميز هذا المشروع بإنتاج أنواع عالية الجودة من الإسمنت ذات استعمالات دقيقة ويعتمد تقنيات جد متطورة وأتوماتيكية التشغيل والمراقبة دون أن تنبعث منه أي إفرازات وغبار ويتزود من المقاطع عبر سلسلة نقل مغلقة بدل الشاحنات لتفادي الحوادث والتعطيلات .

هذا بالإضافة إلى عدة ميزات أخرى منها الاقتصاد في استهلاك الماء الذي سيستخرج من طبقات المياه المالحة ويكون في حدود 11 لتراً للطن الواحد من الإسمنت عوض 24 لتراً لإنتاج الطن من الإسمنت في مشاريع مماثلة أخرى وتركيز محطة لتوليد حاجيات المصنع من التيار الكهربائي بالاعتماد على الحرارة التي يوقرها فرنه .

ومن المتوقع أن يدخل المشروع مرحلة الإنتاج سنة 2022 وسينتج مليون ومائتي ألف طن من الكلنكر ومليون ونصف مليون من الإسمنت الخاص .

المصدر: tn24.ween.tn

الجزائر

مجمع (جيك) : الشروع في إنتاج الإسمنت بشركة سيقوس بأمر البواقي شهر "مارس 2019"

يخطط لبدء إنتاج الإسمنت بشركة الإسمنت سيقوس بولاية أم لبواقي التابع للمجمع الصناعي لإسمنت الجزائر (جيك) ، وذلك مباشرة بعد الانتهاء من إنجاز الجزء الأول من المشروع في شهر مارس / آذار ، وسيكون الاستلام الكلي للمشروع خلال الربع الأخير من هذا العام .

وتصل طاقة إنتاج شركة الإسمنت سيقوس التي تعد فرعاً من المجمع الصناعي لإسمنت الجزائر (جيك) 2.2 مليون طن سنوياً .

كما أفاد المدير التقني لشركة الإسمنت «سيقوس» أن إنجاز المشروع يتم فيه الأخذ بعين الاعتبار كل ما له علاقة بالمحافظة على البيئة ، مع توفير الطاقة من خلال استخدام وسائل وتجهيزات لا تستهلك الكثير من الطاقة الكهربائية . وبشأن المياه الموجهة للمصنع ، أشار إلى أن محطة مخصصة لهذا الغرض يجري إنجازها ضمن نفس المشروع لأجل معالجة هذه المياه لتفادي تلويث البيئة .

المصدر: www.energyservicesexperts.com

«أركان» تتسلم نحو 22 مليون درهم من قيمة بيع أصول مصنع «الإمارات للإسمنت»

باغت شركة «أركان لمواد البناء» أصول مصنع «الإمارات للإسمنت» بقيمة 50 مليون درهم . وأضافت الشركة في بيان لها أنها استلمت مبلغ 21.9 مليون درهم من قيمة الصفقة خلال عام 2018 .

المصدر: www.eliktisad.com

مصنع ومحجر بـ450 مليوناً لـ «إسمنت رأس الخيمة»

أعلنت شركة إسمنت رأس الخيمة عقد صفقة للاستحواذ على مصنع «إسمنت نيوتك» ومحجر «البانه» بقيمة 450 مليون درهم . وأوضحت الشركة أنه من المقرر تمويل صفقة الاستحواذ من أحد البنوك العاملة بالدولة ، مشيرة إلى أنه جرى تقييم المصنع والمحجر بواسطة إحدى كبرى الشركات المتخصصة في هذا المجال .

وأشارت الشركة إلى أن الاستحواذ تم من المالك السابق محمد علي عمر صالح البريكي ، مشيرة إلى أن المصنع يقع بإمارة الفجيرة وسيظهر تأثير الصفقة في البيانات المالية للشركة في الربع الأول من العام الجاري .

المصدر: www.gulf365.co

مصنع للكلنكر في الفجيرة بتكلفة 550 مليون درهم

أعلنت مؤسسة الفجيرة للموارد الطبيعية عن بدء العمل في مشروع مصنع «جي.إس.دبليو» لإنتاج الكلنكر في منطقة حجب بالفجيرة ، على 3 مراحل بتكلفة 550 مليون درهم .

وقال المدير العام لمؤسسة الفجيرة للموارد الطبيعية إن المصنع الجديد سيعمل وفق شروط ومعايير الاستدامة ، ويحقق جميع شروط الصحة والسلامة ، وأن أعمال الإنتاج بالمصنع ستبدأ في أعقاب الانتهاء من المرحلة الأولى للأعمال الإنشائية في ديسمبر 2019 .

المصدر: www.alittihad.ae

تونس

إنشاء مصنع إسمنت بأحدث التقنيات في تطاوين الجنوبية

التقى والي تطاوين وفداً من مستثمرين أجانب يمثلون أربع شركات فرنسية كبرى أسست شركة «إسمنت المستثمرين المتحددين» التي تكفلت بإنجاز مصنع إسمنت في منطقة «بئر ثلاثين» من معتمدية




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تصدير 30 ألف طن من الإسمنت إلى غرب إفريقيا

بعد أن صدرت الشركة الجزائرية «سيلاس» لصناعة الإسمنت شحنتين على متن باخرتين ، الأولى بوزن 80 ألف طن أرسلت إلى غرب إفريقيا وأكثر من 1 ألف طن نحو النيجر ، ها هي اليوم تصدر نفس الشركة ما وزنه 30 ألف طن من الإسمنت ، انطلاقاً من ميناء عنابة نحو غرب إفريقيا.

وتهدف مجموعة «لافارج هولسيم الجزائر» إلى تصدير فائض في الإنتاج يفوق 2 مليون طن عام 2020 .

المصدر: www.elkhabar.com

الجزائر تُصدّر أول شحنة إسمنت نحو النيجر

أطلقت أول عملية تصدير شحنة من الإسمنت مقدرة بـ 2,000 طن نحو جمهورية النيجر ، انطلاقاً من وحدة إنتاج الإسمنت التابعة لمجمع الهامل سيدي موسى ببلدية تيمقطن (270 كلم شرق أدرار).

ويجري تصدير الإسمنت نحو النيجر عبر دفعات بشحنات بإجمالي 8,000 طن شهرياً .

المصدر: almanbaa-dz.com

تصدير الإسمنت: نحو رفع الصادرات إلى نصف مليار دولار خلال 5 سنوات القادمة

صرح وزير الصناعة والمناجم أن الجزائر تطمح إلى رفع صادراتها من الإسمنت إلى نصف مليار دولار في غضون الخمس سنوات القادمة .

وقال الوزير إنه يتوقع أن يبلغ فائض الإسمنت خلال الخمس سنوات القادمة ما بين 10 و15 مليون طن ، وهو ما سيسمح برفع صادرات هذه المادة إلى 500 مليون دولار .

وأشار إلى أن صادرات الإسمنت بلغت واحد (1) مليون طن في 2018 مضيفاً أنها سترتفع إلى مليوني (2) طن في 2019 من بينها 1.2 مليون طن يغطيها مجمع «جيك» بنحو 80 إلى 100 مليون دولار .

المصدر: <http://www.aps.dz>

شركة الإسمنت لعين الكبيرة بسطيف تفوز بجائزة الجزائر للجودة لسنة 2018

فازت شركة الإسمنت لعين الكبيرة بجائزة الجزائرية للجودة لسنة 2018 ، و التي تمنح سنوياً من طرف وزارة التجارة الجزائرية للشركات الحاصلة على نتائج ملموسة في مجال تحسين الجودة وتطوير المنتج ، الجائزة لها قيمة مالية تقدر بمليون دينار وقيمة معنوية كبيرة لدى الزبائن الباحثين عن المنتج الجيد .

المصدر: www.sawtsetif.com

المملكة العربية السعودية

مبيعات شركات الإسمنت السعودية تتراجع 13 % خلال عام .. والصادرات تقفز لـ 4.2 مليون طن
كشفت بيانات سوق الإسمنت في المملكة عن انخفاض نسبته

13 % في إجمالي مبيعات الشركات المحلية (17 شركة) خلال العام 2018 لتسجل نحو 41 مليون طن مقابل نحو 47 مليون طن في العام 2017 ، فيما قفزت إجمالي الكميات المصدرة من الإسمنت والكلنكر معاً إلى نحو 4.2 مليون طن - وهو مستوى قياسي لها - مقابل 163 ألف طن فقط في العام 2017 وذلك بعد قرار وقف رسوم التصدير على الإسمنت .

وأوضحت البيانات أن إنتاج شركات الإسمنت في المملكة سجلت خلال العام 2018 انخفاضاً نسبته 11 % ، إلا أن الانخفاض في حجم إنتاج الكلنكر جاء بنسبة أقل عند 3 % .

وكنتيجة لانخفاض المبيعات والمنتج من الإسمنت بشكله النهائي مع الانخفاض الطفيف في إنتاج الكلنكر ارتفعت مخزونات شركات الإسمنت السعودية إلى أعلى مستوياتها التاريخية .

وتظهر البيانات والتي ترصدها شركة إسمنت اليمامة أن لجوء الشركات للتصدير جاء في ظل الارتفاع القوي للمخزونات المحلية من الكلنكر، إذ تشير البيانات إلى أن الـ 8 سنوات الأخيرة شهدت ارتفاعاً متتالياً لكميات المخزونات من الكلنكر .

وفي عام 2018 شهد حصول شركات الإسمنت على موافقة وزارة التجارة والاستثمار بالسماح لها ببدء تصدير الإسمنت بلا رسوم حيث يتم منح تراخيص التصدير من قبل الوزارة .

المصدر: www.maaal.com

«الراجحي المالية» تتوقع انخفاض الطلب على الإسمنت في السعودية بنسبة 5 % خلال عام 2019

توقعت شركة «الراجحي المالية» أن ينخفض إجمالي الطلب على الإسمنت خلال عام 2019 بنسبة 5 % على أساس سنوي ليصل إلى 39 مليون طن . وقالت «الراجحي المالية» إن الطلب على الإسمنت سيستمر في الانخفاض خلال عام 2019 ، متأثراً بمحدودية الإنفاق الرأسمالي ، ومقروناً بارتفاع تكاليف الإنشاءات .

وأضافت أن إعلان الحكومة السعودية عن مشاريع ضخمة تشمل مشاريع نيوم ، والقدية والبحر الأحمر والإسكان والسياحة، من المحتمل أن توجد مزيداً من الطلب ولكن في المدى البعيد .

وأشارت إلى أن الطلب الضعيف سيدفع المنتجين للبدء في تصدير المزيد من إنتاجهم إلى أسواق أخرى خارج المملكة ، مما قد يساعد القطاع في خفض مخزوناتة الحالية الضخمة.

وتوقعت أن تظل أسعار البيع الحالية في وضع جيد نظراً لأن المنتجين يركزون على المحافظة على الأسعار بدلاً من التركيز على أحجام الإنتاج .

المصدر: www.argaam.com

«إسمنت تبوك» تصدر 6,950 طناً من الإسمنت إلى اليمن

أعلنت شركة «إسمنت تبوك» في 15 يناير / كانون الثاني 2019 الانتهاء من جميع الأعمال المرتبطة بتصدير شحنة بكمية 6,950 طن إسمنت إلى دولة اليمن .

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الهندسية ش.م.م و مقرها بسلطنة عمان من أجل تحديث الخط الثالث من مبرد الكلنكر للمصنع بصلالة . ووفقاً لعقد التصميم والإستراء والتشييد ستقوم أيوكي بتوريد كافة التجهيزات الخاصة بتحديث مبرد الكلنكر من شركة أ.ك.ن جمبا الألمانية .

وطبقاً للعقد مع أيوكا ، سيتم استبدال مبرد القشر القائم بمصنع صلالة بمبرد كلنكر بندولي مصمم لكي يستوعب 4,000 طن يومياً وبقدرة استيعابية مضمونة 3,500 طن يومياً من إنتاج الكلنكر .

ويتضمن مجال المشروع أيضاً أعمال مدنية ، إمداد و تركيب أعمال ميكانيكية و كهربية متعلقة بترقية مبرد الكلنكر ، كما سيقع على عاتق مقاول التصميم والإستراء والتشييد مسئولية إمداد و تركيب المواد المقامة للحرارة من خلال أ.ك.ن

يخطط أن يتم التركيب النهائي للمشروع في الربع الأخير من 2019 ومجدول بطريقة 35 يوم إشعال وإطفاء ذاتي .

المصدر: www.aetoswire.com

ليبيا

التوقيع على إنشاء مصنع إسمنت في نالوت

وقّع المدير التنفيذي للصندوق الليبي للاستثمار الداخلي والتنمية ، ورئيس مجلس إدارة الشركة الوطنية لصناعة مواد البناء محضر شراكة بشأن مشروع إنشاء مصنع إسمنت في نالوت والذي تقدر طاقته الإنتاجية بحوالي 1.6 مليون طن سنوياً .

وتأتي هذه الخطوة في إطار الجهود المبذولة من المجلس الرئاسي لحكومة الوفاق الوطني ومصرف ليبيا المركزي لتحريك عجلة الاقتصاد .

المصدر: www.libyaakhbar.com

افتتاح خط الإنتاج الثاني بمصنع زليتن للإسمنت

افتتح وزير الاقتصاد والصناعة لحكومة الوفاق الوطني برفقة مجلس إدارة الشركة الأهلية للإسمنت خط الإنتاج الثاني بمصنع زليتن ، و ذلك بطاقة إنتاجية تقدر بمليون طن سنوياً .

وبذلك ترتفع الطاقة الإجمالية لإنتاجها من الإسمنت لأول مرة إلى 4.3 مليون طن سنوياً .

المصدر: www.libyaakhbar.com

جمهورية مصر العربية

العربية للإسمنت توقع اتفاقية مع سولاريز لإنشاء محطة شمسية
أعلنت الشركة العربية للإسمنت عن توقيع اتفاقية شراكة مع سولاريز إيجيبتي لإقامة محطة لتوليد الطاقة الشمسية في المصنع الخاص بالأولى بمحافظة السويس .

وأضافت أنه بموجب هذه الاتفاقية تتولى سولاريز إيجيبتي أعمال

وقالت الشركة إن الأثر المالي لتلك الشحنة سيظهر ضمن نتائج الربع الرابع من عام 2018 والربع الأول من عام 2019 .

وكانت شركة «إسمنت تبوك» قد وقعت مذكرة تفاهم مع شركة «التطلعات الدولية»، بتاريخ 25 نوفمبر 2018 ، لتصدير كمية 6 آلاف طن من مادة الإسمنت إلى جمهورية اليمن .

المصدر: www.argaam.com

الجمهورية العربية السورية

شركة إسمنت الرستن تستأنف إنتاجها بزخم قوي بعد خلاصها

من الإرهاب

رغم كل ما كابته شركة إسمنت الرستن من ظروف قاسية واعتداءات متكررة من قبل الإرهابيين طيلة السنوات السبع الماضية تمكنت الشركة من استئناف العملية الإنتاجية فيها بزخم قوي من جديد عقب عودة الأمان والاستقرار للمنطقة في صيف العام الماضي وإجراء صيانات جزئية في أقسامها وآلاتها .

الشركة التي تأسست في ستينيات القرن الماضي أفلحت مجدداً بهمة إدارتها وكوادرها الفنية والعمالية العالية وحرصهم وحماهم على مواصلة مسيرة العمل والإنتاج بالوتيرة ذاتها التي كانت عليها قبل الأحداث قادرة على إنتاج كمية تقدر ما بين 350 و400 طن من مادة الإسمنت يومياً .

وكشف المدير العام لشركة إسمنت الرستن أن عروضاً متعددة قدمها مستثمرون من القطاع الخاص بغية استثمار الشركة وتشغيلها لحسابهم من خلال تأمين مواد ومستلزمات الإنتاج والقدرة على تصريفه مع منح الشركة قسماً من الإيرادات والأرباح وفق الحد الأدنى مما تجنيه الشركة حالياً .

المصدر: www.sana.sy

سلطنة عُمان

«ريسوت» تخطط لشراء إسمنت صحار

وقعت شركة ريسوت للإسمنت خطاب نوايا لشراء شركة مصنع إسمنت صحار ، وهي شركة محدودة المسؤولية .

وكانت ريسوت باعت حصتها في العمانية البرتغالية لمنتجات الإسمنت ، في منتصف عام 2017 مقابل 5.5 مليون ريال ، وحققت ربحاً للمجموعة من عملية البيع يفوق الـ 1.11 مليون ريال .

المصدر: www.mubasher.info

ريسوت للإسمنت توقع اتفاقية مع أيوكي الهندسية لتطور مبرد

الكلنكر

صرحت شركة ريسوت للإسمنت ، المصنع الأكبر للإسمنت في سلطنة عمان ، أنها بصدد تحديث تقنية تبريد الكلنكر لمزيد من التوفير في الإنتاج . حيث وقعت الشركة اتفاقاً مع شركة أيوكي

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السويس للإسمنت: بيع مصنع إسمنت بالمنيا لشركة إعمار مقابل 694 مليون جنيه

أعلنت شركة السويس للإسمنت عن توقيع عقد بيع مصنع الإسمنت الأبيض المملوك لشركتها التابعة إسمنت حلوان في محافظة المنيا لصالح شركة إعمار للصناعات مقابل 694.5 مليون جنيه ، بسعر 0.12 دولار للسهم بإجمالي 322 مليون سهم تمثل 100 % من المصنع .

المصدر: www.youm7.com

المملكة المغربية

«إسمنت المغرب» تبيع 7.575 من رأسمالها لتسع مؤسسات

ذكر أن مجموعة «هايدلبرغ» الألمانية باعت 7.57 % من حصتها في شركة «إسمنت المغرب» مقابل 1.46 مليار درهم . ومن أبرز المؤسسات التي تقدمت لشراء الحصة في «إسمنت المغرب» هي الصندوق المهني المغربي للتقاعد .

وبفعل هذه الصفقة انخفضت حصة الشركة الألمانية «هايدلبرغ» من رأس مال «إسمنت المغرب» إلى 51.23 مقابل 58.8 سابقاً ، أما استثمار الصندوق المهني المغربي للتقاعد في إسمنت المغرب فقد قفز به من 8.26 إلى 10 % . وأنتجت العملية المذكورة 1.46 مليار درهم لصالح الشركة الألمانية «هايدلبرغ» .

المصدر: www.aljha24.ma

اليمن

استعدادات لإعادة تشغيل مصنع إسمنت باتيس

التقى محافظ محافظة أبين بعدد من رجال الأعمال الأتراك ، حيث قاموا بزيارة ميدانية لمصنع إسمنت باتيس التابع للشركة اليمنية السعودية والذي توقف لعدة سنوات وتجري حالياً الاستعدادات لعمل تقييمي شامل للمصنع لكل منشآت المصنع والعمل باتجاه تحديثه وتزويده بما يحتاجه من معدات وفقاً وأفضل التكنولوجيا الحديثة .

هذا وتبلغ المساحة الاجمالية للمصنع 8 كيلو متر حيث تم بناء منشآت صناعية هائلة ويعد هذا المصنع هو الأكبر من المصنع الحالي مصنع الوحدة للإسمنت والذي يعد من المصانع الناجحة ويصدر منتجاته إلى مختلف محافظات الجمهورية .

المصدر: www.tahdeeth.net

الإنشاءات وتشغيل المحطة لمدة 25 عاماً بنظام BOOT – البناء والتملك والتشغيل ونقل الملكية . وبحسب البيان تبلغ الاستثمارات الإجمالية لوحدة الطاقة الشمسية الجديدة 100 مليون جنيه .

ومن المتوقع أن تبلغ سعتها الإنتاجية أكثر من 14 جيجاوات ساعة من الطاقة الكهربائية كل عام ، وهو ما يخطط أن يمثل 4 % من إجمالي إمدادات الطاقة التي يحتاجها المصنع على مدار الربع قرن القادم .

ومن المتوقع أن تبدأ هذه الوحدة في العمل خلال الربع الثاني من 2019 ، وهو ما سيعمل على توفير قدر كبير من تكلفة الطاقة الكهربائية بالمصنع كل عام ، بالإضافة لذلك ستقام الوحدة الجديدة على مساحة إجمالية تصل إلى 96000 متر مربع .

تجدر الإشارة أنّ مصنع العربية للإسمنت يعتمد بالكامل على الوقود البديل والفحم بعد أن توقفت الشركة عن استخدام الغاز الطبيعي في تشغيل المصنع .

وشركة سولاريز إيجبت من الشركات المصرية المعتمدة في مجال تمويل وتصميم وإقامة وتشغيل وحدات ومحطات توليد الطاقة من الخلايا الشمسية في مصر منذ عام 2013 .

المصدر: www.hapijournal.com

تحالف صيني مصري يعرض إنشاء محطة شمسية وبيع الكهرباء لـ(إسمنت التعمير)

عرض تحالف صيني مصري تدشين محطة طاقة شمسية بقدرة 100 ميجاوات وبيع الكهرباء المنتجة لصالح شركة صناعات مواد البناء «إسمنت التعمير» .

وقال رئيس شركة إم إيه إم لتطوير وإدارة المشروعات إن الشركة تتعاون مع «بانجلى سولار» الصينية لتدشين محطة طاقة شمسية باستثمارات 80 مليون دولار ، وتم الاتفاق مع شركة «صناعات مواد البناء» على بيع الكهرباء المنتجة من المشروع لصالح مصنع الإسمنت التابع لها .

وأوضح أن الدراسات الفنية والاقتصادية لتدشين المحطة أعدت وعرضت على مجلس إدارة شركة صناعات مواد البناء ، ووافقت مبدئياً على شراء الكهرباء المنتجة من المشروع . وقد وافق البنك الآسيوى للتنمية مبدئياً على تمويل المحطة بنحو 50 مليون دولار ، وتتولى «بانجلى سولار» الصينية تدشين المشروع وبيع الكهرباء المنتجة لصالح «أسمنت التعمير» لمدة تتراوح بين 10 و12 عاماً .

حيث تصل فاتورة استهلاك كهرباء مصنع أسمنت التعمير إلى 180 مليون جنيه شهرياً ، والشركة تسعى للاعتماد على الطاقة الشمسية لتقليل قيمة الفاتورة .

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نشاطات عربية

مؤتمرات

المؤتمر العربي السادس: تكنولوجيا إدارة البلديات (المدن الذكية)

المكان: القاهرة ، جمهورية مصر العربية

التاريخ: 13 – 15 أبريل / نيسان 2019

الجهة المنظمة: الدار العربية للتنمية الإدارية بالتعاون مع الاتحاد الدولي لمؤسسات التنمية البشرية

للحصول على كافة التفاصيل يرجى التواصل مع نائب مدير التدريب أ / سارة عبد الجواد

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موبايل واتس اب: 00201062992510

فاكس: 0020237800573 / 0020235866323

بريد الكتروني: Saragwadi@AhadHr.org / saragwadi@gmail.com

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النظم الالكترونية الحديثة لإدارة الوثائق والمستندات والأرشفة الرقمية للملفات

التحول الإلكتروني والتقليل من استخدام الورق - إدارة بلا أوراق -

المكان: عمان، المملكة الأردنية الهاشمية - فندق هوليدي ان

التاريخ: 14 – 18 أبريل / نيسان 2019

الجهة المنظمة: أطلس لتنمية الموارد البشرية

للحصول على كافة التفاصيل يرجى التواصل مع منسقة المؤتمر/ مديرة التدريب الأئسة فاطمة مفيد العملة

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أو مع الدكتور تحسين حنتولي - رئيس المؤتمر: موبايل: 00962796782098

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نشاطات عربية

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الاستراتيجيات الحديثة للعلاقات
العامة وتحسين الصورة الذهنية
للمؤسسات

المكان: دبي، الإمارات العربية المتحدة

التاريخ: 21 - 25 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
المهني

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المكان: شرم الشيخ، جمهورية مصر العربية

التاريخ: 21 - 25 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
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الإبداعية للعاملين

المكان: بيروت، الجمهورية اللبنانية

التاريخ: 08 - 11 أبريل / نيسان 2019

الجهة المنظمة: المنظمة العربية للتنمية
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في الأداء الوظيفي

المكان: القاهرة، جمهورية مصر العربية

التاريخ: 14 - 18 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
المهني

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المكان: تركيا

التاريخ: 14 - 18 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب

الموازنات التخطيطية وتفعيل دور
الرقابة

المكان: شرم الشيخ، جمهورية مصر
العربية

التاريخ: 07 - 11 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
المهني

للحصول على كافة التفاصيل يرجى التواصل
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إعادة تنظيم المخازن لزيادة كفاءة
الرقابة على المخزون

المكان: القاهرة، جمهورية مصر العربية

التاريخ: 07 - 11 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
المهني

للحصول على كافة التفاصيل يرجى التواصل
مع إدارة التدريب:

هاتف: 0020235878943

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قيادة التغيير والتطوير التنظيمي
(2030)

المكان: دبي، الإمارات العربية المتحدة

التاريخ: 07 - 11 أبريل / نيسان 2019

الجهة المنظمة: المؤسسة العامة للتدريب
المهني

للحصول على كافة التفاصيل يرجى التواصل
مع إدارة التدريب:

هاتف: 0020235878943

<p>ASEC Signs a Protocol with the Iraqi Group KAR for Manpower Technical Development</p>	<p>أسيك توقع بروتوكول تعاون مع مجموعة KAR العراقية للتطوير الفني للقوة العاملة</p>
<p>Arab Swiss Engineering Company "ASEC", the leading provider of cement plants' operations and maintenance in the MEA region, announced today the signing of a protocol with the Iraqi conglomerate KAR Group for manpower technical development.</p>	<p>أعلنت الشركة العربية السويسرية للهندسة «أسيك» ، الشركة الرائدة في مجال تشغيل وصيانة مصانع الإسمنت في منطقة الشرق الأوسط وأفريقيا ، توقيع بروتوكول للتعاون مع مجموعة KAR العراقية في مجال التطوير الفني للقوى العاملة .</p>
<p>ASEC, through its renowned Academy for cement technology technical training, shall carry out an intensive and wide-ranging manpower development plan for KAR Group's cement plant "Qarachog", in Erbil, Iraq, that has come online in 2017.</p>	<p>هذا وسوف تقوم أسيك من خلال أكاديميتها التدريبية العريقة والرائدة في مجال التدريب على تكنولوجيا صناعة الإسمنت بتنفيذ خطة مكثفة واسعة النطاق لتطوير القوى العاملة بمصنع إسمنت «كاراشوج» التابع لمجموعة KAR ، الواقع بالقرب من مدينة إربيل العراقية والذي دشنت إنتاجه خلال عام 2017 .</p>
<p>The cooperation protocol aims at the technical development of domestic calibers of engineers, chemists and technicians through providing tailored programs blending the technological theory with the best practices in cement manufacturing process and optimization. ASEC Academy shall utilize both in-class and on-the job training in addition to simulator training for mill and kiln operators. A pool of ASEC's cement experts and instructors from various specialties shall support the development program either through tutoring or supervising the on-site sessions.</p>	<p>ويهدف بروتوكول التعاون إلى تطوير المهارات الفنية للكوادر العراقية بما في ذلك المهندسين والكيميائيين والفنيين من خلال تقديم برامج تدريبية تم تصميمها لتلبي احتياجات العمالة بالمشروع عن طريق المزج بين النظريات التكنولوجية وأفضل الممارسات في تصنيع الإسمنت ورفع كفاءة العملية التشغيلية . وتعزز أكاديمية أسيك توظيف مجموعة من أساليب التدريب والتي تشمل المحاضرات داخل قاعات التدريب والتدريب العملي على خط الإنتاج بالإضافة إلى تطبيقات المحاكاة والتي تستخدم لتأهيل مشغلي الطواحين والأفران . هذا وسوف يشارك في إعداد وتنفيذ البرنامج نخبة من خبراء الصناعة والمدرسين من مختلف التخصصات سواء من خلال القيام بالتدريس أو الإشراف على جلسات التدريب أثناء العمل في الموقع .</p>
<p>It is worth noting that ASEC Academy has been collaborating with the Iraqi cement companies since 2005. "We are committed to supporting our clients' growth and assist in developing manpower skills through quality training and knowledge sharing. We are glad to resume our cooperation and support to the Iraqi cement industry and we look forward to further our partnership over the near future." commented ASEC's managing director.</p>	<p>ومن الجدير بالذكر أن التعاون بين أكاديمية أسيك وشركات الإسمنت العراقية قد بدأ منذ عام 2005 . ومن جانبه ، أفاد العضو المنتدب لشركة أسيك في هذا الصدد "نلتزم دوماً بدعم مساعي التطوير والنمو من جانب عملائنا وخاصة من خلال العمل على تطوير الكوادر الفنية عن طريق تقديم أحدث البرامج التدريبية ودعم عملية نقل الخبرات . إن استئناف مسيرة التعاون في سبيل تطوير صناعة الإسمنت العراقية يشعرنا بسعادة بالغة ، وكذا فإننا نتطلع إلى تعزيز شراكتنا في المستقبل القريب."</p>

صيانة معمل إسمنت – (إرادة الحياة)

قصدنا في هذه المقالة عن معمل الإسمنت التابع لمؤسسة الإسكان العسكرية الواقع في منطقة المسلمية بمحافظة حلب قصة إرادة الحياة للمواطن السوري وجدارته ببناء بلده بالاعتماد على الذات والثقة بمقدرته على بعث الأمل من جديد ليصبح واقعاً جميلاً معاشاً .

بني معمل الإسمنت خلال فترة قياسية لا تتجاوز عاماً واحداً حيث تم تسخير كافة الإمكانيات آنذاك لإنجازه وقد تم البدء باستثماره فعلياً في عام 1982/ والمعمل من صنع شركة BÜHLER-Miag الألمانية ، حيث توضع في منطقة توهله للعمل عشرات السنين معتمداً على المواد الأولية التي يتم استخدامها من المقالع المحيطة به تماماً ليحقق ريعية اقتصادية ، كذلك تواجد خط النقل بواسطة القطارات بقربه حيث يتم نقل الفيول إليه ونقل الإسمنت منه لتصريفه في كافة المحافظات وهكذا تستمر عجلة البناء والعمل بصورة مستمرة دون كلل أو ملل ويستمر العطاء ويحقق المعمل المواصفات القياسية العالمية في إنتاج الإسمنت الأسود البورتلاندي . كذلك يحتل المرتبة الأولى من الناحية البيئية من خلال محافظته على بيئة نظيفة خالية من الغازات والغبار وذلك باستخدام أحدث التقنيات في مجال شطف الغبار وترسيبه .

وتأتي اللحظة التي توقف فيها كل شيء في المعمل وبدأت الحرب الظالمة القذرة وانطفت شعلة الإنتاج في عام 2012 ولمدة خمس سنوات تم خلالها تدمير المعمل بشكل جزئي في بعض أقسامه وبشكل كلي بالأقسام أخرى ولم يستطع عمال وفنيو ومهندسو المعمل الوصول إليه خلال تلك الفترة، إلى أن حانت ساعة الحقيقة وتم تحريره من كل أدوات الحرب والدمار .

وحينذاك في أوائل 2017 تم تنظيم كوكبة ممن تبقى من عمالنا ومهندسينا وفنييننا ، وبما توفر لديهم من همة وإرادة وبدافع الحب للمعمل والوطن ، بدأ العمل الشاق حيث تم إجراء جرد لكافة المكونات والمستلزمات ولكافة الأقسام . ومن ثم تم تنظيم برنامج زمني لأعمال الصيانة الكهربائية والميكانيكية وأعمال الصيانة المدنية والتكنولوجية .

تم البدء بالصيانة في قسم مطحنة الإسمنت وقسم التعبئة وملحقاتها من تجهيز المركز التحويلي 66 ك.ف / 6,6 ك.ف وتجهيز محولات الخدمة وتجهيز قسم ضواغط الهواء ودارات الماء والمعالجة وصيانة صوامع التعبئة التي توزع الإسمنت معبأ أو سائب إلى مراكز الاستهلاك .
فرحة لا توصف وجهد لا يوصف ، الكل عمل والكل كطف ثمرة هذا العمل .

وبالهمة نفسها والعزيمة التي لا تلين ، تم اتخاذ القرار بالبدء بالمرحلة الثانية من إعادة تأهيل المعمل حيث تبقى الأقسام التالية:

المقلع – الكسارات الكلسية والبازلتية مع تفرعاتها من مركبات وكراكات ومطحنة المواد الأولية مع كافة تجهيزاتها وملحقاتها ، مثل برج التبريد والمرسب الكهربائي وبواري سحب الغازات .

دارة الفيول + خزانات الفيول وقسم الفرن الدوار مع ميرد الكلنكر والفيلتر البحصي ودارة المروحة الرئيسية 400 ومنظومة التحكم PLC وفق أحدث الأنظمة (PCS-S7) .

وبنفس البرنامج الذي بدأنا به في المرحلة الأولى واعتماداً على الخبرات الذاتية والكادر المحلي ، تم إنجاز المطلوب .
استمرت هذه المرحلة سنة كاملة وتعتبر زمناً قياسيماً بالنسبة لإنجاز عظيم يشهد له القاصي والداني وخاصة أنه بجهود وخبرات خاصة وكاملة لعمالنا ومهندسينا وفنييننا .

وكان لإدارة المؤسسة اليد الطولى في مد يد العون وتذليل الصعوبات والموازرة في تأمين ما تطلبه العمل ، من خلال تواجدهم وإصرارهم على تحقيق الحلم ومن خلال الدعم اللامتناهي للكادر الفني الذي أنجز وأبدع وبكلفة نهائية قليلة .