CEMENT & BUILDING MATERIALS REVIEW

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ARAB UNION FOR CEMENT AND BUILDING MATERIALS

Cement and Building Materials Review

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* Repair and welding techniques
* Vertical Mills
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* Refractories & testing of refractories
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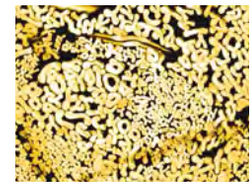

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ARAB NEWS

EGYPT

Egypt's competition authority approves cement quotas

Egypt's competition authority has approved a request by 23 cement makers to reduce production temporarily to help reduce a glut in output, setting a baseline cut at 10.69%.

The competition authority decision, dated July 5, said there would be additional cuts of 2.81% for each production line and further cuts depending on the company's age.

The quotas would come into force on July 15 and remain in place for one year.

Egypt's cement production capacity has risen significantly in the last three years after the inauguration of the 13Mtpa plant owned by the military in Beni Suef, even as local sales halved. The sector is seen as an indicator of Egypt's openness to foreign investment, which it has struggled to attract.

Companies, including HeidelbergCement, Vicat, LafargeHolcim, Titan Cement and Cemex, invested heavily in Egypt after a privatization drive that began in the 1990s. Local players set up their own plants later.

Al Naqool starts pilot production at project in Egypt

Saudi Arabian-based Mohammed Hassan Al Naqool Sons has started pilot production at its Cement Industries subsidiary based in El Alamein. The project has an investment of around US$5m. It will manufacture cement-based products, including blocks and concrete. Commercial production at the site is expected to start in the third quarter of 2021.

Global Cement

Redecam upgrades filter at Lafarge Egypt's Ain Al-Sokhna cement plant

Redecam has successfully started up a project one line two at Lafarge Egypt's Ain Al-Sokhna cement plant. The upgrade consisted of: converting the main kiln's electrostatic precipitator (ESP) into a bag filter; enhanced the cooling system for the clinker cooler, including a partial ESP retrofit; and revamping the bypass the gas conditioning tower and dust transport system. The Italy-based engineering company previously carried out a similar project on line three at the plant in 2020.

Global Cement

IRAQ

Iraq awards a Spanish company a project to build a cement plant

Iraq has awarded a project to a Spanish company to build a cement plant in the Northern Nineveh Governorate.

The plant will have a total cost of around USD 250 million, and it would have an initial output capacity of 4,000-4,500 tons per day, noting that it could be expanded later.

The project would produce new types of cement that are not available in Iraq and would be completed within 2.5 years.

CW Group

KUWAIT

Kuwait Ministry of Commerce and Industry bans cement exports

The Ministry of Commerce and Industry has banned all export and re-export of cement and other construction materials from Kuwait. However, it has allowed individual citizens to import construction materials for personal use. The ban is part of a raft of a measures intended to stem the increase in building material prices.

The ministry subsidizes building materials including cement and concrete, and it continues to monitor the cement market and cement production for 'unlawful' price rises.

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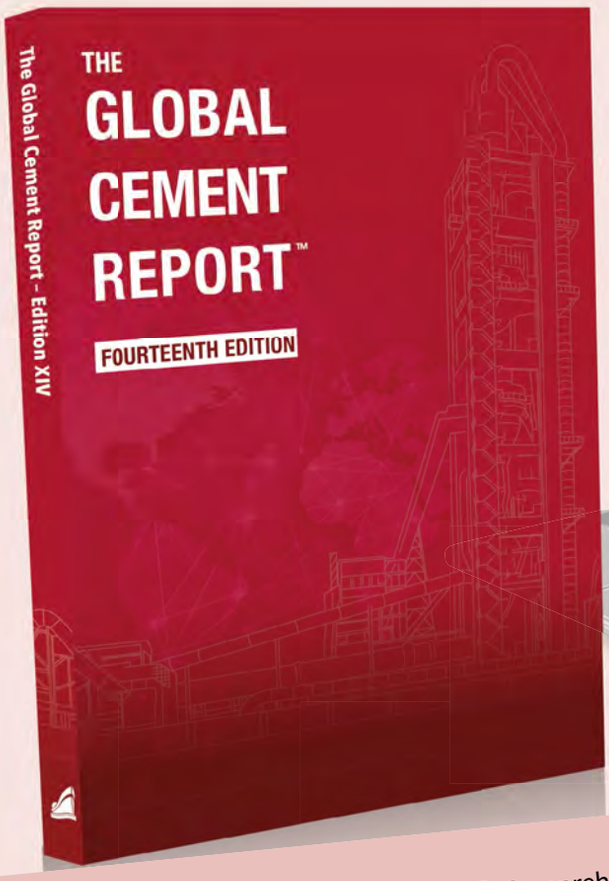

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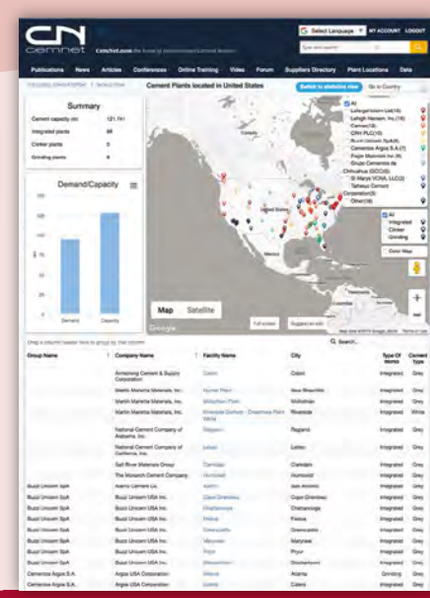

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Kuwait's cement production capacity is 9.0Mt/yr, while 2020 consumption was 6.0Mt.

Global Cement

MOROCCO

Morocco's Settat cement plant ranked as second most efficient in LafargeHolcim Group

LafargeHolcim's Settat plant has been ranked as the second most efficient integrated cement plant in LafargeHolcim Group. The classification is based on industrial performance criteria in terms of efficiency, cost and sustainable development covering 129 of the group's integrated plants around the world. Five of the six plants operated by LafargeHolcim Morocco are also reported to be in the Top 20 of this list. The 1.7Mt/yr Settat plant has also become a pilot in the group's 'plant of tomorrow" initiative whereby automation technologies, robotics, artificial intelligence and predictive maintenance will be used to improve its production efficiency further still.

Global Cement

Moroccan cement and clinker standards tighten

The government of Morocco has tightened cement and clinker quality standards. The new standards will see cement and clinker assessed on the basis of higher consistency and final product durability standards than previously.

Global Cement

SAUDI ARABIA

Cement demand in Saudi Arabia climbs in the first half of 2021

Cement demand in Saudi Arabia rose by around 14 percent in the first half of 2021, as the construction sector continues to recover from the effects of the Coronavirus pandemic.

Higher demand boosted production of the country's cement plants by nearly 12 percent to 27.9 million tons in the first half of 2021, compared to 24.9 million tons in the first half of 2020.

Cement and clinker exports also soared by nearly 80 percent to around 5 million tons, from 2.8 million tonnes in the same period.

CW Group

Qassim Cement to launch a new production line

Qassim Cement plans to build a new 10,000t/day production line at its Buraydah cement plant to replace some of the site's existing lines. Construction will begin in the first half of 2022. The company will announce the cost of the project after completing preliminary studies.

Global Cement

Saudi Cement increases holding in United Cement Company

Saudi Arabia-based Saudi Cement has increased its share in its Bahraini subsidiary United Cement Company (UCC) by 37% to 100%. The purchase of additional shares cost it around US$7.5m in May 2021. UCC is an importer and distributor of bulk cement. It operates a marine terminal and was founded in 1999.

Global Cement

Saudi Ceramics to build new $66.4m factory for porcelain tiles

Saudi Ceramics has announced plans to set up a new factory for the production of porcelain tiles with a capacity of 8.25 million sqm annually, at a cost of $66.4 million.

The project is expected to commence in the fourth quarter of 2021 and will be completed by the second quarter of 2023.

meconstructionnews.com

SYRIA

Result in Lafarge Cement Syria case delayed to September 2021

The Court of Cassation, a court of last resort, has delayed its ruling on the conduct of Lafarge in Syria between 2011 and 2014 until September 2021. It was due to make a decision on a number of appeals related to the case including whether charges of charge of crimes against humanity should be upheld. Other indictments include those of financing terrorism, endangering life and violating an embargo. Lafarge has been accused of financing terrorism through indirect payments to extremist groups to keep its Jalabiya cement plant operational after the outbreak of war in Syria.

Lafarge Cement Syria was a subsidiary of Lafarge in the early 2010s. Lafarge and Holcim merged in 2015 becoming LafargeHolcim. LafargeHolcim's shareholders later voted to change the company's name to Holcim in May 2021.

Global Cement

Jeddah Superdome features site-made Geometrica structure

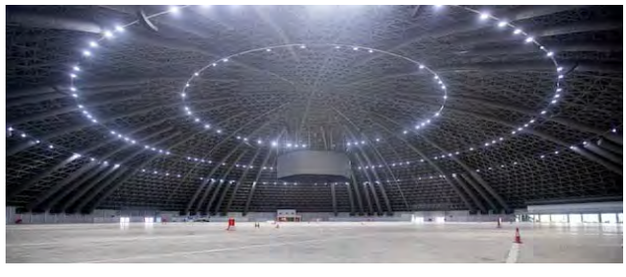
Geometrica, Inc., U.S./Mexican specialists in long-span domes, worked closely with main contractor Losberger De Boer, German specialists in modular structures, to design and build the new Jeddah Superdome in the Kingdom of Saudi Arabia during the 2020 coronavirus pandemic.

Jeddah Superdome is now the world's largest dome with a continuous roof and the world's largest geodesic dome..

Described as Saudi Arabia's "most prestigious event venue" by client Sela Sports Company, the Jeddah Superdome contributes to the Kingdom's trade, culture and tourism development in an ambitious program titled "Saudi Vision 2030."

Saudi Vision 2030 seeks to diversify the Saudi Arabian economy, reduce its dependence on oil and accelerate development. Jeddah, the country's economic and tourism capital, on the west coast, is a focus of investment and development.

In line with the Saudi Vision 2030 framework, Sela Sports Company, the Kingdom's premier events-management company, launched a 2020 initiative to build a new, world-class, multipurpose venue with the capacity to host the largest events: fairs, concerts, exhibits, sports and specialty shows. The concept: a monumental geodesic dome spanning a record 210 meters (689 feet).



"Losberger De Boer's in-house design team, along with our trusted consultant Geometrica, designed the dome's concept. We were able to complete the frame three days ahead of schedule [as revised by the coronavirus pandemic], despite the challenging conditions. We went on to complete the remaining works within the agreed time frames," said Waleed Khaled, regional sales director for Losberger De Boer Middle East.

"We couldn't have met the project's tight deadline if we manufactured and shipped from our factory" said Francisco Castaño, Geometrica's CEO. "so we shipped, instead, a 13-person team and one production line, along with our structural joints, from Monterrey to Jeddah in early March."

Construction started at the perimeter ring and progressed ring by ring towards the apex. Throughout the build, the structure was always self-supporting; no scaffolding nor propping towers were used. "We finished the free-span dome structure in August, and LDB installed the fabric cladding in November," said Castaño. Geometrica's unique technology enabled both the rapid design and local fabrication of the Jeddah Superdome, accelerating its delivery.

The dome's 210m span is entirely free of internal columns. The height at its apex is 46m (151 feet). The roof area is 39,800 square meters (9.8 acres). The geodesic structure sits on a steel ring beam and columns that allow for unprecedented flexibility of layout and access throughout its perimeter.

The Jeddah Superdome is now open to the public. Its very first exhibition featured, fittingly, the region's accomplishments and development projects, including the Superdome itself.

Said LDB's Khaled, "It was a pleasure working with Geometrica on this project, and we are looking forward to many more."

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AUMUND takes over the service for KoWey machinery worldwide

With effect of 30 June 2021 KoWey GmbH & Co. KG, Kamp-Lintfort (Germany) has ceased its business operations worldwide. From now AUMUND Fördertechnik GmbH takes over the After Sales Service from KoWey (Germany) and from KCT Engineering (India) on all machinery including original spare parts and retrofits respectively conversions with regard to the bucket elevators and conveying systems supplied worldwide.

All over the world AUMUND PREMAS® Services for preventive and predictive maintenance are highly recommended for all installed KoWey machines to check the conditions and to suggest the corresponding maintenance activities. For further support or information all former KoWey customers are invited to contact the AUMUND After Sales Department **aftersales@aumund.de** directly.

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, Great Britain), TILEMANN GmbH Chains & Components (Essen, Germany) 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 19 locations in Asia, Europe, North and South America and a total of five warehouses in Germany, USA, Brazil, Hong Kong and Saudi Arabia.

Additional information on AUMUND Group:

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

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

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

«Cement and its Applications» is the only initiator and organizer of international cement conferences PetroCem. PetroCem 2018 which was held on April, 2018 in Saint-Petersburg, Russia – gathered more than 520 participants from 36 countries and representing more than 320 companies.

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FLSmidth to acquire thyssenkrupp's Mining business – creating a global industry leader in mining technology

FLSmidth and thyssenkrupp Industrial Solutions AG (a fully owned subsidiary of thyssenkrupp AG, "thyssenkrupp") have reached an agreement that FLSmidth will acquire thyssenkrupp's Mining business1 (TK Mining) for a total consideration (enterprise value) of EUR 325 million, corresponding to approximately DKK 2.4 billion. Closing of the transaction is expected in H2 2022 and is subject to customary approvals from relevant authorities.

TK Mining is a leading full-line supplier of solutions for mining systems, material handling, mineral processing and services, which is highly complementary to FLSmidth's offering. TK Mining has an asset light business model and is present in 24 countries with engineering and global service centres, and has close to 3,400 employees. In 20202, revenue was EUR 780 million (approximately DKK 5.8 billion) with around one-third deriving from services. The business delivered a high single-digit negative EBIT margin and is expected to return to profitability by year 2024 based on the ongoing restructuring undertaken by TK Mining. In addition, the combination with FLSmidth offers large cost synergies, creating significant shareholder value.

A combination of the two companies will create a leading global mining technology provider with operations from pit to plant, extending the strategic customer relationships with a complementary product offering and customer base as well as improved geographic coverage. Furthermore, TK Mining's extensive active installed base, together with FLSmidth's strong existing service setup, will provide additional aftermarket opportunities, while the joint R&D capabilities and combined portfolio will enable accelerated innovation in digitalisation and MissionZero solutions. The mining industry is characterised by sound fundamentals and a positive outlook, based on underinvestment over the past decade and increasing demand due to the clean energy transition. The timing of this acquisition positions FLSmidth to capture enhanced value from the mining growth cycle underway.

Thomas Schulz, Group CEO of FLSmidth, said: "TK Mining and FLSmidth are a perfect match, and I am proud to announce this agreement to join forces. This is a truly transformational deal allowing us to accelerate our growth ambitions in mining by creating a stronger talent pool and one of the world's largest and strongest suppliers to the mining industry. Our complementary customer base and improved geographic coverage will offer a strong value proposition to our customers. There is a significant opportunity in transforming TK Mining towards FLSmidth's business mix and model in which higher margin service business makes up about 60% of revenue. I look forward to welcoming TK Mining's management team and talented staff to our organisation."

Martina Merz, Group CEO of thyssenkrupp AG, said: "FLSmidth is an excellent owner and a very good new home for our mining activities. The companies have a strong cultural fit and are a good match: the business models are comparable; the technologies complement each other well. The result is a world-leading technology provider from pit to plant. This is also a great opportunity for our employees. The merged new company will be able to drive innovation and digitalisation even faster and will increasingly focus on sustainability and ways to reduce environmental footprint."

FLSmidth delivers sustainable productivity to the global mining and cement industries. We deliver market-leading engineering, equipment and service solutions to our customers enabling them to improve performance, drive down costs and reduce environmental impact. Our operations span the globe and our ~10,600 employees are present in more than 60 countries. In 2020, FLSmidth generated a revenue of DKK 16.4 billion.
www.flsmidth.com

[1] It is being negotiated if thyssenkrupp's Indian mining business will be part of the transaction
[2] September 2020 FYE

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Through-body veining, RAK Ceramics chooses 'total synchronization' by SACMI

Integrated on the Continua+, this solution lets manufacturers synchronize through-body decorations and digital effects perfectly. Already fully operational, the line broadens and enhances the range produced by UAE-based RAK, one of the global ceramic industry's leading players.

The world's 3rd largest manufacturer of floor and wall tiles, United Arab Emirates-based RAK Ceramics is expanding its high-added-value range featuring through-body veining. To do so, it's gone for the innovative SACMI powder dosing system, integrated on the Continua+ line and seamlessly synchronized with downstream digital decoration devices.

A comprehensive solutions provider - from powder preparation to end-of-line - SACMI fully integrates the machines that make up the ceramic plant, giving manufacturers the advantage of a platform that is scalable and expandable on the basis of actual customer and market needs.

On this latest solution to be supplied to RAK (installed on the existing Continua+ line), SACMI has incorporated the through-body veining digital decoration concept. Here, spray dried powder deposits are managed by the APC device; this allows for the creation of through-body veins whose color, orientation and size are then matched perfectly with the digital wet decoration (SACMI DHD) graphics applied on the slab surface. Synchronization is controlled by the SVV through-body veining vision system. The latter detects the shape and position of the veins made with the APC and matches them with the DHD digital graphics file to obtain an optimal match. The result? Highly distinctive products of outstanding quality and aesthetic depth, and perfectly matched through-body decoration and surface effects.

Smooth collaboration between SACMI technicians and the RAK team - and the use of new digital remote support/assistance services - ensured the solution was successfully assembled and tested. Now fully operational at the main Ras Al-Khaimah facility, which already boasts the best of SACMI tile-making technology, the line will produce both large floor and wall slabs and furnishing items such as tables and high-end kitchen counter tops.

SACMI RobotGlaze, 5th supply for Duravit Egypt

Reliability and Performance; key features of the new investment to further ambitious plant improvement plans at the Egyptian branch of multi-national sanitaryware manufacturer Duravit.

Duravit Egypt has taken the latest step in its plant improvement plans with SACMI technology. The company has recently installed a fifth GA2000 robot, part of the SACMI RobotGlaze series renowned throughout the world for its superior reliability and performance levels.

A long-standing partner of SACMI at its various factories around the world, Duravit made this latest investment as part of an ongoing expansion plan at its Egyptian plant, leading manufacturer in North Africa.

As with the previous supplies, this robot is a latest-generation model equipped with the most advanced solutions to guarantee the best performances in terms of quality and sustainability. Among these is the glaze flow-rate control system which ensures even glaze application with zero wastage.

Process repeatability and quality are the most well-known and successful characteristics of this type of robot with which SACMI is contributing to the advance of the international sanitaryware industry towards the new frontiers of automation and 4.0 production control.

The robot supplied to Duravit Egypt, which can be programmed off-line and equipped with self-learning software, facilitates improved management of the production mix thus increasing line efficiency and reducing the time-to-market of the new products.

LB acquires the assets of CMF Technology

LB has won the auction for the allocation of all rights to CMF's technologies and intangible assets. As of 1 September, it will also be launching a global after-sales service.

Fiorano Modenese-based company LB Officine Meccaniche has won the auction for the allocation of the assets deriving from CMF Technology's bankruptcy proceedings, including all rights to CMF's technologies and intangible assets such as patents, software, company know-how and the technical drawings of all machines and the Spiller system.

The CMF patents, now owned by LB, relate to machines for the preparation and distribution of powders for the production of full-body slabs; units for the stratified loading of powdered ceramic materials into press moulds; and tile sorting and storage systems.

LB has also acquired ownership of the well-known Spiller 2.0 technology for transferring a graphic effect created on spray-dried powders using a fixed screen from the working surface of the device to the infeed conveyor of a large-format slab production line. Spiller has demonstrated outstanding levels of performance in terms of process reliability, repeatability of results and control over the graphics of powders, including the ability to achieve synchronised vein movements in any direction.

The acquisition of CMF Technology's assets is part of LB's new industrial development plan, which focuses on customisation of the technological offering and service as critical success factors.

In accordance with its customer-oriented philosophy, LB will also carry out all service, spare parts and after-sales activities on CMF installations worldwide from 1 September 2021.

"Acquiring new patents and expanding the range of technologies on the market not only enables LB to offer many of the technologies available on the market and to pursue innovation, but also to adopt an approach focused on creating value throughout the entire production process according to the customer's needs through technologically appropriate, tailor-made solutions," comments CEO Corrado Fanti."
www.ceramicworldweb.it

Coesia acquires 100% ownership of System Ceramics

The Bologna-based multinational completed the acquisition of the remaining 40% capital of System Ceramics on 9 June

After acquiring a 60% stake in Fiorano Modenese-based company System Ceramics in January 2019, Coesia fi-.nalised the acquisition of the remaining 40% on 9 June and confirmed Franco Stefani as the company's Chairman This operation enables Coesia to consolidate its investment in the ceramic machinery sector, an industry in which System Ceramics is a key player and international leader in terms of technological innovation. Completion of the transaction will allow for the development of new synergistic R&D projects and a further strategic injection of .expertise

Coesia, whose sole shareholder is the Bolognese entrepreneur Isabella Seragnoli, is a Bologna-based group of 21 companies operating in the field of industrial and packaging solutions with a global presence spanning 35 countries, 85 production facilities across 138 business units and around 8,000 employees. System Ceramics, which also owns the companies Studio 1 and Tosilab, operates in 21 countries with 38 business units and around 1,200 .employees

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BEUMER Group: U-shape conveyor combines the advantages of a troughed belt conveyor and those of a pipe conveyor

Reliable transport in U-shape

The U-shape conveyor allows the implementation of narrower curve radii than a troughed belt conveyor and higher mass flows than a pipe conveyor. At the same time and contrary to the troughed belt conveyor, it protects the material conveyed from environmental stress and the environment from material loss and emissions. Thus this u-shaped conveying solution has proven to be an ideal alternative in the cement and mining industry as well as in port terminals if high capacity is required with little space available.

Lafarge Zementwerke GmbH, a company of LafargeHolcim in Rapperswil-Jona/Switzerland, is located in Styria, Austria. The plant not only places particular emphasis on high-quality products, but also on sustainable, energy-efficient and environmentally-friendly production. Alternative fuels are therefore increasingly being used to fire the new calciner. "During the transport, the material should be protected against external influences such as wind, rain or snow and the environment against possible material loss and emissions," says Karl Filarowski, Sales Director at BEUMER Group Austria. In addition, the conveyor should be able to transport both coarse material and very fine material. The BEUMER experts opted for a U-shape conveyor. "In this solution, a special idler configuration brings the belt in a u-shape," describes Filarowski. Thus, the bulk material reaches the discharge station. An idler configuration similar to that for the shaping is used for opening the belt. Unique feature of this solution: It brings together the advantages of open troughed belt conveyors and closed pipe conveyors. "Our U-shape conveyor can be used in all industries, especially when large grain sizes have to be transported or the available space is not sufficient for an open troughed belt conveyor," says the BEUMER expert.

Troughed belt conveyor or pipe conveyor?

"With our belt conveying systems, we design comprehensive system solutions for the mining and cement industries or in port terminals," says Karl Filarowski. The troughed belt conveyors allow high mass flows even in case of heavy and robust materials. Their open design makes them suitable for coarse materials and very large volumes and permits to skim off the transported material in the rare event of overfilling. The simple design of these conveyors means they can be delivered and installed quickly and are also easy to maintain," explains Filarowski. The proven components such as belt, idlers, pulleys and drives make sure that they work reliably and, depending on the depth of troughing, they can also be designed as curved overland conveyors.

The pipe conveyors on the contrary present other specific advantages. The idlers form the belt to a closed tube protecting the material transported against external influences and the environment from emissions such as material loss, dust or odours. Partition plates with hexagonal cuts and idlers in staggered arrangement keep the tube shape closed. "The pipe conveyors allow the implementation of narrower curve radii and larger angles of inclination than troughed belt conveyors," says BEUMER expert Filarowski. The system requires little space and can be adapted to the topography of the terrain. As a consequence, the number of transfer towers and power supply units is reduced and the owner saves money. Either the troughed belt conveyor than the pipe conveyor permit a simultaneous transport of different materials in the upper and in the return strand.

U-shape conveyor instead of pipe conveyor

The closed pipe conveyors are suitable to protect fine material such as ash and ore concentrates or even household waste from external influences. The higher the requested conveying capacity has to be, the larger the whole system has to be dimensioned. The diameter directly affects the width of the conveyor and the minimum curve radius. What happens if the required space is missing? "We offer our U-shape conveyors in different versions. This depends on the respective application," says Filarowski. The P-U-shape conveyor offers the functionalities of a pipe conveyor, but is also able to transport coarse materials. In this version the upper strand is formed to an U, while the return strand keeps its tubular shape. "This saves space and prevents loss of material," explains Filarowski. This solution permits the owner to benefit from a significantly higher transport capacity with the same belt width compared to the pipe conveyor. Filarowski mentions an example: The pipe conveyor is a

volumetric system. If we consider the starting basis of a tube diameter of 150 and a belt width of 600 mm, the conveying capacity amounts to 100 cubic metres per hour. The P-U-shape conveyor achieves a capacity of 170 cubic metres with the same size. "Thus we can offer the customer an approx. 70% higher conveying capacity".

Often the owners think in advance to provide the running line with several feeding points. The closed pipe conveyor should open and close again at every single point. This requires additional mechanical components which cost money. "Our U-shape conveyor is open at the top and can therefore transport more material. A special cover can also be used to prevent the material or odours from escaping".

U-shape conveyor instead of troughed belt conveyor

The T-U-shape conveyor, on the contrary, is suitable in case the owner relies on the advantages of a troughed belt conveyor, but has to consider the specific topographic conditions. This happens if for example narrower curve radii are required or if there are line sections, which require a thinner construction. This way it is for example possible to install a troughed belt conveyor for the routing outside the tunnel, and in the tunnel itself the design of the conveyor changes to a T-U-shape conveyor. "Compared to a troughed belt conveyor with a capacity of 500 tons per hour and a belt width of 650 mm, it is possible to achieve the same capacity with a T-U-shape conveyor saving 150 mm of space," describes Filarowski. "The bigger the troughed belt conveyor, the bigger the related space saving".

From the pipe conveyor to the U-shape convey or

But what can be done if a plant is already using a pipe conveyor and the system does not achieve anymore the required capacity due to capacity expansions? "We are able to retrofit existing pipe conveyors to U-shape conveyors," promises Filarowski. At this regard, the partition plate cut-out in the upper strand is enlarged as required to enable the optimal use of the existing conveyor width. The staggered arrangement with six idlers can be changed to five idlers allowing the belt to open automatically and form an U. At the same time the hexagonal cut-out in the return strand remains. Thus the belt runs in tubular shape and avoids loss of material on the running line. "For the modification we can re-use the existing components such as idlers and conveyor belt," says the BEUMER expert. If an owner relies on a pipe conveyor and nevertheless wants to be prepared for future capacity expansions - with little space in the plant - BEUMER technicians can already consider an optional modification to an U-shape conveyor during the project planning.

We had exactly this case with an owner who intended to transport alternative fuels with a pipe conveyor. "We designed the steel structure like that of an U-shape conveyor with corresponding partition plates cut-outs in the upper strand," reports Filarowski. The technicians additionally mounted adjusting pieces with idlers to ensure the tube shape of

Figure 1: The U-conveyor: The idlers form the belt into a U.

Figure 2: The U-shaped conveying solution is suitable for use in the

Figure 3: There, this conveying solution supplies the calciner with alternative fuels.

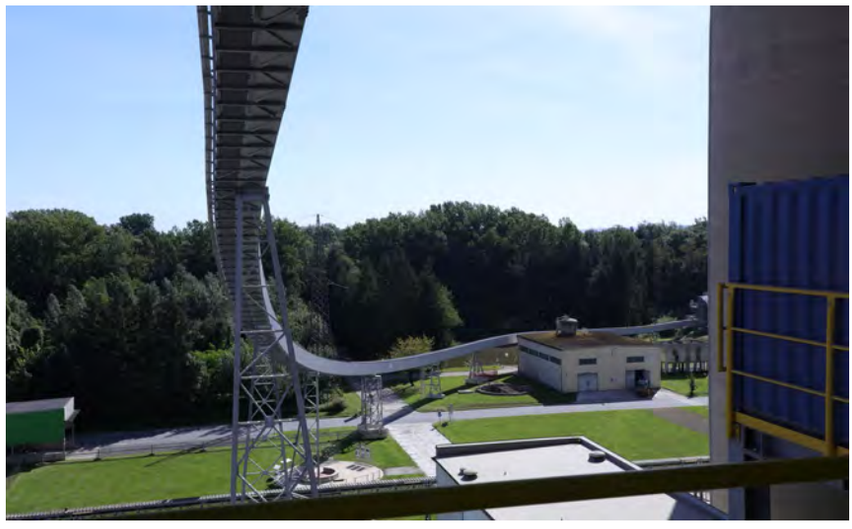

Figure 4: With the U-conveyor, tighter curve radii than with a troughed belt conveyor and higher mass flows than with a tube belt conveyor can be implemented.

Figure 5: The conveyed material is protected against external influences such as wind, rain or snow - and the environment against potential material loss and possible emissions.

the pipe conveyor at the upper edge of the u-shaped cut-out. In case of modification, these adjusting pieces can be removed and the system retrofit. Thus a thin design with corresponding curve radii is kept. Special covers can be optionally mounted.

The ability to plan for a long term

"Our customers must always be able to react in flexible way on the market," knows Karl Filarowski. "Higher capacities because of an increase in requirements, or modified products require future-oriented and tailor-made concepts to be successful in the long run".

U-shape conveyors are therefore a safe investment, which can be easily integrated in an existing infrastructure.

BEUMER Group is an international leader in the manufacture of intralogistics systems for conveying, loading, palletising, packaging, sortation, and distribution. With 4,500 employees worldwide, BEUMER Group has annual sales of about EUR 950 million. BEUMER Group and its group companies and sales agencies provide their customers with high-quality system solutions and an extensive customer support network around the globe and across a wide range of industries, including bulk materials and piece goods, food/non-food, construction, mail order, post, and airport baggage handling. For more information, please visit: www.beumer.com.

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BEUMER Group: High-capacity packaging system handles films made of recycled material:

Complying with the law in packaging matters

Many packaging system owners, who fix and package goods ready for dispatch by using stretch film for transshipment on pallets are unsettled: Since the beginning of 2019 the new packaging law has been in force. Its aim is to avoid waste and increase recycling. Therefore, many films will contain more recycled material in future, which might considerably change their properties and also the handling. Can the owners of packaging systems continue with the use of their systems? Yes, says BEUMER Group. Your high-capacity BEUMER stretch hood A packaging system processes these films as usual and in a very reliable way.

"At the centre of the packaging lines we install with our customer's is the high capacity BEUMER stretch hood A packaging system," says Jörg Spiekermann, sales manager for palletising and packaging systems in the Consumer Goods area of BEUMER Group. No matter if it is washing machines, paint buckets, barrels or champagne boxes on pallets: the system always covers each product efficiently with a highly elastic stretch hood. This is also possible if the content shall not come in contact with the surface of the container for example. This is the case for lubricants and adhesives, antifreezes, resins, brake cleaners, as well as for bulk material such as pellets. The inside of the barrel or of another container is lined with a film hood. "During transshipment and outside storage, the merchandise is protected reliably against environmental influences such as sunlight, dirt and humidity," Spiekermann explains. "Furthermore, the packaging ensures that the products remain stable on the pallet on the loading space of the trucks without moving."

The BEUMER stretch hood A packaging system is able to package reliably up to 110 pallet stacks per hour with a stretch hood made of conventional films, having film strengths reaching between 40 and 150 micrometers. But what about thinner films or films which are more rigid, smoother or less elastic? These are the questions posed more and more by the owners of packaging systems since the new packaging law came into force at the beginning of 2019 changing a lot of things.

More recycling in Germany

When it comes to recycling, the multiple properties of plastic become a problem. In Germany, for example, more than 90 percent of all plastic waste is collected again, but only 43 percent of it is recycled and then reused. Well over half, 55 percent in total, end up in incineration plants and are used to generate electricity and heat or are processed into alternative fuels.

In order to change this, the manufacturers of consumer goods, building materials or furniture as well as the film producers have to change their way of thinking. Currently, most of the plastic is extracted as primary material from crude oil. In the future the parts of recycled plastic should perceptibly increase: this is what politicians and recycling companies in the European Union want. "Our target is less plastic packaging and more recycling. To achieve this target we need all parties involved: manufacturers, trade and consumers," says Federal environment minister Svenja Schulze. With the new law, we in Germany will recycle considerably more than before." For example, the recycling rate for plastic packaging will increase from 36 percent to 58.5 percent and to 63 percent by 2022. This means that the owners of recycling systems must be able to prove that they recycle an appropriate part of the packaging they accept. The new packaging law is mainly intended to prevent waste and increase recycling.

Recycling is efficient

For the film manufacturers who supply BEUMER Group, this is an economical solution to recycle their own production waste. The old material can be processed into regranulate and fed back into the production cycle. The utilisation of ones own regranulates permits the manufacturer to conserve resources, reduce emissions, minimise waste by recycling and avoid environmental impacts. Ideally: their quality can be even compared to that of new material. "In this case, nothing changes for our packaging system," emphasizes Spiekermann.

However, the film properties can considerably change due to the portion of recycled material. The BEUMER sales manager mentions a film manufacturer, who relies simultaneously on high quality and less material. "The stretch films are therefore thinner but more efficient than conventional films," he says. Thus, the packaged products are secured in optimum way and at the same time less material is used. The result is a higher production throughput and less exchange of film rolls at the machine. Spiekermann: "We have thoroughly tested the film with our BEUMER stretch hood A

packaging system, which handles these thin films in a safe and reliable way".

Together with the film manufacturers, the BEUMER experts have performed tests and analyses with various films in their in-house R&D centre. "We have noticed that films with a high portion of recycled material behave like conventional plastic material during processing," says Spiekermann.

Clean packaging as usual

So everything is clear? "Yes", the BEUMER expert is sure. "We welcome the new packaging law. After all, sustainability is part of our corporate philosophy." Thus, the users can continue to use the high-capacity packaging system to cover detergents, paint buckets, barrels or champagne boxes on pallets with a highly elastic stretch hood. The film fits very tightly, 'like a second skin', to the entire stack and thus, ensures the necessary stability even with the new films we tested," Spiekermann describes.

Photo 1: The owners opt for the BEUMER stretch hood A packaging system to protect the goods from dust and pests.

Photo 2: The machine is easy and safe to operate.

Photo 3: The palletised goods can be forwarded to the packaging system through the roller conveyors.

Photo 4: The pallets are packaged in short cycle times. The machine covers the products with a highly elastic stretch hood.

Photo 5: If the BEUMER stretch hood A packages the pallets for high-bay storage systems, the pallet base remains unwrapped, so that the forks of the fork-lift truck won't damage the film.

THE GAMBAROTTA GSCHWENDT HIGH CAPACITY SURFACE FEEDER "TIREX"

The Gambarotta Gschwendt high capacity surface feeder "TIREX" comes from the need to speed up the transport process, by avoiding civil works.

In many industries bulk materials are entering the plant by trucks, dumpers or front loaders. The material can be clinker, alternative fuels, coal, gypsum, limestone, clay, fertilizers or any other kind of bulk solid material.

The common approach is to unload the material on the ground and then load it onto a hopper. This process is inefficient and needs time and therefore costs.

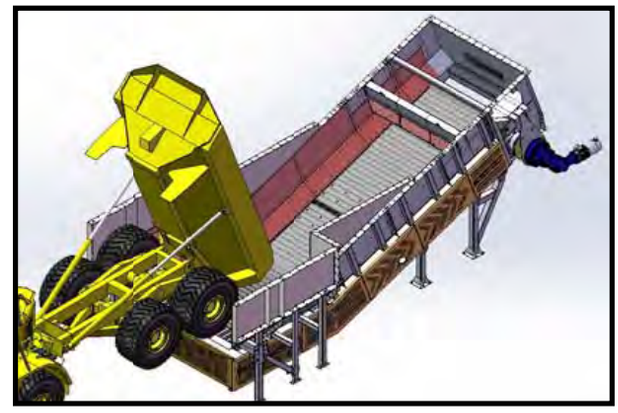
The Gambarotta Gschwendt TIREX surface feeder is designed to improve these steps:

- receiving the bulk material from trucks or dumpers directly;
- storing it with a capacity from 30 up to 400 m^3;
- delivering the material to the next conveyor, usually a belt conveyor or bucket elevator;
- conveying capacity from 5 up to 2000 MTon/h;
- c-c distance up to 25 meters;
- mobile version equipped with undercarriage available as well.

Key points of Gambarotta Gschwendt Tirex:

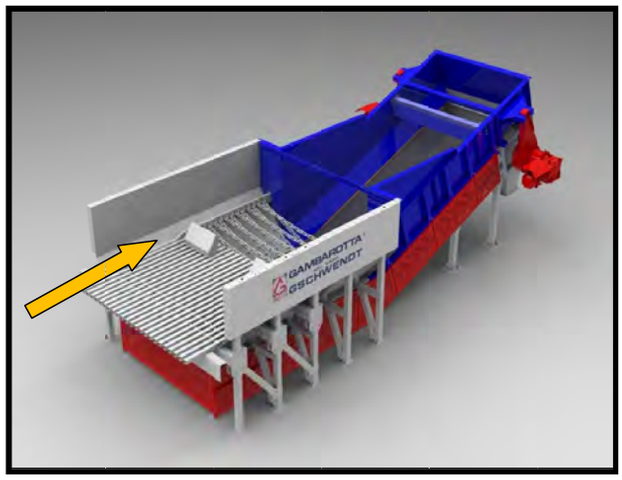
- Strength of the equipment, designed for Mining, Cement and Steel industries;
- Environmental friendly, minimizing the spillage in the unloading area and having the option to be completely closed and equipped with a bag filter for the dedusting during the discharge;
- No dedicated civil works are needed: in comparison with Apron Feeders and other type of conveying systems.

The new Gambarotta-Gschwendt high capacity TIREX is a robust machine with a strong structure able to withstand the typical hard work encountered in Mining areas and heavy Industries. This special conveyor has been specifically designed for efficient discharge operations, with the possibility to adjust the flow rate of the conveyed material on demand optimizing the process time.



Strong Design for Great Performances

The main structure of the Gambarotta Gschwendt "TIREX" is suitable to withstand both large material unloading, including material hurts, and the weight of the Trucks which are placed on the back side of the machine for discharge operations. Two wheel stoppers are installed on a service platform with the aim to keep the Truck stand still, allowing the material to drop on the conveying pathway in total safety.



The service platform can also be designed in order to accept up to 3 Trucks, operating on the three sides of the Surface Feeder at the same time.

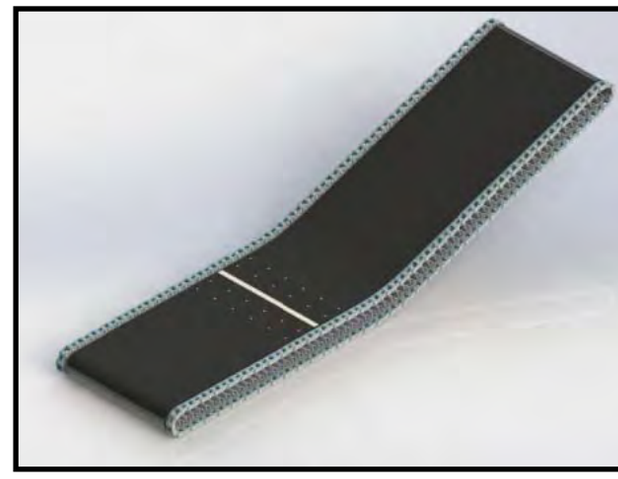
The big inlet steel hopper is lined with high-resistance anti-wear material and can include, depending on the TIREX model, one or more service chutes, specially developed to slow down the dropping material before reaching the transport group.

Eco-friendly

A de-dusting cover placed on the overall top side of the Gambarotta Gschwendt TIREX guarantees no dust leakage during the discharge and conveying operations, keeping the outer area clean and totally safe for workers.

This cover includes a tall plastic curtain on the inlet section allowing tipper Truck to unload the material without any leakage, avoiding the dust coming out.

On top cover a bunker filter system is placed for de-dusting together with a top service platform for maintenance operations.



Reduction of leakage in conveying phase

The Gambarotta Gschwendt TIREX transport system consists of a train of high quality steel plates, connected to a high strength steel chain on both sides covered by a strong shear proof rubber bolted on the plates. Basically, the transport area is composed of a straight horizontal track, where the material is initially discharged, followed by an inclined track in which the material is conveyed to the outlet chute. The width of the transport group goes typically from 2.6m to 4m and buffer areas are even customizable. A layer limiter is properly positioned on the inclined section with the aim to level the material and to control the flow rate.

No civil works

The overall structure does not require any special civil work, but only a solid concrete base and a ramp for the Truck arrival. The machine has been designed with the option to be moved from one place to another without any permanent fixing to the ground. This feature makes the Gambarotta Gschwendt TIREX conveyor extremely versatile and flexible, a feature very appreciated by the customers. The whole conveying system can be supplied also according to ATEX requirements when needed.

Drive Unit

The hauling is provided by a reliable and powerful Variable Frequency device system, placed on the drive of the Surface Feeder. Depending on the required machine capacity, the drive unit can be supplied with single or double gear box reducer and the feeding speed can always be regulated according to the Customer's needs. The drive group, with their own powerful planetary gearboxes, can withstand efficiently the peaks of power during the transportation and guarantee continuous work and high reliability of the whole conveying system. The outlet side of the Surface Feeder includes a discharge chute made in anti-wear resistant steel.

Main technical features and options

- High Strength Structure
- Completely customizable
- Suitable for any kind of material, even abrasive or big sizes
- No civil works required
- Mobile construction for extreme versatility
- De-dusting cover and filter system
- Equipped with under carriage system
- Anti-spillage platform underneath Truck area
- Different Storage Capability
- High performance VFD drive system with single or double motorization
- Weighing version
- ATEX version

The Group is always available for any questions or need that may arise while reading this article.

Regards,

GAMBAROTTA GROUP

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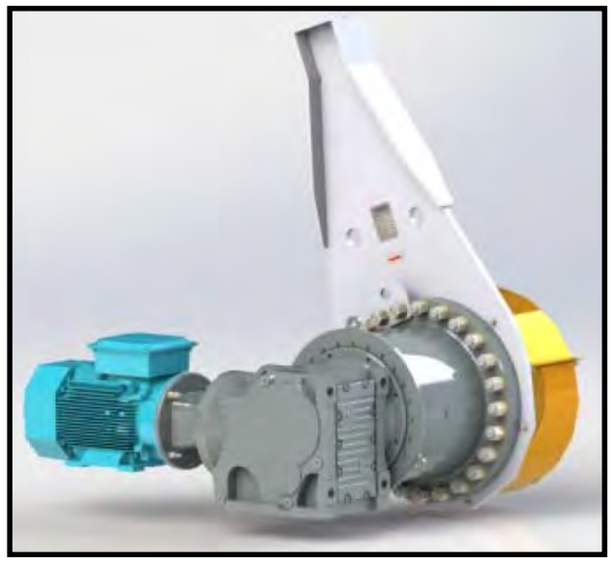
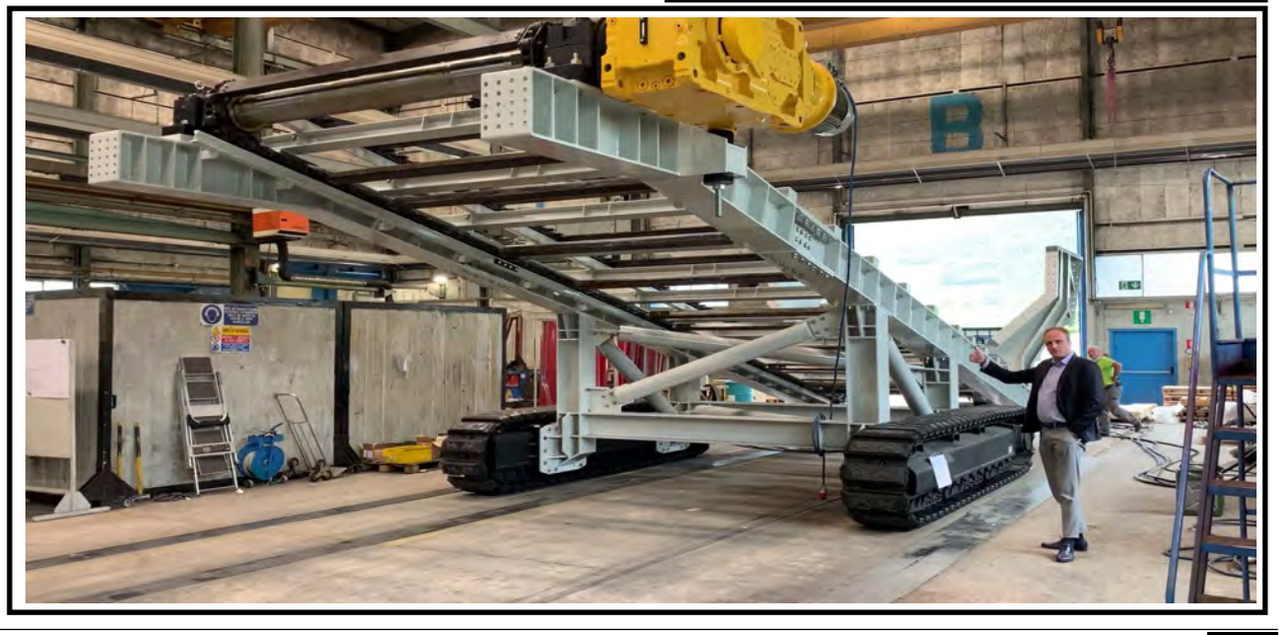




CHOOSE AN UNLOADER BASED ON VALUE, NOT COST

It is a false economy to select an unloader without considering operational parameters and performance, through-ship efficiencies, and through-life costs; value-for-money should always be the aim, Per Karlsson, President, Siwertell AB, Bruks Siwertell Group, explains.

We all want value for money, but this is rarely just about the cheapest price. Our equipment lasts for decades, so our aim is to ensure an optimum long-term investment by helping an operator choose a system that best matches its needs.

Many customers, when designing or buying a new unloader, or in fact the whole import terminal, still consider price as the main factor in their decision-making process. Price is important, but if you only look at price, you stop looking at value, and to achieve the best long-term investment we need to look at value. There is a lot to be gained from understanding what a product can ultimately deliver to a business.

Knowledge is key; without accurate information available about different technologies – which might be real game-changers, offering completely new possibilities and directions – operators are condemned to lose money. This is because they miss out on the possibility of developing and lifting operations to more profitable levels, or designing a completely new, optimized terminal from the outset.

LONG-TERM PROFITABILITY

We have developed a value calculation method that enables us to accurately simulate the impact of different technical solutions on the long-term profitability of an operator's terminal. The model is based on combining the total cost of investment in relation to the unloader, including factors such as the cost of the

jetty, conveying system, and wider operational figures such as demurrage, personnel, energy consumption and material handling waste, for example, spillage.

The cost of a state-of-the-art Siwertell screw-type ship unloader, of which the largest model can offer continuous rated capacities of up to 3,000t/h, is often higher than the cost of a bucket chain, pneumatic unloader, or a grab/mobile harbor crane. However, as soon as you compare its higher capacity and efficiency against the need to purchase two or three of the other types of machine to achieve the same work rate, this is where operational profitability really starts to take a hit. It is also where the value calculation model can be a powerful tool to help demonstrate how an optimum equipment arrangement can generate the best results in terms of capacity, efficiency, and profits.

Calculations are also considered at such an early stage that an operator can access the commercial feasibility of options before any investment commitments are made. This can save costly project changes further down the line.

DIFFERENT NEEDS, DIFFERENT SOLUTIONS

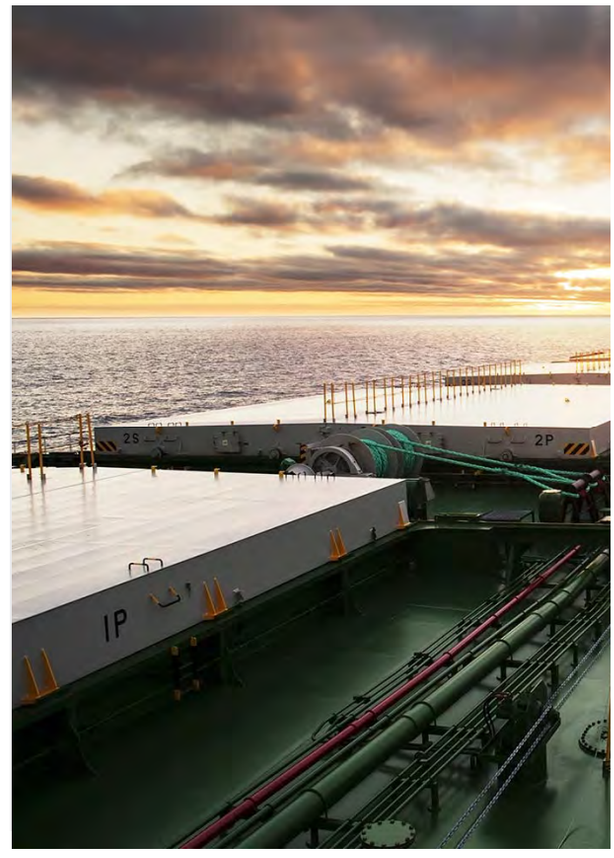
For all projects, we work together with our customers to find the right and best combination of equipment. We also have our own design and project management department and are often able to offer reference visits for customers to see a machine or terminal in operation.

Projects tend to be divided into two main categories: the optimization of an existing terminal, and the construction of a completely new one.

In the case of terminal optimizations, like other projects, the value calculation method enables us to accurately simulate the impact of different technology options on the long-term profitability of an existing terminal. The modeling takes into consideration all investment and operating costs, the benefits of different equipment and how best to integrate it into existing infrastructures.

FASTER MATERIAL TURNAROUNDS

Projects within existing terminals are typically capped to keep capacity at the same level, because of limitations in downstream conveying systems. However, a clear market trend, in new cement, fertilizer and grain projects in particular, is to build up capacity on the jetty,



and within the terminal. This is to maximize the speed at which material can be discharged from a vessel and then transferred to an onward receiving system, minimizing the time the vessel stays at the jetty and any dry bulk material spends in storage. The faster the terminal moves material on from storage, or bypasses it altogether, the quicker its financial turnover.

In these scenarios, the value calculation model proved

to be an unbeatable tool, simulating alternative options and effectively showing the impact of different solutions and their combinations. Again, all this happens at such an early stage, when no money has been invested, and all options are still open. It genuinely delivers the power of knowledge, improving the understanding of different choices to enable decisions based on fact not fiction.

OPTIMIZED FROM THE OUTSET

For customers building a complete terminal, the value calculation model is an even more critical tool because it can help the customer optimize the entire terminal environment right from the beginning. For these projects, again we consider all factors, because the size of the jetty, material transportation logistics, personnel requirements, and capacity, all have a major impact.

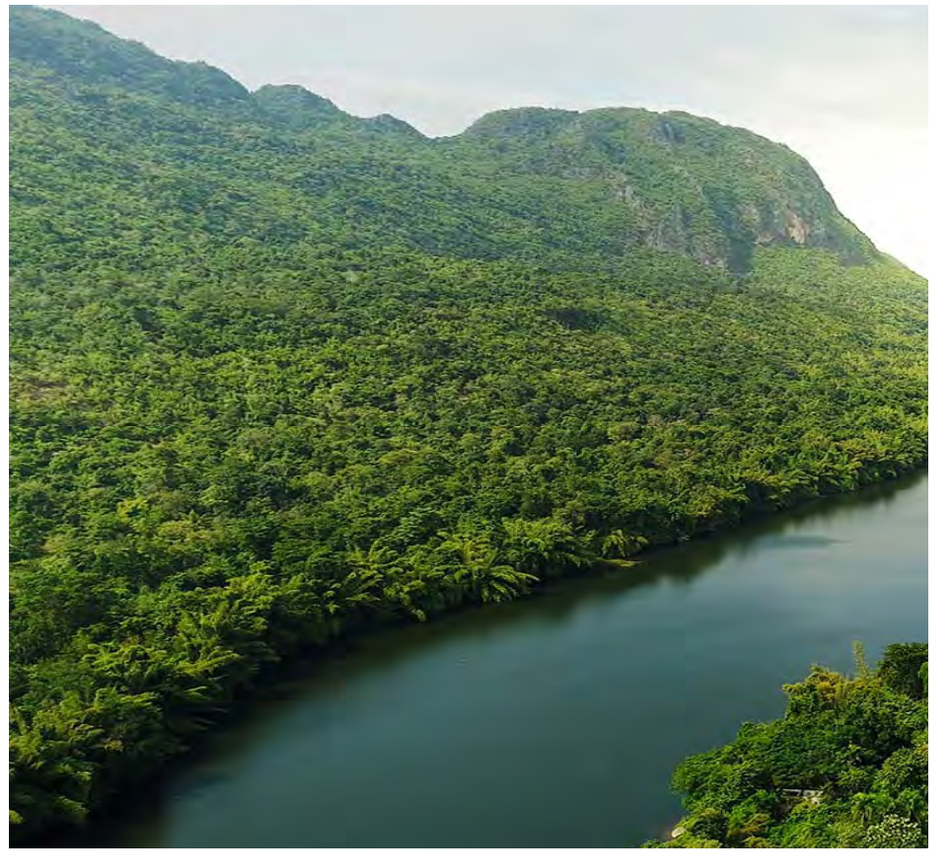
Just taking jetty costs, for example: as higher capacities are needed, dry bulk material handling systems like cranes and continuous unloaders must either get larger or more numerous – in both cases, adding weight or traffic to the jetty. Jetty reinforcements to accommodate heavy bulk handling equipment can easily correspond to fifty percent of the cost of the actual equipment. Therefore, reducing any additional machine weight is advantageous for customers as significant savings can be made in terms of the need for quay reinforcement work – but also, a proportionately higher-throughput machine can be selected for a given strength of quay, delivering impressive returns on investment and securing capacity for any future growth.

THROWING MONEY AWAY

I should also mention a third project group, those operators that run their traditional machinery day-in and day-out, never even realizing that their terminals are quite literally throwing money away, in inefficiencies and wasteful practices so normal as to be regarded as 'acceptable'.

We have had many cases where we have been able to show the customer how an existing system, based mainly on several low capacity grab cranes, operated by 50 to 100 personnel per day, can be converted to a high-capacity terminal operated by just a few personnel and one high-capacity machine; paying the whole investment back in just a few years. These 'sleeping' customers need to be woken up to the amount of money that they are saying goodbye to.

There is an increasing need to upgrade operations that take one to two weeks to unload a vessel with grab or mobile harbor cranes, which have a cargo spillage rate of one to two percent, leading to huge material losses and unacceptable levels of environmental damage. There is technology available, like an enclosed high-capacity screw unloader, which can not only unload the same vessel in two to three days, saving up to USD 20,000 a day in vessel costs, but also saves all the material losses from spillage and keeps the jetty clean and dust-free. Furthermore, the shorter unloading time, the greater the possibility that the terminal has to increase its annual through-put and by that, also increase the profitability of the terminal itself



MILLIONS IN SAVINGS

We have been able to show that we can easily make USD 2-3 million worth of operational savings per year depending on the annual volumes and existing equipment of the terminal. This is especially relevant to those terminals who have been satisfied, or have accepted existing set-ups and operational cost levels, because they have never had enough factual information to challenge them. Until now, it has been difficult for these existing terminals to develop a plan to improve their profitability, but we can now offer this and show different options with our value calculation model.

An additional feature in the model is that we can offer customers financing with very low interest rates and long pay-back times. With these favorable conditions, we have even been able to show that the investment generates the money to pay back the financing, and also generates a positive cashflow, shortly after the operation's start-up.

SUSTAINABILITY BUILT-IN

Aside from the financial gains that can be achieved through our technology, we must stress the environmental ones. We have mentioned the costs, both financial and environmental, associated with waste from cargo spillage, but all dry bulk handling equipment should achieve long-term sustainability. It must prevent dust emissions, as well as spillage, and offer the most efficient operations over the course of its service life.

Our totally enclosed Siwertell unloaders are among the most environmentally friendly shore-based bulk handling systems available. Because of their rigorous environmental credentials, they are often installed in environmentally sensitive sites and can be used at the heart of populated areas.

We can demonstrate the sustainability of our solutions; they not only pay for themselves in a few years, but continue to deliver better value and efficiency to the operator over their lifetimes. It makes good business sense to consider all options from the outset.

Any investment starts with needs

Value is influenced by many factors, but it starts with what an operator actually needs. The most important factors that Bruks Siwertell takes into consideration when designing new dry bulk handling equipment for a customer are as follows:

- **Sustainability of operations**
- **Desired through-ship capacity**
- **Terminal intake volumes**
- **Typical vessel types and sizes that will need to be accommodated**
- **Quay height above the waterline, tidal ranges and conditions**
- **Rail limitations in relation to load**
- **Existing equipment locations such as rails, conveyor, roads or other machines that share the jetty space**
- **Type of materials to be handled and if several materials need to be handled by the same machine.**
- **Properties of materials, for example, ATEX-rated, abrasive, corrosive**

The only way to really know what value operators are looking to add to their businesses is to work closely with them. This ensures the best results in terms of meeting performance expectations, and long-term profitability and sustainability.

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CEMENT PLANT OPERATIONS & IMPORTANCE OF PROCESS OPTIMIZATION

By : RAJNI KANT MANAWAT

ABSTRACT

Setting up the most advanced cement manufacturing facility does not, on its own, guarantees profitable operations. In order to ensure its profitability and make it maximum cost efficient, cement manufacturing facility constantly requires sound operational practices besides advanced technological design. All the stakeholders are striving hard to ensure best operational practices but this approach is a continuous exercise. Undoubtedly, Cement Industries are facing couple of challenges. But other than saving costs, we have to be mindful about being energy efficient and using a robust and reliable solution to ensure best operational practices in the cement plants. To offset the challenges in the area of energy management and ensure energy efficiency in the cement industry, the Companies are employing cutting edge technology solutions and also emphasising on operations audit for a diagnostic review to see what's wrong or what kind of improvement can be done with production/operations.

INTRODUCTION

In this regard**,** plant operational studies are an efficient tool to identify the areas of energy conservation & plant optimisation. The most important of those areas are PROCESS CONTROL and PROCESS OPTIMISATION. Other potential areas could include preventive maintenance, raw-mix & fuel-mix optimization, dust emission reduction etc. The studies have also identified the potentials for increasing production & reduction in energy consumption and in planning their investment priorities for their plant's modernisation.

There is a regular practice in cement plants to ask a process engineer to explore the "big picture" in production/operations and also for a diagnostic review to see what's wrong or what kind of improvement can be done in production/operations.

In this paper, author has shared his experiences as he remained involved in the field of PLANT OPERATIONS and has specifically dealt with process optimisation for enhancement of plant productivity and savings in energy consumption through Plant Operations Audit.

WHAT IS PLANT OPERATIONS AUDIT & ITS OBJECTIVE?

It is an effective way for enhancing the productivity and minimising energy consumption. It is the first step in conducting a general/objective assessment of a production/operations area. It is also known by many other names, such as diagnostic review, general survey, operations exam, etc. It can be done as a stand-alone project, but is usually done as a part of a larger project, such as reducing costs or improving productivity. The methodology is based on a judicious evaluation of the current aspects that control the operating environment. The following are the objectives of a comprehensive plant operations audit:

- Optimization of the output.
- Reduction in Specific Energy Consumption.
- Trouble shooting of mechanical, electrical and process systems.
- Dust abatement.
- Quality assurance.

WHEN OPERATIONS AUDIT SHOULD BE DONE

An OPERATIONS AUDIT should be done whenever important changes of a general nature are required. These important changes may include; a plant-wide cost reduction effort, the installation of a productivity program, thermal energy efficiency program, electrical energy efficiency program, chemistry and operations strategy, changes in the management information

system, the introduction of new product, new plant acquisitions, prior to relocations of plants etc.

TOOLS REQUIRED TO CONDUCT OPERATIONS AUDIT

A variety of tools are used by Process Engineer to conduct the audit are as under: -

1. Conducting audit as a project, with a written objective, defined tasks, expected deliverables, listing of work steps and its schedule.
2. Conducting meaningful interviews at all level of the organization and drawing clear, concise findings and conclusions in document.
3. Gathering data necessary for the conduct of audit, analysing data and also obtain realistic data from key departments.
4. Undertaking operations tour and related field trips for gathering important general information with product flow charts, equipment location drawings.
5. Recording observations and answers to key questions during operation tours and related visits for confirmation and verification at a later date.
6. Obtaining Organisation charts, job descriptions, budget plans, financial statements, operations records, and written operating procedures during conduct of the audit.

STEPS FOR PROCESS AUDITS

A. HISTORICAL EVALUATION

Plant operating and shutdown data need to be collected for the past two or more years. The reasons, duration and frequency to identify the causes in order of severity of the stops are analysed and their classification:

- Process/operation
- Mechanical
- Electrical
- Instrumentation
- Refractory

Plant performance is also analysed by department. Often, the best performance of a department does not occur at the same time as the best performance of the plant as a whole. If we choose the best throughput times for each department and make them occur at the same time, the throughput of the plant will show a significantly higher level of efficiency. Attempts are being made to make them happen at the same time, which is not an unrealistic goal, as the departments had indeed done so at that level in the past.

Through a systematic approach, all departments are made to function at the highest possible level, increasing overall equipment effectiveness.

B. BENCHMARK

Modern dry-process cement plants with an efficient grinding and pyro processing system, typically consume less than 680-700 KCal/Kg-Clk of thermal energy and 65-75 KWH/Mt of electrical energy. Older plants with inefficient systems, combined with operational and maintenance failure, tend to have much higher energy consumption. Based on the specific plant conditions and requirements, a general benchmarking is conducted to set goals. Plant audits evaluate the performance of a cement plant against the appropriate benchmark. After a detailed evaluation, recommendations are made for optimizing the plant at three levels of capital investment:

- Level 1: no or very little capital investment, making adjustments to operating protocols and improving maintenance.
- Level 2: minor capital investments, with ROI within 24 months.
- Level 3: Large capital investments, with ROI within of 3 to 5 years.

C. THERMAL ENERGY

- A successful thermal energy management program requires energy auditing as its one of the important procedures. The possible approaches of heat recovery from some major heat loss sources by making a detailed analysis of kiln, raw mill, coal mill and grate cooler. To improve the production process, increase the productivity, decrease energy consumption of the plant.
- Thermal energy is related to the pyro processing system. For a clinker production of 1 million tons per year, the savings of 10 kcal/kg-cl would result in an annual savings of approximately $92,000.
- (1,000,000 TPY * 1,000 kg/year * 10 kcal/year * $ 60/t-coal
- (6,500 kcal/kg of coal/1,000 t of coal)
- Another significant advantage in most cases is that the reduction in heat consumption can be used to increase production.

Potential savings can also be derived from:

- Cooler optimization
- Stop leakages
- Optimization of operational strategy

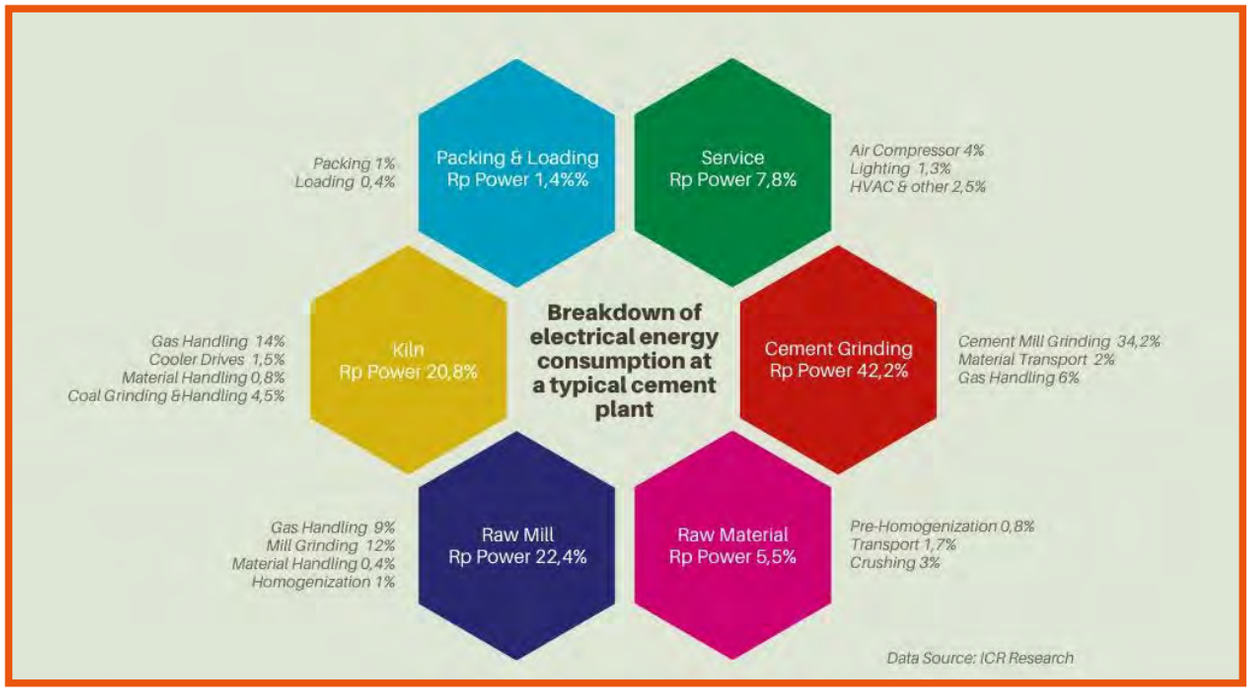
D. ELECTRICAL ENERGY

The main aim of the energy audit is to provide an accurate account of energy consumption and energy use analysis of different components and to reveal the detailed information needed for determining the possible opportunities for energy conservation.

- Large fans and mill units are the main consumers of electrical energy.

o Fans: Fan power is linked to specific heat consumption and many operating parameters. Optimizing these parameters will help reduce the fan's power consumption.

- Mills: In the case of ball mills, optimizing the mill load and maintaining the internal parts of the mill will minimize energy consumption. As for the vertical roller mills, the inspection of the internal parts of the mill and the separator, and the adjustments in the operation will bring improvements, both in energy consumption and in increased production.



E. CHEMISTRY AND OPERATIONS STRATEGY

Problems related to clinker quality are addressed by evaluating chemistry and operating parameters.

WHAT SHOULD BE PLANT OPERATIONAL APPROACH: OUR PHILOSOPHY

Plant operational approach is another way of cost reduction. The objective is to optimise the operations to achieve the maximum productivity. A few examples of the optimisation measures are given below:

1. The false air infiltration in the system to be kept as low as possible.
2. The required operating parameters like temperature, pressure, etc. have to be maintained for a particular equipment. For example, at the outlet of the raw mill, the material temperature is to be maintained as 90-100oC.
3. In case of cement production in ball mills with high fineness i.e. more than 350 m2 / kg, suitable grinding aid may be used.
4. A kiln burner operation may be optimised to achieve the desired shape and intensity of flame with the minimum primary air.
5. Kiln shell cooling fans may be operated if the kiln shell temperature exceeds a certain value say 250oC.
6. The clinker cooler operation should be optimised to achieve the maximum secondary air temperature and tertiary air temperature.
7. Idle run of the equipment must be prevented particularly during start up and stoppage periods. Similarly, the feed interruptions/ reductions must be avoided. Plant operational audit may also be carried out on regular basis.
8. Optimisation of the output, Reduction in specific energy consumption
9. Trouble shooting in electrical, mechanical and process systems, Dust abatement, Quality

assurance.

10. Change of Mindset from conventional practices & Full utilization of Equipment's Capacity.
11. Enhance mining life by using low grades mines/ Mines reject and high MgO
12. Enhance the Pond-ash consumption by employing Furnace.
13. AFR usage implementation, waste available from nearby regions.

WHY SHOULD CEMENT PLANTS ADOPT MODERN PROCESSING TECHNIQUES

The main objective for adopting the modern processing techniques in cement production are as follows: Improve capacity utilisation, Energy savings, Improved environment, use of waste heat, use of by-products, wastes, alternative raw materials and fuels, Meeting market requirements in terms of quality and types of cement i.e., Quality assurance, lowering investment cost and thereby reducing cost of production.

CASE STUDY:

ABC CEMENT LIMITED, established a Greenfield cement plant. It has a Single kiln equipped with 6 stages preheater and pre-calciner supplied by FLS. The kiln is 4.35 m ID x 67 m long with rated capacity of 4500 TPD clinker.

The plant is commissioned in the FY2010. The captive mines for this plant are spread in the area of 502 Hectares. Geologically, the different litho-units encountered in the area are black cotton soil, clay/Gravel, light grey to dark grey limestone, greenish siliceous limestone and quartzite. Limestone of grey and dark grey coloured, fine grained, massive and bedded in nature occur in folded and deformed structure. The upper beds are fractured and joints which are the avenues for the intrusion of the Gravel /clay and soil from the overlying layer are frequent. Gravel mixed with smaller size limestone is difficult to separate at mine face in mechanized mining operations. Increasing the production of the kiln will bring in the additional capacity as well as the saving in thermal and electrical energy consumption. The production capacity of the kiln can be maximized by optimizing the Specific Volumetric Loading of kiln. These in-turn depend on the burnability of the raw-mix which is in turn the function of chemical, mineralogical composition, the fineness and homogeneity of the raw mix.

The kiln of Dia. & Length resp. 4.35m X 67m is designed at 4500TPD and with effective volume of 821 M3 however a sustainable volumetric loading of 08 TPD/M3 would result in a maximum achievable clinker production of 6500 TPD. The kiln parameters and evaluation of the kiln tube is tabulated in the table 1. From this data it is clear that there is potential to increase the kiln output by increasing the filling, specific volumetric loading and thermal loading. This can be achievable by improving the raw mix burnability, consistency and also need to be examined the capacity of the feeding equipment, grinding mills and other ancillary equipment to unleash the possible output from the kiln.

The study is conducted and modifications were implemented to achieve the maximum potential output through optimization of raw meal and streamlining of operational process parameters.

PROBLEM

Whenever plant operating more than 4500 TPD leading to disturbance in the kiln, dust circulation, snowman formation, flushing of clinker from Kiln-cooler system and ultimately leading to non-compliance of the clinker quality. The yellow core is observed in the clinker continuously. The coating formation in the kiln burning zone is also observed.

STUDIES CONDUCTED

1. Optical Microscopic Studies of the Limestone Samples from Different Benches of Mines

To understand the mineralogy, grain size of constituent minerals, groundmass and their micro-structures of limestone samples have been collected from all the benches of the quarry. A detailed optical microscopic study of the samples has been carried out at laboratory.

The major mineral constituents, accessory minerals, shape of the mineral grains and their occurrence along with groundmass, modal composition of minerals and granulometric analysis have been carried out for all the samples collected. Numerous micro veins of euhedral calcite grains are present in the rock. The major mineral constituents are calcite, quartz and dolomite. Accessory mineral is iron oxide. Traces of mica are also observed. Subhedral calcite grains with rounded grain margins are uniformly distributed in the rock. Margins of calcite grains are partially stained. Subhedral to anhedral quartz grains are also uniformly distributed in the rock. Grain size variations in the quartz are too

Table 1: Kiln Parameters and evaluation

KILN PARAMETERS	DESIGNED VALUE	ACHIEVED VALUE
CAPACITY(TPD)	4500	6568
LENGTH (M)	67	
DIA (M)	4.35	
SPEED (RPM)	5.5	
SLOPE (%)	4	
SPECIFIC HEAT CONSUMPTION (K CAL/ KG CLINKER)	710	700
BRICK THICKNESS (M)	0.2	
KILN EVALUATION		
KILN L/D	15.4	
EFFECTIVE VOLUME (M3)	821	
EFFECTIVE CROSS-SECTIONAL AREA (M2)	12.26	
CIRCUMFERENTIAL SPEED (CM/S	125	
FILLING (%)	10.62	15.50
SPECIFIC VOLUMETRIC LOADING (TPD/ M3)	5.48	8.00
SPECIFIC THERMAL LOADING (GCAL/H/ M2)	4.29	6.26
RETENTION TIME (MINUTES)	14.56	

large. Few clusters of micro quartz grains are present.

Subhedral dolomite grains are mostly developed in association with quartz grains. Subhedral iron oxide grains with rounded grain margins are mostly fractured and shattered. Groundmass matrix is rich in carbonate minerals.

From the optical microscopy study of the thin sections of limestone samples it is observed that the major minerals of all the samples are calcite, dolomite and quartz that constitute almost 93% of the total minerals present. The average percentages of occurrence of calcite, dolomite and quartz are 56%, 15% and 20% respectively. Iron oxide and may be very fine-grained clay minerals are present as accessory minerals. Mica, orthoclase, cryptocrystalline form of quartz is observed in traces. The minimum, maximum and average grain size of all the major minerals and accessory minerals has been measured and it is observed that there exist calcite, quartz and dolomite grains are in the range of 300 to 500µm in some places.

2. Pre-blending and Homogenization

Variation in the run of mine quality (RoM) of limestone needs to be evened out and a supply of consistent uniform quality has to be maintained throughout. In order to ensure a homogenous quality of limestone, pre-blending systems have come into vogue. Stacker and Reclaimer arrangement for Pre-blending of limestone has now a days become integral part of unit operation of raw material preparation in cement manufacturing. The crushed limestone is stacked and reclaimed in a circular stockpile.

The blending efficiency is depending on stacker efficiency which in turn depends on length, width, number of layers stacked, equipment properties and raw material characteristics, and the input variability. The frequency and amplitude of the variations of material properties in the input stream has a greater impact on pre-blending. The variation in limestone during stacking is very high with min of 0.84 and max of 1.53, having Standard Deviation 0.225 in LSF. The variation in reclaimed limestone is also high.

3. Raw Mix Modification

The red-mud which is the process waste of Alumina Refinery is being used as corrective material. The quality of red-mud and raw mix is shown in the table 2

On interpretation of composition of raw meal, kiln feed it is observed a high variation. The quality of raw meal in terms of lime saturation factor had varied from 0.85 to 0.96; the alumina modulus also fluctuated from 0.76 to 1.01. The alumina modulus and silica modulus maintained are in the level of 0.86 and 2.16 respectively which are low.

4. Raw Meal Fineness Optimization

The particle size distribution is one of the important factors during the sintering process of solid particles through solid-solid or solid-liquid screening process ultimately resulting in nodulation to form clinker. Considering the quality of clinker produced, it appears that variable quantity and quality of clinker liquid phase is being formed during Clinkerization.

Burnability studies were carried out on the raw meal samples. The result of the burnability indicated that the raw meal with ~16% residue on 90µm size is showing good free lime pattern on relatively lower temperatures. The samples of raw meal were subjected to detailed and systematic characterization for their thermal behaviour using the state of art simultaneous DTA/TG analyser of Perkin-Elmer make. The result of thermal analysis indicated that the raw meal with ~16% residue on 90µm in formation of melt at lowest temperature and overall thermal behaviour is most optimum.

The samples were studied for the fusion behaviour of the various raw meal samples collected using state of art Heating Microscope. The formation of liquid content in a material primarily depends upon its chemical composition, particle size distribution, temperature and duration of exposure to high temperature, rate of heating, environment, besides others. When the samples of raw meal were tested, almost all the parameters were more or less constant except the particle size distribution which was deliberately altered to see its effect on burnability. It was found that there was a clear trend between residue on 90µm and extent of reduction of sample area of the test cube. It was observed that as the residue was increased, the reduction in area also decreased indicating formation of lesser liquid. Based on the heating microscope study the raw meal with ~16% residue on 90µm size is considered most optimum.

The microstructure study was carried out on clinker produced from raw meal of different particle size

Table 2 : Redmud and Raw Mix

Constituents	Lime Stone	Red Mud	Raw Mix
LSF	1.06	0.02	0.93
SM	5.04	0.23	2.16
AM	1.80	0.52	0.86
LOI (%)	36.20	14.42	34.74
SiO_2 (%)	14.10	13.52	14.06
Al_2O_3 (%)	1.80	20.02	3.02
Fe_2O_3 (%)	1.00	38.34	3.50
CaO (%)	45.0	1.54	42.10
MgO	0.80	0.64	0.79
SO_2 (%)	0.10	0.20	0.11
Na_2O (%)	0.10	7.27	0.58
K_2O (%)	0.15	0.54	0.18

distribution. The evaluation of resultant clinker from the burnability investigations by Optical Microscope revealed that considering the morphology of phases developed their quality and crystal sizes, the clinker made with raw meal with 16% residue on 90µm is most optimum.

5. Process Optimization

The snowmen and coating samples collected from clinker cooler, calciner and kiln burning zone were analysed for chemical composition by gravimetric method as well as by XRD to look into the presence of chemicals and phases formed. The results show high LOI of 3.1% for snowmen indicating rushing of kiln feed from 6th cyclone inlet to kiln with reduced calcinations and required phase formation.

From the XRD analysis of yellow core samples of clinker presence of free lime and high peak of C4AF is observed which may be on account of excess of iron over alumina in raw-mix. The burning zone sample analysis give indication that presence of free lime and high peak of C4AF which may be on account of excess of iron over alumina in raw-mix.

From the XRD analysis of burning zone sample it is observed that unstable belite is present and surprisingly CaCO3 is observed. This corroborates the thinking of rushing of kiln feed from 6th cyclone inlet to kiln.
The XRD analysis of calcination zone coating samples indicates the presence of Mayenite Thenardite (Na2SO4) and C12A7 might be due to leaching out of alumina from refractory.

MODIFICATIONS AND CORRECTIONS

The input variability and the frequency & amplitude of the variations of material properties in the input stream have a greater impact on pre-blending efficiency. The

deterioration of quality (CaO content) is due to the influence of clay/Gravel present. The screening system is implemented to remove the clay/Gravel from the limestone. Two points loading is practiced to bring down the amplitude of the variations of material properties in the input stream. The limestone piles are made in segmented linear type pile in chevron mode stacking. The number of layers is increased by optimizing the stacker speed. The filling cycle and extraction cycle pattern of raw-meal silo changed from consecutive to alternate gates with cycle time reduction from 180 sec to 160 sec. The raw meal fineness is maintained at 16% on 90µm which is most optimum particle size distribution for improved burnability and productivity. The alumina modulus increased from 0.86 to 1.05. The size of MFR in clinker cooler optimized to increase the cooling efficiency.

CONCLUSION

The systematic study of raw materials and with minor modification in the physical and chemical properties in the raw meal will lead to improvement in the kiln productivity. In the case of ABC Cement Ltd., the kiln productivity has been consistently achieved 140% over the designed capacity (that is from 4500TPD to 6500TPD) which has resulted to capacity addition of 0.6 million Ton of clinker without any capital investment.

END NOTES

In the product like cement which is primarily a low value product, with high incidence of taxes and duties, high energy costs, the avenues available to a plant for reducing its costs are limited. In the present environment due to energy crisis and steep increase in the cost of energy and other input materials, it has become imperative to give serious thought on how to make operations and equipment efficient towards use of energy and adoption of latest technology equipment to retain the requisite competitive edge in the market.

Based on the several studies in the field of operational audit, it has been observed and proven that production level can be improved and energy consumption can be reduced by:

1. Doing continuous process diagnostics investigations / monitoring
2. Process optimisation
3. Maintaining the preheater and pre-calciner strings, dedusting system, ducting
4. Providing quality utility services in terms of compressed air quality, water quality, etc.

A plant audit is the basis for optimizing plant operations and often has the lowest/benefit ratio of investment. The operations audit can be a beneficial first step in aiding the industrial and process engineer in assessing the appropriate focus for later problem-solving efforts and can be used in a variety of circumstances in most production and operations environment.

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He is passionate to first optimize the Plant without any CAPEX or with little investments to achieve Productivity Enhancement with implementation of innovative ideas and small up-gradations.

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ELEMET LE: new developments to meet the increasing technological request for bucket elevator belts

Introduction

The market of rubber belts has deeply changed during the years. New applications rising has made compulsory the development of manufacturing technologies to meet more and more detailed client's requests.

Particullary, rubber elevator belt has not only required much more attention but it has been in need of the most important improvements.

Aim of this article is to analyze all these topics and to introduce our ELEMET LE as well, an excellent and competitive product of SIG Società Italiana Gomma, manufactured in its workshop close to Milan, Italy

Bucket elevator belts and related problems

Rubber elevator belts are very simple systems, especially if compared to traditional conveyor systems. As a matter of fact they are composed by two vertical pulleys rounded by a suspended rubber belt on which buckets for material handling are placed at a regular distance.

Despite this manufacturing semplicity, the operation is usually difficult, mainly in cement plants. This stumbling-block is due to some causes that have forced manufacturers to develop more and more performing as well as long lasting products that could allow to reach a compromise between the various application exigencies.

Therefore, here below, it is useful to focus on a deep analysis of all the technical causes and its related difficulties that you are likely to be faced.

- **Difference in height and increasing throughput**
  Nowadays, because of increasing height of silos as preheating towers, for rubber elevator belts it has become compulsory to overcome very important distances, most of times higher than 100 meters. Moreover the calcination ovens require nowadays bigger material quantities in the past. Both these last two requirements proportionally influence the tensile strength values measured inside the carcass of the rubber elevator belt, making the belt class easily over 2000 KN/m.

- **Elongation**
  These significant heights are in contrast with the exigence of keeping very short take up travels because of evident geometrical needs connected to buckets loading. If in the past textile rubber elevator belts were installed also in cement plants, today it is always more frequent to use bucket elevators equipped with steel cords that have a reduced elongation.

- **High temperatures**
  Usually, material temperature is higher than the one of the surrounding environment; moreover being the elevator a closed area, the inside elevator air easily reaches the thermal balance with the conveyed material creating a "stove effect". This last phenomenon is much more dangerous for the rubber belt than in traditional throughed rubber conveyor belts, where hot material only partially and discontinuously is in contact with the rubber. Today it is really common to find applications where working temperature reaches continuous values of 120 – 130°C with short time peaks even higher.
  Rubber compound made of synthetic polymers as SBR are used with necessary protections and crosslinking so that they can easily be used for horizontal applications, also withstanding

temperatures rising until continuous 150°C. On the countrary, this is not more possible in rubber elevator belts due to an extremely fast rubber degradation causing a performances worsening.
Pratical experience teaches that heat resistance rubber compound made of SBR polymers can be used only for bucket elevators operating up to a maximum peak temperature of 100°C whereas for higher values it is necessary to choose other more extreme and expensive solutions that pay back with much longer life time anyway.

Always in comparison with common throughed rubber conveyor belts for which big thicknesses of rubber covers are adopted to better protect the interior carcass, this practice is impossible for rubber elevator belts. As a matter of fact, big thicknesses would make extremely instable the tightening of the bolts fastening the buckets with the risk of ovalisation of the holes, loss of the buckets themselves, damage of the belt or even of the whole system in the event of accident.

- **Joining method**
  The rubber elevator belts are jointed with mechanical clamping devices made by aluminium or steel angles bars specifically shaped.
  These joint type is an extremely critical aspect for rubber belt operation and its own life time because it has an unavoidable interaction with the belt itself: as a matter of fact, steel fabric cords are bended for 90° due to traction. Moreover an important number of cords is cut to let the joint tightening by means of special bolts, but causing an increased overweight to remaining cables.
  For these reasons, it is not uncommon to find damaged bucket elevator belts near the joint, especially when the clamping device is not suitable for the belt type. Therefore, the OEM has to carefully evaluate the most suitable method of joining to avoid an early damage to this delicate area. In details, clamp conformity must be developed taking into account the applied tension to any single cord proportionally to its section. This aspect is for sure critic for belt class higher than 2000 N/mm for which it is required to adopt belts with bigger steel cord diameter.

- **Buckets support**
  After the rubber belt, the buckets are the most important equipment since they are used for material lifting. Once the production ends, rubber elevator belts are punched according to a specific drawing to let buckets fasten to the belt through suitable bolts. This punching operation takes to a reduction of the useful belt width for the calculation of the real applied tensions.
  Buckets are charged using specific chutes or alternatively they are filled dredging the elevator basement; mainly in this second case the effort on fastening bolts is really difficult. Hence it turns out to be extremely crucial that the belt could offer enough resistance to ensure that bolts could correctly stay tight and not be removed and teared from the belt.

  The contact point between buckets and belt must be subject to high attentions due to different causes. The hot material inside the buckets along with the hot air inside the elevator system transmits to the belt a huge amount of heat that contributes to the rubber degradation. Moreover, especially when materials in big size is handled, the accumulation of varius pebbles between buckets and the belt can be another element of drastic belt life time reduction. For both these reasons, between buckets and the belt it is used to put isolating items as rubber strips in high heat resistant quality. The usage of these protective elements has shown a significant increasing of the belt life time.

ELEMET LE – the most suitable solution for cement plants bucket elevator belts.

For decades involved in the supply of first equipments and spare parts for bucket elevators, SIG gained a very deep knowledge that allowed to develop a product named as ELEMET LE which has all the necessary properties to obtain the best compromise between the above mentioned exigences and capable also to sort out any problem rising from the use of rubber belts for vertical material handling.

Our ELEMET LE is currently offering satisfying performances under all points of view and several bucket elevators are now in operation in various cement plant around the globe. Its success is obvious, above all if we consider that it has firstly replaced fabric elevator belts and now also the belts with single longitudinal steel cords ones that were the unbeated main players in the field.

Analysing the constructive differences between traditional bucket elevator belts with only longitudinal steel wires and ELEMET LE, it is possible to immediately figure out the technological advantages of the last one.

Between ELEMET LE and other steel bucket elevator belts, the substantial difference can be observed in the particular conformation of the steel web carcass conformation. As a matter of fact, the innovation and excellent performances of ELEMET LE are due to its carcass equipped with a double steel cord weft and a warp made by strong resistance and low elongation

wires in selected diameters, according to the tensile strength, to minimize any breaking risks in the joint area

Moreover, ELEMET LE is also characterized by an high bolts fastening strength thanks to the double steel cord transversal weft placed on independent steps but not interlaced with longitudinal wires to give stiffness, tear resistance and transversal stability to the belt.

A similar carcass construction avoids that the tensions on the longitudinal wires could transfer to the transversal side obtaining in this way a compact structure without possible damages due to mutual friction of the steel cords.

As for the delicate relation between rubber and steel, ELEMET LE are made with brassed steel that guarantees a better long lasting rubber adhesion at high temperatures, compared with common traditional galvanised steel.

This important feature gives much more freedom in setting up a suitable adhesion rubber with the steel allowing us to obtain better synergies with special polymers used for the covers.

These polymers can contrast the fast ageing caused by high temperatures but keeping unchanged the superficial hardness, avoiding cracking, grooves and bachelization which are typical phenomena of unsuitable rubbers for this specific use.

If requested by end user, SIG is able to supply the belt in measure and punched thanks to latest technologies that can guarantee dimensional minimal tolerances on sizes and position of the holes.

For less severe applications with low – medium tensile strength up to 1600 KN/m and with elevation usually lower than 70m, it is possible to supply the classic ELEMET differing from its older brother “LE” for having thinner, more elastic and at higher elongation steel wires.

Conclusion

This article firstly has attempted analysing in the most possible exhaustive way the potential problems connected to the application of rubber belts for bucket elevators

Secondly, this article has been aimed for giving a practical solution how SIG has been able to introduce in the market a new competitive but also efficient and effective product, very appreciated in the cement field.

In conclusion, we can sum up ELEMET LE advantages and features as follows:

- A stiff steel carcass with warp and double weft to guarantee bolts support and function stability;
- Resistant structure with longitudinal steel cord wires with reduced diameter to obtain low elongation, easy alignment and high flexibility in bending for better joint performance;
- Brassed wires to ensure long lasting rubber adhesion values
- Special polymers used for the rubber covers to maximize temperature resistance on long term.
- Breaking load from 800 to 3500 KN/m and widths suitable for all exhigences, from 300 to over 1600 mm;
- Optimized covers thicknesses to ensure the best compromise between carcass protection, wear and prolonged tightening of bolts;
- Belt punching with latest technologies and extremely tight tolerances.

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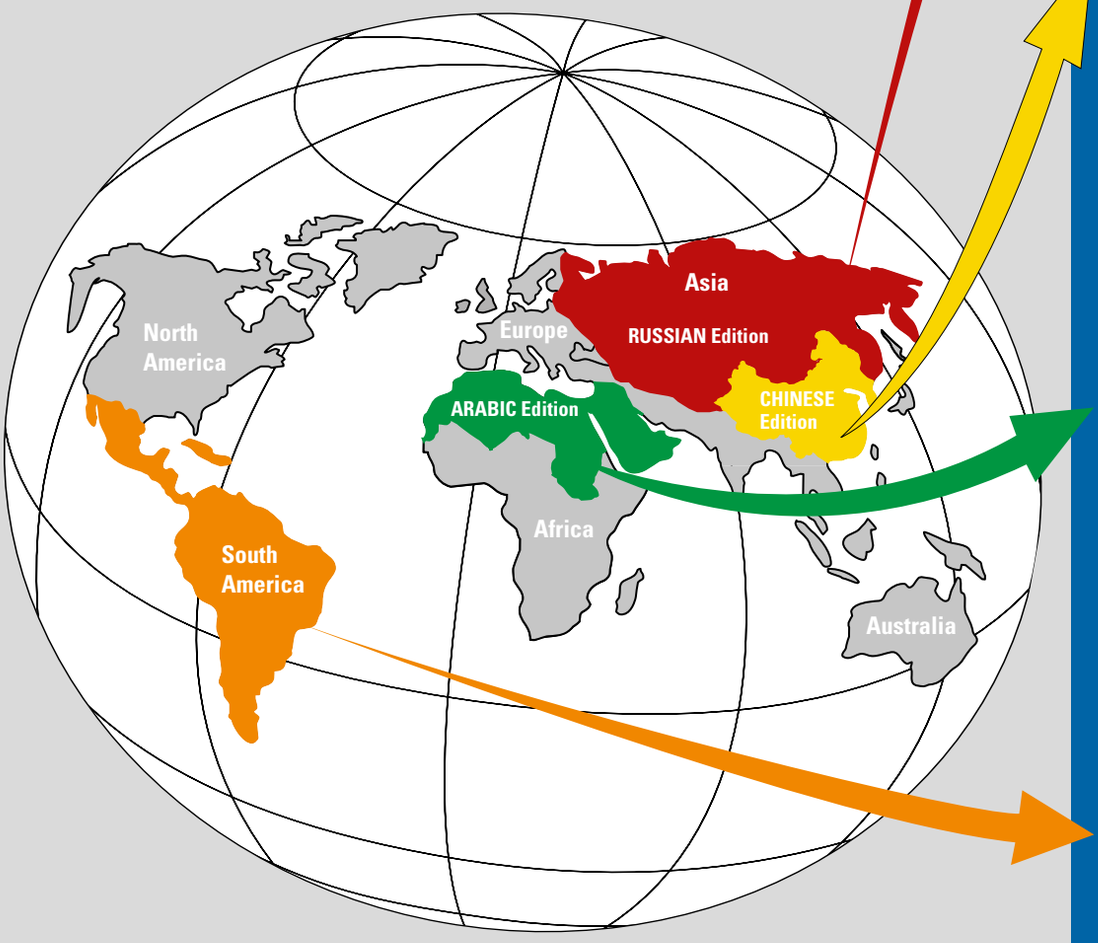

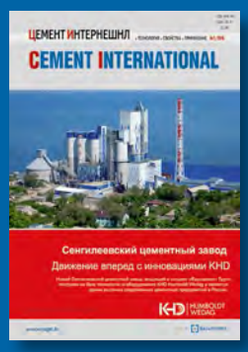

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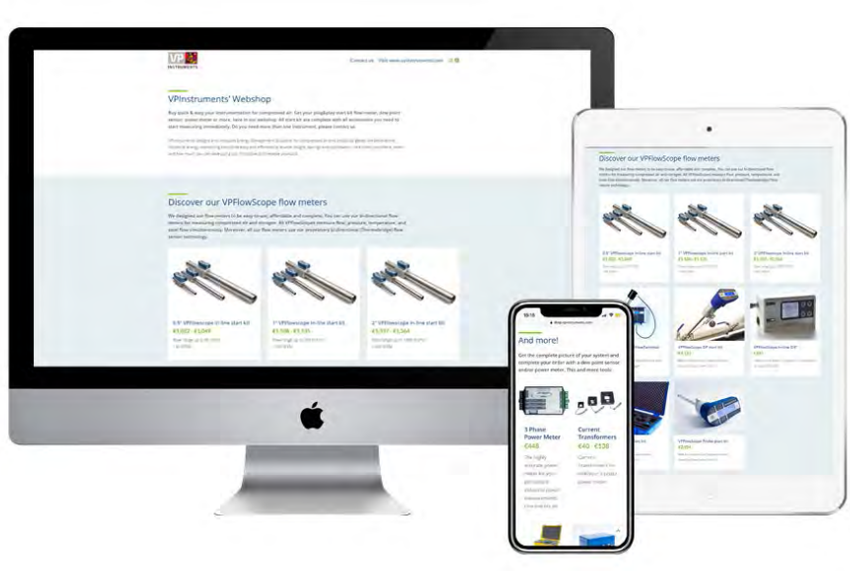
VPInstruments' Webshop: New products are now available!



VPInstruments, manufacturer and worldwide supplier of measurement and monitoring equipment for compressed air and gas, is pleased to announce that the new string of products is now available on our **Webshop** page.

Via the VPInstruments' **Webshop**, you can quickly and easily buy your instrumentations for compressed air. Besides in-line flow meters, now you can also directly purchase your power meters, insertion flow meters for compressed dry and wet air measurements, dew point sensors and even easy junction boxes to create Modbus networks. A selection of newly added products:

- VPFlowScope DP: The patented, ultimate measurement tool for wet compressed air flow measurements. The unique design enables you to take measurements in the discharge pipe of a compressor under 100% saturated conditions. The VPFlowScope DP measures 4-in-1: bi-directional flow, pressure, temperature, and totalized flow.

- VPFlowScope M: Your industry 4.0, 4-in-1 insertion flow meter for compressed air. It can be installed under pressure and measures bi-directional flow, pressure, temperature and totalized flow simultaneously.

- VP Dew Point Sensor: The smart dew point transmitter with a large measurement range of -70..+60 ^{0}C; so you can measure downstream a refrigerant type dryer as well as a desiccant-type dryer.

- 3 Phase Power Meter: The VPInstruments 3 Phase Power Meter is the highly accurate power meter for your permanent power measurements. With the power meter, you can measure the voltage and current of all three phases.

Get your plug-and-play start kits, dew point sensors, and more, right from our Webshop at:
shop.vpinstruments.com.
Buy your instrumentations in just a few clicks!

About VPInstruments
VPInstruments offers industrial customers worldwide easy insight into energy flows. We believe that industrial energy monitoring should be easy and effortless, to enable insight, savings, and optimization. VPInstruments products are recommended by leading energy professionals and offer the most complete measurement solution for compressed air flow, gas flow and electric energy consumption. Our monitoring software VPVision can be used for all utilities, and enables you to see where, when, and how much you can save. Our products can be found all over the world. We serve all industrial markets, for example, automotive, glass manufacturing, metal processing, food and beverage and consumer goods. We can also help your industry. Let us open your eyes and start saving energy.

For more information, contact:
VP Instruments
Tel. +31 (0)15 213 1580
info@vpinstruments.com
Internet: www.vpinstruments.com

Improved VPFlowScope M flow meter with new VPStudio 3

VPInstruments announces new firmware for the Transmitter of the VPFlowScope M flow meter. Firmware 2.2.0 has improved reliability and stability. With this new firmware the VPFlowScope M is even easier to use. Simultaneously, we release the VPStudio 3 software to configure and readout your VPFlowScope M.

The VPFlowScope M provides a complete solution for compressed air and technical gas flow measurement. It covers the entire compressed air system, from supply to demand side. Thanks to the built-in pressure sensor and temperature sensor, the VPFlowScope M is a powerful tool to detect what is really going on in your system.

New improvements of the VPFlowScope M firmware and VPStudio 3:

- Easier data logging: No need any more to start/stop your VPFlowScope M data logger. The VPFlowScope M features now a one-year circular memory. When you power your flow meter, your parameters (flow, pressure, temperature) are automatically recorded once per second. Via VPStudio 3 you can select the required period and data interval for your data analyses.

- New graphical display. With a new look & feel, the display can be customized to show one, two or three parameters. Moreover, the display can be adapted according to the surroundings by having black text on a white background or vice versa.

- Unified Modbus functionality. All Modbus functionalities are equally available over RS485 & Ethernet.

- The pipe diameter can now be stored in the Transmitter, so you can replace the VPSensorCartridge without losing your setting.

- The data logger CSV export settings is replacing the prior Project Module, making data export more intuitive and easier.

As a customer you can now update your VPFlowScope M Transmitter free of charge (only when your VPSensorCartridge has S/N 6100658 or higher). Updating goes via a VPFlowScope M Firmware Updater, which is enclosed with VPStudio 3. It is important to read the complete release notes and follow the upgrade instructions carefully, before updating.

Insert the grinding bowl, start, finished: Get to know the fastest and safest Planetary Ball Mills on the market

Automatic grinding bowl clamping, imbalance control and comminution down to the nano range

Planetary Mill PULVERISETTE 5 *premium line*: high-performance grinding down to the nano range for large quantities in up to 4 grinding bowls of 125 to 500 ml volume

Planetary Micro Mill PULVERISETTE 7 *premium line*: nano grinding for small quantities in 2 grinding bowls of 20 ml to 80 ml volume

FRITSCH's premium line Planetary Ball Mills PULVERISETTE 5 and 7 can grind, alloy, mix and homogenize reliably at bowl speeds of up to 2200 rpm. They let you effortlessly grind hard, medium, soft, brittle and moist samples down to a final fineness of < 100 nm in a very short time. Sample quantities of 1 to 60 ml (PULVERISETTE 7) or 15 to 450 ml (PULVERISETTE 5) can be processed simultaneously at the two grinding stations.

The Top 3 Advantages of the Planetary Mills premium line

- **»** Faster: final fineness down to <100 nm in 3 minutes due to high bowl speed of up to 2200 rpm
- **»** Safer: automatic grinding bowl clamping – user-independent, reproducible and safe
- **»** User-friendly: easy grinding bowl insertion and blockage of the start if operating state is impermissible

For both wet and dry grinding, the process is easy to start due to the guided positioning of the grinding bowl and the automatic bowl detection for the correct speed. Due to the automatic grinding bowl clamping, you grind with the reassuring feeling that the grinding bowl is always correctly mounted and clamped, without the need for any cumbersome screwing. Grinding has never been as safe.

The optional EASY GTM system lets you continuously monitor gas pressure and temperature directly the in the grinding bowl during the grinding process.

Send us a sample of your most difficult grinding material – we will conduct an individual sample grinding for you. Compare for yourself.

Up-dated information, videos and whitepapers on the FRITSCH Planetary Mills premium line
Planetary Mill PULVERISETTE 5 premium line
www.fritsch-international.com/p-5pl
Planetary Micro Mill PULVERISETTE 7 premium line
www.fritsch-international.com/p-7pl

For more information, please contact:

FRITSCH GmbH • Milling and Sizing
Aaron Juchem
Industriestrasse 8 • 55743 Idar-Oberstein • Germany
Phone +49 67 84 70 159
E-Mail: **juchem@fritsch.de**• Internet: www.fritsch.de

Particle size distribution? Keep it simple! Compact laser particle size analyser with extra wide measuring range

Save Money and avoid trouble: practically maintenance-free dispersion unit without soiling, without wear

NEW:
The Laser Particle Sizer
ANALYSETTE 22 NeXT

Laser Particle Sizer
ANALYSETTE 22 NeXT with
ultrasonic box

Select the Laser Particle Sizer according to your needs: either the ANALYSETTE 22 NeXT Micro for all typical measurement tasks from 0.5 - 1500 µm or the high-end instrument instrument ANALYSETTE 22 NeXT Nano with an extra wide measuring range from 0.01 - 3800 µm for maximum precision and sensitivity even for smallest particles.

The advantages of the NeXT Generation in overview:

- **»** Unbeatably priced particle size analyser with a unique measuring range from 0.01 – 3800 µm.
- **»** Powerful, practically wear-free and maintenance-free dispersion unit, residue-free rinsing.
- **»** Whole measuring process extremely flexible to program via SOPs and a measuring time typically < 1 minute Reproducible results and the possibility to record additional parameters such as temperature and ph value during wet dispersion.
- **»** Extremely simple to operate and clean.

A particle size analyser can only be as good as its dispersion capabilities. Due to the **ANALYSETTE 22 NeXT's** cleverly reduced design and robust engineering, the dispersion unit is particularly durable and practically maintenance-free. The complete absence of valves and movable seals in the sample circuit ensures that there are no dead spaces for sample material to settle. The powerful, adjustable-speed centrifugal pump distributes the sample uniformly in the entire circuit for stable measurements.

To measure samples tending to agglomerate, simply add the optionally available high-performance ultrasonic box to the sample circuit.

The special features of the **FRITSCH ANALYSETTE 22 NeXT** and how it works – please have a look:
www.youtube.com/embed/1mdaKYmNoCc?rel=0
Test the FRITSCH Particle Sizers!

Send us your sample for an individual **sample measurement** – we will send you a detailed analysis protocol. Compare for yourself!
Up-dated information on FRITSCH particle sizing technology – from Static Light Scattering to Dynamic Image Analysis at www.fritsch-international.com/particle-sizing.

CEMENT BAGGING EQUIPMENT MARKET TO REMAIN LARGELY STABLE UNTIL 2026

The cement bagging equipment market size is estimated to remain largely stable until 2026, as a decline in new capacity additions, particularly in greenfield projects, contribute to a slowdown in the sector, according to CW Research's 2021 update of the World Cement Bag & Bagging Equipment Industry and Forecast.

New capacity additions through greenfield projects are likely to increasingly lose ground to brownfield projects over the next five years, as greenfield projects are expected to account for just 37 percent of overall new capacity additions, compared to almost 53 percent in 2016.

"The cement bagging equipment market is both dependent on demand and capacity, since an increase in demand may not result in new bagging projects if there is overcapacity in the market. In many key markets, overcapacity is absorbing the rising demand," explains Prashant Singh, Associate Director at CW Group.

Chinese capacity reduction to slowdown global capacity growth

Over the past few years, the Chinese government has made a concerted effort to rationalize the overcapacity in the cement sector and to eliminate outdated cement plants by linking new capacity additions to old capacity elimination.

Cement capacity additions on a global level have faced a gradual decline in the past five years, driven by a steady decline in new projects for cement plants in China.

Outside China, driven by African and Asian countries, global capacity additions are likely to increase between 2021 and 2026.

Cement bagging industry to face decline by 2026

The cement bagging industry follows a similar trend to cement bagging equipment market. It is expected to see a slight decrease in its market size to 60 percent of the total cement bagging equipment market in the next five years.

The market for cement bags is more influenced by cement demand than by the existing capacity, but it is threatened by a shift from bagged to bulk cement.

Bag fillers to lead the cement bagging equipment market in the next five years

Segment-wise, bag fillers are expected to remain the largest segment within the cement bagging equipment market in the next five years, accounting for almost 60 percent of the estimated total size.

The demand for automation created by rising labor costs and new safety regulations provides a growth platform for both palletizing and wrapping, which are expected to show a positive CAGR of 1 percent for the period between 2021 and 2026.

CW Group's World Cement Bag & Bagging Equipment Industry and Forecast Report addresses important market dynamics and provides a five-year outlook for equipment used in the bagging of cement, including entire dispatch lines. The report provides a comprehensive view of this market segment, providing critical decision support information for cement and cement bag producers, kraft paper manufacturers, distributors, suppliers of bagging equipment and other stakeholders. The report explores demand for cement bags and related bagging equipment on a global as well as a regional basis. Additionally, shares for bag vs bulk distribution, market trends and packaging options (kraft paper, polypropylene etc.) are discussed together with an outlook for the industry.

ASIA EX-CHINA AND MIDDLE EAST TO SUPPORT CEMENT DEMAND GROWTH OVER THE NEXT FIVE YEARS

As the global economy regains its growth trajectory in 2021, CW Research expects to see a quick recovery in Asia ex-China and the Middle East regions, which are expected to drive cement consumption growth over the next five years, according to CW Research's 1H2021 update of the Global Cement Volume Forecast Report (GCVFR).

Cement consumption is estimated to witness a 5 percent growth year-on-year in Asia ex-China this year, after a decline of more than 6 percent in 2020. In the Middle East, cement demand is set to see a growth of almost 4 percent after a much smaller rise of less than 1 percent in 2020.

"2021 has brought optimistic expectations of a cement demand recovery. However, global markets still see divergent regional growth trajectories. China's cement demand is expected to plateau, with demand gradually set to decline from 2024 onwards. On the other hand, Asia ex-China and the Middle East are predicted to show robust yearly growth until 2025," noted Prashant Singh, Associate Director at CW Group.

Pakistan, India, Bangladesh and Vietnam's demand set to increase in 2021

In Asia ex-China cement demand is likely to see an increase in 2021 estimated at 5 percent driven by increases in Pakistan, India, Bangladesh and Vietnam.

In 2020, cement demand in the region declined mostly driven by a double-digit drop in Indian cement consumption, because of pandemic restrictions. Nevertheless, in the last quarter of the year government investments in infrastructure projects helped to nudge the sector back into a growth trajectory. However, in 2Q2020 this growth has once again been impacted by lockdowns caused by a new Covid-19 wave.

In the next 5 years, India and Vietnam's governments are likely to support numerous large-scale support transport, energy, residential and industrial infrastructure projects increase the requirement for cement.

Outlook for cement consumption in the Middle East remains bright

In the Middle East, the outlook for cement consumption remains bright in the coming years as crude oil prices have largely recovered from historical lows during the first half of 2020.

Major construction projects including NEOM city in Saudi Arabia and the 2022 Qatar World Cup are expected to drive cement demand over the forecast period.

US construction sector to drive growth in North America's consumption

Cement demand in North America is projected to increase over the next five years driven by the United States' construction sector, as the country accounts for majority of consumption in the region.

Meanwhile, in Latin America, despite the economic contraction in major countries including Brazil and Mexico, the cement sector had a surprisingly positive performance in 2020. Latin America in 2021 is expected to witness an increase of around 3 percent year-on-year in cement demand and is set to rise further until 2025.

The CW Group's Global Cement Volume Forecast Report (GCVFR) is a twice-yearly update on projections for cement volumes on a national, regional and global level. The forecast provides global and regional outlooks, as well as detailed perspectives on 57 of the world's most important countries' cement consumption, production, net trade and cement production capacity. The five-year outlook presented in this benchmark study enables industry professionals to shape their perspective on markets and business priorities.

EASTERN EUROPE AND CIS REGION TO EMERGE AS THE LARGEST EXPORTER OF WHITE CEMENT

At a global level, Eastern Europe and CIS region is expected to emerge as the largest exporter of white cement in 2021, displacing Western Europe, according to the 2021 update of CW Research's 's Global White Cement Market and Trade Report.

Eastern Europe and CIS is a small market when it comes to consumption, and it is characterized by export driven players looking to benefit from competitive advantages in production. A robust increase in Turkey's white cement exports, which has increased at a CAGR of more than 6 percent between 2016 and 2021, has prompted the region to the leading position.

"Turkey is alone projected to ship over 1 million tons of white cement this year to markets including the United States, Israel, Italy and Iraq. Turkey's exports rose, in ten years between 2011 and 2021, from about 50 to over 95 percent of local white cement production. At the same time, its domestic demand is predicted to decline at an average of almost 6 percent in the 2016-2021 period," explains Carolina Pereira, Manager, Advisory & Research at CW Group.

North America to remain the largest import destination for white cement

Given the inability of domestic production to meet demand, North America has become highly reliant on imports, particularly in the case of the United States, where imports are expected to represent over 80 percent of total consumption in 2021.

In 2021, North America is expected to remain the largest import destination for white cement, followed by the Middle East, Western Europe and Eastern Europe and CIS. The United States is expected to import the single largest volume of white cement, sourced from Canada, Turkey, and Mexico among others.

Western Europe to retain its position as net exporter

Western Europe is projected to ship 40 percent of its white cement exports to North America and Eastern Europe and CIS regions in 2021, with Denmark leading white cement exports in the region, exporting to countries like as Poland, United States, Netherlands, Germany and France.

Middle East's imports to witness growth in 2021

The Middle East, the world's second largest producing region of white cement, after China, is expected to see countries slowly decrease their dependency on imports of white cement in the last four years, as more capacity has been added. However, in 2021E, the imports in the region are expected to increase by almost 16 percent compared to 2020.

Countries including the UAE and Qatar are at the forefront of using white cement on a large scale in construction projects, due to the increased focus on aesthetics and insulation efficiency, which means that the region will remain a hot spot for demand of white cement.

The Global White Cement Market and Trade Report is CW Research's comprehensive assessment on worldwide white cement industry and presents the latest market data (demand and supply) covering the 2016-2021E period, with a 5-year medium-term forecast until 2026. The report includes white cement consumption and production figures, import and export data as well as pricing trends and white cement capacity developments.

NAVIGATE TOWARDS SUCCESS

The cement industry knowledge your competitive advantage needs:

- **News:** daily newsletter delivered to 23,000 recipients, including CEOs, equipment manufacturers, consultants, and engineers in 160+ countries
- **Proprietary intelligence:** interviews with cement industry thought leaders and experts, including CEOs, executives, analysts and consultants
- **Market research:** high-quality research reports, including detailed market studies, competitive assessments, cement trade flows, and export opportunity assessments. Custom research available upon request
- **Data services:** statistical and data research tools offering industry practitioners a wealth of cement supply and demand data

The highest aesthetics development of SITI B&T's technologies

SITI B&T Group presents five collections of large slabs with extraordinary aesthetic qualities, which are the result of the research and know-how of all the companies of the group.

In the last ten years, SITI B&T Group has focused increasingly on ceramic design and is now presenting a new approach to technology illustrated by five collections of large slabs with extraordinary aesthetic qualities that can be produced both in the laboratory and on an industrial scale.

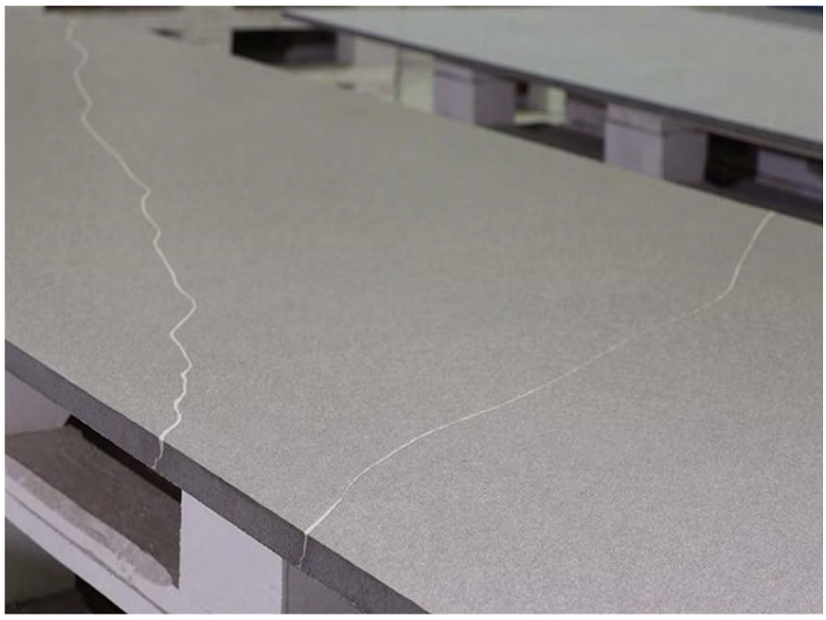


Photo 1: D full-body vein

1.A **3D full-body vein** running either over the surface or through the thickness of the slab. It can be positioned anywhere and in the desired number (photo 1); this design is available in both matt and glossy digital decorative surface finishes.

2.**Porphyries:** full-body flakes, also suitable for double loading (photo 2).

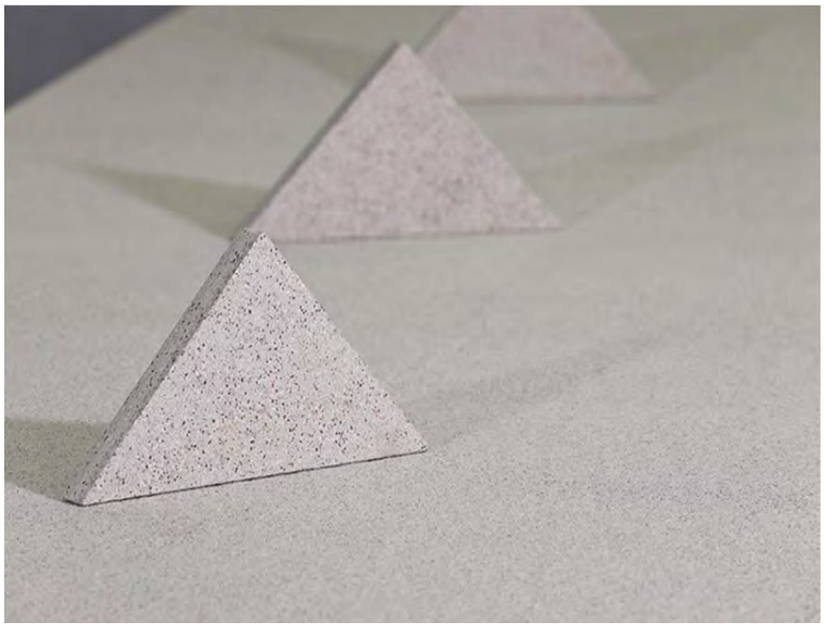


photo 2: porphyries

3.**Cloud collection:** micronized powders (photo 3).

4.**Stone collection:** a combination of technologies consisting of solid-layered veins created from flakes mixed together with full body veins (photo 4).

5.**Nuovo Calacatta 3D** with an innovative matching system between full-body vein and digital decoration (photo 5).

These product families are the culmination of the Group's ongoing R&D efforts at the bt-LAB, which have led to significant developments in the field of Supera® technology.

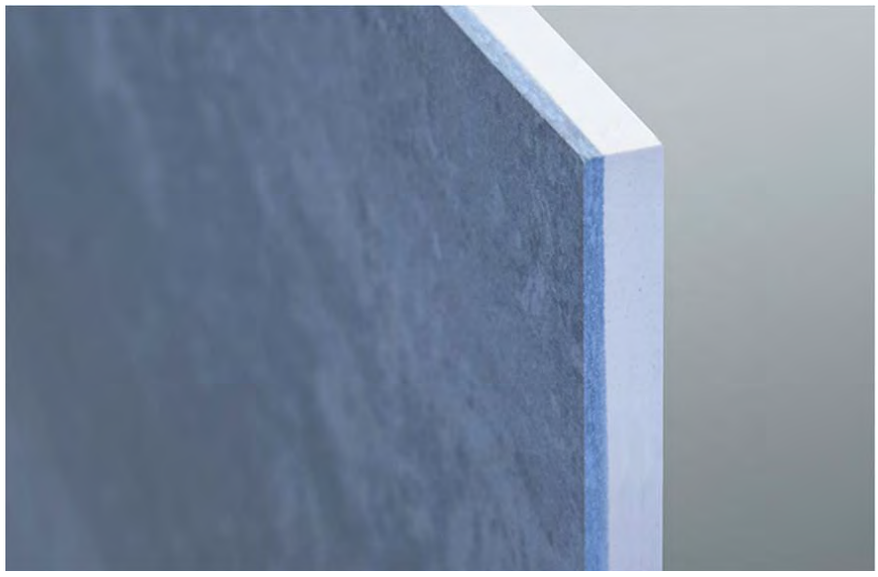


photo 3: cloud collection

photo 4: stone collection

photo 5: Nuovo Calacatta 3D

Thanks to the expertise in different production technologies achieved by the Group's various companies, SITI B&T is able to deliver truly distinctive aesthetics based on full-thickness decoration with thicknesses of up to 30 mm and structures with deep and clearly defined reliefs on the ceramic surface.

"Our aim has always been to enable our customers to create truly distinctive and recognisable products," explains Fabio Tarozzi, CEO of SITI B&T Group. "For this reason, we wanted to look beyond existing technologies to ensure maximum expressive capabilities in terms of decoration and design."

One outstanding example of the way the Group's technologies are being used is that of Best Surface, a ceramic tile producer with a complete plant for the production of large interior slabs in Castellón, Spain whose Idylium brand products are innovating the world of design and architecture. SITI B&T supplied the technologies for every stage of the process, including solutions from Ancora and Projecta Engineering and graphic and creative support from Digital Design.

DIARY DATES

Cement

CEMENTTECH 2021
The 22nd China International Cement Industry Exhibition
Date : 10 - 12 October 2021
Venue: Nanchang Greenland International Expo Center, Jiangxi, China
For more information, please contact:
Ms. Joann Long
Tel: +8610 88083329
Fax: +8610 88084171
Email: Joannalong@ccpitbm.org
Website: www.cementtech.org

Egypt Drymix Mortar Meeting
Date : 20th October 2021
Venue: Cairo, Egypt
Email: info@drymix.info
Website: www.drymix.info

Virtual Global CemProducer 4: Maintenance and optimisation
Date : 9th November 2021
Venue: Your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: info@propubs.com
Website: www.CemProducer.com

Virtual Global CemPower Seminar
Electrical energy production and efficiency
Date : 23rd November 2021
Venue: Your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: info@propubs.com
Website: www.CemPower.com

28th Concrete days 2021
Date : 24 - 25 November 2021
Venue: Hotel Aquapalace Prague, Czech Republic
For more information, please visit:
www.cbsbeton.eu

Virtual European Cement Conference
European cement markets and technology
Date : 07th December 2021
Venue: Your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: info@propubs.com
Website: www.EuropeanCement.com

INTERCEM Americas
Date : 06 - 07 December 2021
Venue: Hilton Downtown Hotel, Miami, Florida, USA
Tel: +44 20 8669 5222
Email: info@intercem.com
Website: www.intercem.com

Alternative Fuels & Raw Materials (AFARM) Americas 2021
Date : 08 - 09 December 2021
Venue: Cancun, Mexico
For more information, please contact:
Mr. Ali Assad, Business Development Executive
Mobile: +40 754 023 330
Email: aga@gmiforum.com
www.gmiforum.com

Virtual Global Ash Conference 2
Ash beneficiation and use in cement and concrete
Date : 14th December 2021
Venue: Your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: info@propubs.com
Website: www.GlobalAsh.com

Virtual (*free*) and in-person events in 2021-2022 from:

global cement™

Details and registration

Virtual African Cement
Market trends and technology in Africa
7 September 2021

Virtual Future Concrete
Low CO2 options for cement
14 September 2021

Virtual Global CemFuels 3
Alternative fuels for cement and lime
21 September 2021

Virtual Global CemQC 2
Quality control for clinker and cement
5 October 2021

Virtual Global CemProducer 4
Cement plant maintenance
9 November 2021

Virtual Global CemPower
Electrical generation and efficiency
23 November 2021

Virtual European Cement
Market trends and technology in Europe
7 December 2021

Virtual Global Ash 2
Ash for cement and concrete
14 December 2021

15th Global Slag Conference
18-19 January 2022, Vienna

Virtual Global Concrete 3
Global concrete business
1 February 2022

15th Global CemFuels Conference
16-17 February 2022, Lisbon

Virtual Asian Cement 2
Market trends and technology in Asia
1 March 2022

20th Global Gypsum//15th Insulation Conference
16-17 March 2022, Estoril/Lisbon

Virtual American Cement 2
Market trends and technology in the Americas
30-31 March 2022

5th Global CemBoards Conference
26-27 April 2022, Brussels

1st Global CemProducer Conference
11-12 May 2022, Munich

Virtual Global CemEnergy 3
Conventional fuels for cement and lime
24 May 2022

Virtual Global CemCCUS
Carbon capture, use and storage for cement and lime
14 June 2022

Virtual Middle Eastern Cement 3
Market trends and technology in the Middle East
5 July 2022

Virtual African Cement 2
Market trends and technology in Africa
6 September 2022

16th Global CemFuels Conference
21-22 September 2022, Bangkok

Virtual Global CemQC 3
Quality control for clinker and cement
4 October 2022

3rd Global FutureCem Conference
18-19 October 2022, Vienna

Virtual Global CemProducer 5
Cement production optimisation
1 November 2022

2nd Global GypSupply Conference
15-16 November 2022, Brussels

Virtual Global CemPower 2
Electrical generation and efficiency
29 November 2022

Virtual European Cement 2
Market trends and technology in Europe
6 December 2022

Virtual Global Ash 3
Ash for cement and concrete
13 December 2022

Check website for latest details

15th Global Slag Conference
Date : 18 - 19 January 2022
Venue: Vienna, Austria
For more information, please contact:
Dr. Robert McCaffrey, Conference convenor
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: info@propubs.com
Website: www.globalslag.com

Virtual Global Concrete 3
Date : 01st February 2022
Venue: your device
For more information, please contact:
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Fax: +44 1372 743838
Email: rob@propubs.com

15th Global CemFuels Conference and Exhibition on alternative fuels for the cement and lime industry
Date : 16 - 17 February 2022
Venue: Lisbon, Portugal
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com
website: https://www.cemfuels.com/

16th TURKCIMENTO International Technical Seminar & Exhibition
Date : March 2022
Venue: TBC, Turkey
For more information, please contact Turkish Cement Manufactures' Association
Email: info@turkcimento.org.tr

Virtual Asian Cement 2
Date : 01st March 2022
Venue: your device
For more information, please contact:
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Fax: +44 1372 743838
Email: rob@propubs.com

15th Global Insulation Conference and Exhibition
Date : 16 - 17 March 2022
Venue: Lisbon, Portugal
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Fax: +44 1372 743838
Email: rob@propubs.com
www.globalinsulation.com

20th Global Gypsum
Date : 16 - 17 March 2022
Venue: Lisbon, Portugal
For more information, please contact:
Dr. Robert McCaffrey
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Fax: +44 1372 743838
Email: rob@propubs.com
www.globalgypsum.com

CBI – Cement Business & Industry Africa 2022
Date : 16 - 17 March 2022
Venue: Johannesburg, South Africa
For more information, please contact:
Mr. Ali Assad, Business Development Executive
Tel.: +40-754-023-330
Email: aga@gmiforum.com

Virtual American Cement 2
Date : 30 - 31 March 2022
Venue: your device
For more information, please contact:
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Fax: +44 1372 743838
Email: rob@propubs.com

5th Global CemBoards Conference
Date : 26 - 27 April 2022
Venue: Brussels, Belgium
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

NEW DATE

Cementtech

CEMENTTECH 2021

The 22nd China International Cement Industry Exhibition

October 10-12,2021

Nanchang Greenland International Expo Center · Jiangxi · China

Organizer

- China Building Materials Federation
- China Cement Association
- CCPIT Building Materials Sub Council

Contact details:
Joanna Long
Tel: 8610-88083329
Fax: 8610-88084171
Joannalong@ccpitbm.org

www.cementtech.org

4th Edition of the Italian Concrete Days
Date : 28 - 30 April 2022
Venue: Piacenza Expo, Italy
For more information, please visit
www.gic-expo.it

1st Global CemProducer Conference
Date : 11 - 12 May 2022
Venue: Munich, Germany
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual Global CemEnergy 3
Date : 24th May 2022
Venue: your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual Global CemCCUS
Date : 14th June 2022
Venue: your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual Middle Eastern Cement 3
Date : 05th July 2022
Venue: your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual African Cement 2
Date : 06th September 2022
Venue: your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

16th Global CemFuels Conference
Date : 21 - 22 September 2022
Venue: Bangkok, Thailand
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual Global CemQC 3
Date : 04th October 2022
Venue: your device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

3rd Global FutureCem Conference
Date : 18 - 19 October 2022
Venue: Vienna, Austria
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

Virtual Global CemProducer 5
Date : 01st November 2022
Venue: your Device
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com

2nd Global GypSupply Conference & Exhibition
Date : 15 - 16 November 2022
Venue: Brussels, Belgium
For more information, please contact:
Dr. Robert McCaffrey
Tel.: +44 1372 743837
Fax: +44 1372 743838
Email: rob@propubs.com
www.globalgypsum.com

XXIII INTERNATIONAL CONSTRUCTION FORUM

CEMENT · CONCRETE DRY MIXTURES

NOVEMBER 1-3, 2021. EXPOCENTRE, MOSCOW.

CEMENT · CONCRETE DRY MIXTURES

XXIII INTERNATIONAL CONSTRUCTION EXHIBITION
«Cement. Concrete. Dry mixtures»

ConTech

International Conference
«Concrete technologies: chemistry, production, precast»

MixBuild

International Scientific and Technical Conference **«Modern Technologies of Dry Mixtures in Construction»**

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organizers

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info@alitinform.ru // www.infocem.info //+7 812 335 09 92

DIARY DATES

Training

Virtual Online Course "Firing Alternative Fuels: Opportunities, impacts on process, optimisation and limitations"
Date : 25 - 28 October 2021
Email: training@vdz-online.de
For more information, please visit:
https://www.vdz-online.de

In-class Training "Basic Course Process Control"
Date : 8 - 11 November 2021
For more information, please contact:
Ms. Julia Volchkova
Tel: +49-211-45 78-402
Email: training@vdz-online.de
Website: https://www.vdz-online.de

In-class Training "Process Technology of Cement Production"
Module 1 (Grinding Technology and Raw Material Preparation)
Date : 29 November - 3 December 2021
Module 2 (Clinker Production and Material Technology)
Date : 6 - 10 December 2021
For more information, please visit: :
https://www.vdz-online.de

CERAMIC

CEVISAMA – International Ceramics & Bathroom Experience
Date : 07 - 11 February 2022
Venue: Valencia Fair, Spain
For more information, please visit:
https://cevisama.feriavalencia.com

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Training Programme 2021

Online Courses

Firing Alternative Fuels:
Opportunities, impacts on process, optimisation and limitations
25 - 28 October 2021

In-class Training

Plant Maintenance and Refractories
6 - 10 September 2021

Basic Course Process Control
8 - 11 November 2021

Process Technology of Cement Production
29 November - 10 December 2021

E-Learning

More than 75 hours of self-paced online training with high-quality content, from quarry to dispatch

More information and registration:
www.vdz-online.de/en/training
training@vdz-online.de

Follow us on LinkedIn

VDZ
Toulouser Allee 71
40476 Duesseldorf
Germany

DIARY DATES

GENERAL

SPAC ASIA Summit

Date : 07th October 2021

Venue: your device

For more information, please contact:

Tel.: +603 - 2775 0067

Email: johnk@trueventus.com

28th Colloquium of African Geology

18th Conference of the Geological Society of Africa

Date : 09 - 17 October 2021

Venue: Fez, Morocco

For more information, please contact:

Email: cag28fez@gmail.com

http://www.fsdmfes.ac.ma/CAG28/

MHEA Bulkex 2021

Date : 12 - 13 October 2021

Venue: Chesford Grange - Warwickshire, UK

For more information, please visit:

https://mhea.co.uk/bulkex21/

9th European Bulk Liquid Storage Summit

Date : 27 - 28 October 2021

Venue: Cartagena, Spain

For more information, please contact:

Cheryl Williams

Tel.: +44 203 141 0605

Email: cwilliams@acieu.net

COMPSEC virtual summit

Date : 02nd November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

CENTRIFUGAL PUMPS Optimizing Performance

Date : 03rd November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

Construction Technology Festival KSA - Online

Date : 3rd November 2021

Venue: your device

For more information, please contact:

Katie Briggs, Content Director - B2B Connect

Email: kbriggs@b2bconnectgcc.com

For more information, please visit:

https://ctf-ksa.com/

BATIMATEC Expo

Salon International du Bâtiment des Matériaux de Construction et des Travaux Publics

Date : 07 - 11 November 2021

Venue: Palais des Exposition Pins Martimes, Algiers, Algeria

For more information, please visit:

www.batimatecexpo.com

Switchgear and Circuit Breakers Virtual Conference

Date : 15th November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

Risk Based Inspection

Date : 16th November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

2021 European Base Oils & Lubricants Summit

Date : 17 - 18 November 2021

Venue: Amsterdam, The Netherlands

For more information, please contact:

Mr. Mohammad Ahsan

Tel.: +44 203 141 0606

Email: mahsan@acieu.net

Website: www.acieu.net

Mechanical Seals and Shaft Alignment

Date : 18th November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

Fatigue Management for Mechanical Engineers Virtual Conference

Date : 23rd November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

Soil Mechanics & Geotechnical Engineering Virtual Summit

Date : 24th November 2021

Venue: your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

9th International Aggregate Symposium

Date : 25 - 26 November 2021

Venue: Antalya, Turkey

For more information, please visit:

www.kirmatas.org.tr

10th International Drilling Blasting Symposium

Date : 25 - 26 November 2021

Venue: Antalya, Turkey

For more information, please visit:

www.delmepatlatma.org.tr

Rotating Equipment Maintenance Virtual Summit

Date : 29th November 2021

Venue: Your device

For more information, please contact:

Michael Karuna

Tel.: +60327750000 ext.513

Email: michaelk@trueventus.com

TRIBOLOGY

Date : 30th November 2021

Venue: Your device

For more information, please contact:

John Karras

Tel.: +603 2775 0067

Email: johnk@trueventus.com

Urban Master Planning Virtual Summit

Date : 07th December 2021

Venue: Your device

Tel.: +603 2775 0000

Email: samb@senatemeetingaroundtheworld.com

Alternative Fuels & Raw Materials Americas 2021

Date : 08 - 09 December 2021

Venue: Cancun, Mexico

For more information, please contact:

Mr. Ali Assad, Business Development Executive

Email: aga@gmiforum.com

Mobile: +40 754 023 330

Mr. Henrique Pereira, Client Service & Development Executive

Email: hp@cwgrp.com

Mobile: +351 910 962 102

17th Edition SteelFab 2022

Machinery, Technology, Equipment

Date : 10 - 13 January 2022

Venue: Expo Center Sharjah, UAE

For more information, please contact:

Tel.: +971 6 5770000

Email: steel@expo-centre.ae

Website: www.steelfabme.com

SOLIDS Dortmund 2022

Date : 16 - 17 February 2022

Venue: Dortmund, Germany

For more information, please visit:

www.solids-dortmund.de

Egypt Projects

5th International Exhibition for Construction & Building Materials

Date : 17 - 19 March 2022

Venue: Egypt International Exhibition Center - EIEC, Cairo Governorate, Egypt

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For more information, please contact:

Mr. Amr Hassan

Tel.: +20226774263

Fax: +20226774252

Mobile: +201009069609

Email: amr@arabiangerman.com

Website: www.Egypt-projects.com

27th International Mining Congress and Exhibition (IMCET 2022)

Date : 22 - 25 March 2022

Venue: Antalya, Turkey

Tel.: (+90 546) 4251072

Fax: (+90 312) 4175290

For more information, please contact:

E-mail: imcet@maden.org.tr

madenmuhodasi@maden.org.tr

Website: www.imcet.org.tr

World Cities 2022

Date : 17 - 21 April 2022

Venue: Sands Expo & Convention Centre, Singapore

For more information, please contact organizers at:

Email: info@worldcities.com.sg

Website: www.worldcitiessummit.com.sg

Hillhead 2022

Date : 21 - 23 June 2022

Venue: Hillhead Quarry, Buxton, Derbyshire, UK

For more information, please contact:

Email: hillhead@qmj.co.uk

www.hillhead.com

Powtech 2022

Date : 30 August - 01 September 2022

Venue: Nürnberg, Germany

For more information, please visit:

www.powtech.de/en

European Coatings Show

Date : 28 - 30 March 2023

Venue: Nürnberg, Germany

For more information, please visit:

https://www.european-coatings-show.com/

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interpack Düsseldorf

Date : 04 - 10 May 2023

Venue: Düsseldorf Trade Fair Centre, Germany

For more information, please visit:

www.interpack.com

عالم الإسمنت ومواد البناء

تصدرعن : الاتحاد العربي للإسمنت ومواد البناء العدد 85 سبتمبر / أيلول 2021

- أخبار عربية
- أخبار عالمية
- مقالات تقنية
- منتجات جديدة
- مؤتمرات ومعارض

CEMENT & BUILDING MATERIALS REVIEW

- *Arab News*
- *International News*
- *Technical Articles*
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- مؤتمرات ومعارض

A quarterly bilingual publication that is widely spread in the Arab region.

For more information, please contact

Eng. Ahmad Al-Rousan, AUCBM Secretary General

Arab Union for Cement and Building Materials (AUCBM)
Email: aucbm@scs-net.org / aucbm1977@gmail.com
Please visit our website http://www.aucbm.net


هيئة عربية دولية

عالم الإسمنت ومواد البناء

الملف العربي | أخبار عالمية | موضوعات تقنية | منتجات جديدة | مؤتمرات ومعارض

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

المساهمات

- ترحب هيئة تحرير المجلة بمساهمة السادة المهتمين والمتخصصين بهدف اثراء المادة التحريرية .
- الآراء الموجودة بالمجلة لاتعبر بالضرورة عن رأي الاتحاد أو المجلة وإنما عن الرأي الخاص بكاتبها ولا يتحمل الاتحاد أية مسؤولية قانونية تجاه ذلك .

الاشتراكات السنوية

- الشركات والمؤسسات 150 دولار أمريكي
- الجامعات ومراكز البحوث 65 دولار أمريكي

Email: aucbm@scs-net.org / aucbm1977@gmail.com

Website : www.aucbm.net

المحتويات

المراسلات

توجه كافة المراسلات بإسم رئيس التحرير / الاتحاد العربي للاسمنت ومواد البناء
الجمهورية العربية السورية - دمشق - ص . ب 9015
هاتف : 611 85 98 - 611 54 12 (11 963 +)
فاكس : 612 17 31 (11 963 +)
Email: aucbm@scs-net.org / aucbm1977@gmail.com
Website : www.aucbm.net

مجلة عالم الإسمنت ومواد البناء

جدول موضوعات المجلة لعدد ديسمبر / كانون أول 2021

* أنظمة التشحيم
* الصيانة في مصانع الإسمنت
* تقنيات الإصلاح واللحام
* إدارة قطع الغيار
* الطواحين العمودية
* الكسارات
* المبردات
* تكنولوجيا الحراقات
* الحراريات وفحص الحراريات
* دراسات حالة

آخر موعد لاستلام المقالات أو النصوص الصحفية أو الإعلانات لهذا العدد هو 3 ديسمبر / كانون أول 2021

الإعلانات

(بالدولار الأمريكي)

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

أبعاد الإعلان : A4 مع مسافة على الأطراف الأربعة
أبعاد الإعلان على الغلاف الخارجي : ارتفاع 20 سم وعرض 14سم
الدقة : 300dpi
نوع الملف : PSD أو EPS أو PDF

إعلان على موقع الاتحاد WWW.AUCBM.NET

- عرض 200 بيكسل وارتفاع 75 بيكسل ، بقيمة 150 دولاراً أمريكياً في الشهر الواحد
- يرجى إرسال الصور مع اللينك المطلوب ربطه بها بدقة 300 dpi (dot per inch)

أخبار عربية

أخبار عربية

المملكة العربية السعودية

مبيعات شركات الإسمنت السعودية ترتفع 12 % بالنصف الأول من 2021

سجلت شركات الإسمنت السعودية المدرجة ارتفاعاً في حجم المبيعات خلال النصف الأول من عام 2021 بنسبة 12.02 % وبزيادة تعادل 2.97 مليون طن مقارنة مع الفترة المماثلة من العام الماضي . وبلغ إجمالي مبيعات 17 شركة مدرجة بالسوق المالية السعودية "تداول" أكثر من 27.63 مليون طن في النصف الأول من العام الجاري ، مقابل مبيعات وصلت إلى 24.67 مليون طن خلال الفترة ذاتها من عام 2020 .

وفي المقابل، انخفضت صادرات شركات الإسمنت السعودية بنسبة 22.37 % خلال النصف الأول من عام 2021 على أساس سنوي ، مسجلة 805 آلاف طن ، مقارنة مع 1.04 مليون طن بالفترة المماثلة من العام الماضي .

وعلى مستوى الإنتاج ، سجل ارتفاعاً بنحو 11.8 % خلال النصف الأول من عام 2021 على أساس سنوي وبزيادة تقدر بـ 2.95 مليون طن عن إنتاج الفترة المماثلة من العام الماضي . وبلغ إجمالي إنتاج شركات الإسمنت السعودية 27.89 مليون طن في النصف الأول من العام الحالي ، مقابل 24.94 مليون طن بالفترة ذاتها من العام 2020 .

المصدر: www.mubasher.info

إسمنت القصيم تتوقع البدء في مشروع خط إنتاج جديد خلال النصف الأول 2022

كشفت شركة إسمنت القصيم عن إطلاق خط إنتاج جديد في مصنع الشركة بطاقة إنتاجية 10 آلاف طن في اليوم ليتم إحلاله محل بعض خطوط الإنتاج المحلية .

وتوقعت الشركة أن يتم البدء في مشروع خط الإنتاج في النصف الأول من العام المقبل 2022 .

وذكرت أنه سيتم الإعلان لاحقاً عن طريقة تمويل المشروع والتاريخ المتوقع للانتهاء منه .

المصدر: https://trading-secrets.guru/

"إسمنت السعودية" تستحوذ على 37 % من أسهم "المتحدة للإسمنت"

استحوذت شركة "إسمنت السعودية" بتاريخ 11 مايو / أيار 2021 على 37 % من اسم الشركة المتحدة للإسمنت البحرينية عن طريق دفع مقابل نقدي قيمته 28 مليون ريال ، ونتج عن الاستحواذ على هذه الحصة زيادة ملكيتها في الشركة من 63 % إلى 100 % .

وتأسست الشركة المتحدة للإسمنت في 1999 (وهي شركة مساهمة بحرينية مقفلة) تعمل في تجارة وتوزيع الإسمنت في مملكة البحرين ويبلغ رأسمالها مليون دينار بحريني (ما يعادل 9.9 مليون ريال) .

المصدر: www.argaam.com

"الخزف السعودي" تعلن إنشاء مصنع جديد لإنتاج بلاط البورسلان

وافق مجلس إدارة شركة الخزف السعودي على إنشاء مصنع جديد لإنتاج بلاط البورسلان بأحدث التقنيات العالمية وبطاقة إنتاجية تقدر بـ 8.25 مليون متر مربع سنوياً ، وبتكلفة قيمتها 249.3 مليون ريال .

وسيتم تمويل المشروع من خلال الاقتراض والتمويل الذاتي ، وتضم الجهة المنفذة مجموعة من المصنعين والموردين داخل وخارج المملكة . وسيتم البدء في إنشاء المصنع خلال الربع الرابع من العام الجاري ، ويتوقع البدء في الإنتاج التجريبي للمشروع نهاية الربع الأول من عام 2023 ، على أن تكون مدة الإنتاج التجريبي شهر قبل بدء الإنتاج التجاري .

وتوقعت الشركة الانتهاء من إنشاء المشروع وبدء الإنتاج التجاري في الربع الثاني من عام 2023.

المصدر: www.argaam.com

الجمهورية العربية السورية

إرجاء قرار القضاء في قضية لافارج المتهمة بـ"التواطؤ في جرائم ضد الإنسانية" في سوريا

قرر القضاء الفرنسي إرجاء قراراته في التحقيق في أنشطة شركة لافارج الفرنسية لصناعة الإسمنت في سوريا حتى 2014 إلى 7 أيلول/ سبتمبر 2021 ، وهي الشركة المتهمة بـ"التواطؤ في جرائم ضد الإنسانية" .

ومن ناحية أخرى، فإن شركة الإسمنت التي لا تزال متهمة بـ"تمويل مجموعة إرهابية" و"تعريض حياة الآخرين للخطر" و"انتهاك

الحظر" ، واثنين من المسؤولين السابقين في المجموعة استأنفوا جميع الدعاوى المرفوعة ضدهم . وتواجه لافارج تهمة دفعها مبلغ 13 مليون يورو لجماعات مسلحة بينها تنظيم "الدولة الإسلامية" الإرهابي بين عامي 2013 و 2014 ، لضمان استمرار العمل في موقعها بسوريا .

المصدر: www.france24.com

شركة إسمنت عدرا تزيد إنتاج الكلنكر

حققت شركة إسمنت عدرا زيادة في انتاج الكلنكر بلغت 65 ألف طن خلال النصف الأول من العام الجاري مقارنة مع نفس الفترة من العام الماضي ، حيث وصل إجمالي الإنتاج لغاية يونيو / حزيران الماضي 231 ألف طن بمعدل زيادة 139 % فيما كان الإنتاج العام الماضي 166 ألف طن .

وتم تسجيل زيادة في إنتاج الإسمنت بلغت نحو 87 ألف طن لغاية يونيو / حزيران الماضي مقارنة مع نفس الفترة من عام 2020 ، حيث بلغ إجمالي كميات الإسمنت المنتجة خلال النصف الأول من العام نحو 327 ألف طن بمعدل تطور 136 % مقارنة مع نفس الفترة من العام الماضي والبالغة نحو 240 ألف طن .

كما حققت الشركة زيادة في كمية المبيعات من الإسمنت خلال النصف الاول مقارنة مع نفس الفترة من العام الماضي بمقدار 75 ألف طن وبنسبة تطور 132 % حيث بلغ إجمالي كمية مبيعات الشركة لغاية يونيو / حزيران الماضي من الإسمنت 327 ألف طن في حين بلغت في العام الماضي نحو 248 ألف طن .

وتستعد الشركة لإعادة تأهيل الخط الثالث وذلك بعد توريد مقاطع وبكرات للفرن حيث ستشمل عملية إعادة التأهيل استبدال مقاطع الفرن الثالث وتبديل مبرد الكلنكر وفلتر المبرد وتركيب قبانات على الخط الإنتاجي علماً أن الفرن الأول والثاني تمت إعادة تأهيلهما في العام الماضي ويتم إجراء صيانات مخططة لهما للمحافظة على أدائهما بشكل جيد حيث تصل الطاقة الإنتاجية لكل منهما إلى 700 طن يومياً تقريباً .

وتواجه عمل الشركة صعوبات أهمها الارتفاع الكبير في أسعار القطع التبديلية خاصة ذات المصدر الخارجي وارتفاع أسعار حوامل الطاقة من المازوت والفيول التي تشكل نصف تكلفة الإنتاج تقريباً وأسعار المواد الاولية اللازمة لعملية الإنتاج والنقص الحاد في اليد العاملة الخبيرة .

ومن أهم المقترحات لتطوير أعمال الشركة وتحسين وضعها إنشاء خط جديد لإنتاج البلوك وخط جديد لإنتاج الإسمنت بتقنية حديثة وطاقة إنتاجية عالية ورفد الشركة بالكوادر البشرية ، وتأمين مستلزمات الإنتاج الضرورية ذات المنشأ الخارجي .

المصدر: جريدة الثورة

جمهورية العراق

إنشاء معمل جديد للإسمنت في محافظة نينوى

أعلنت الشركة العامة السمنت العراقية بدء الإيذان بإنشاء معمل جديد لإنتاج الإسمنت ضمن مجمع معامل إسمنت بادوش في محافظة نينوى ، وذلك بعد التوصل لتحديد الشروط النهائية الخاصة للشراكة بالاستثمار وفق بنود العقد المبرم بين الشركة العامة للسمنت العراقية ، وبين شركة سوسيداد الإسبانية (Sociedad) الماسكة للمشروع الاستثماري الخاص بإنشاء هذا المعمل ، خاصة مع توافر الظروف الملائمة لتنفيذه لاسيما مرونة تسويق المنتج نتيجة قربه من مركز محافظة نينوى ، وتوافر مقالعٍ للمواد الأولية ، إذ يعتبر إنشاء هذا المعمل من التجارب الأولى والنوعية في محافظة نينوى كونه سيعمل على إنتاج أصناف متنوعة من مادة الإسمنت تتضمن (الإسمنت اللاصق ، والإسمنت الملون ، والإسمنت المقاوم للأملاح ، والإسمنت سريع التصلب ، والإسمنت فائق النعومة الخاص لتحشية أسس السدود ، وإسمنت آبار النفط ، والإسمنت البورتلاندي العادي ، إضافة إلى أنواعٍ أخرى من الإسمنت الصناعي المستخدم في مجالات أخرى غير البناء) .

وسيتضمن المعمل خطين إنتاجيين، وبطاقة إنتاجية تقدر بحوالي 4 آلاف طن يومياً ، وسيعمل بالطريقة الجافة وبمنظومة حرق ثنائية تعمل بوقود (النفط الأسود والغاز) .

وستكون مدة تنفيذ إنشاء المعمل خلال سنتين ونصف، متضمنة مفاصل المعمل الإنتاجية كافة من مختبرات (فيزيائية وكيميائية) ، وورش صيانة ، ومستوصف صحي ، إضافة إلى البنايات الملحقة للمعمل من مخازن وأبنية للموظفين . ووفقاً للخطط المستقبلية المعدة بين الشركة العامة للسمنت العراقية وشركة سوسيداد المستثمرة للمشروع ، يتطلّع الطرفان لضرورة توسيع الطاقة الإنتاجية للمعمل لتصل إلى قرابة 10 آلاف طن يومياً ، إذن أن الأهمية الحيوية لإنشاء هذا المعمل ستفضي إلى تغطية حاجة السوق المحلية ، وتلبيته لمتطلبات حركة البناء والإعمار في محافظة نينوى والمحافظات المجاورة لها .

دولة الكويت

الكويت تحظر تصدير الإسمنت وحديد التسليح

أصدرت وزارة التجارة والصناعة الكويتية قراراً يقضي بحظر تصدير وإعادة تصدير الإسمنت والأخشاب وحديد التسليح . ويأتي ذلك القرار ذلك حفاظاً على القيمة السوقية لمواد البناء بالسوق المحلي .

المصدر: www.mubasher.info

جمهورية مصر العربية

جهاز حماية المنافسة المصري يوافق على طلب 23 شركة إسمنت تخفيض الطاقة الإنتاجية

وافق جهاز حماية المنافسة المصري على طلب 23 شركة مصنعة للإسمنت تخفيض الطاقة الإنتاجية بشكل مؤقت ، محدداً خط أساس عند 10.69 بالمئة .

وقال قرار الجهاز المؤرخ في الخامس من يوليو / تموز إنه ستكون هناك تخفيضات إضافية 2.81 بالمائة لكل خط إنتاج وتخفيضات أخرى اعتماداً على الشريحة العمرية للشركة .

وقالت الوثيقة إن تخفيضات الإنتاج ستدخل حيز التنفيذ في 15 يوليو / تموز وتظل قائمة لمدة عام .

ويقول مسؤولون تنفيذيون في قطاع الإسمنت إن الطاقة الإنتاجية للإسمنت في مصر ارتفعت بشكل كبير في السنوات الثلاث الماضية بعد افتتاح المصنع البالغة طاقته 13 مليون طن سنوياً المملوك للجيش في بني سويف ، حتى مع انخفاض المبيعات المحلية إلى النصف . ويعتبر القطاع مؤشراً على انفتاح مصر على الاستثمار الأجنبي الذي كافحت من أجل استقطابه .

تستثمر شركات إسمنت أجنبية ، منها هايدلبرج سيمنت الألمانية وفيكا الفرنسية ولافارج هولسيم السويسرية وتيتان سيمنت اليونانية وسيمكس المكسيكية ، بكثافة في مصر بعد حملة خصخصة بدأت في التسعينات . وأنشأت أطراف محلية مصانعها الخاصة في وقت لاحق .

المصدر: www.cnbcarabia.com

"الناقول" السعودية تعلن بدء الإنتاج التجريبي لمشروع في مصر

أعلنت شركة أبناء محمد حسن الناقول عن انتهاء المرحلة الأولى من المشروع التوسعي في جمهورية مصر العربية التي ستبلغ قيمته الاستثمارية 5.33 مليون دولار . وقالت الشركة إنها تتوقع بدء الإنتاج التجاري للمشروع في الربع الثالث من العام الجاري ، على أن يكون التاريخ المتوقع للانتهاء من إنشاء المشروع هو الربع الرابع من العام 2021 .

وقامت شركة أبناء محمد حسن الناقول ، في وقت سابق ، بتأسيس شركة تابعة لها في منطقة العلمين شمال جمهورية مصر العربية في عام 2019 مملوكة لها بالكامل ، التي لم تزاول أي نشاط لها منذ تأسيسها والمتمركز نشاطها في صناعة المواد الإسمنتية (بلوك، خرسانة) .

المصدر: www.mubasher.info

ارتفاع صادرات الإسمنت المصري بنسبة 181 % خلال الـ 5 الأشهر الأولى من 2021

حققت صادرات مصر من الإسمنت ، خلال الفترة من يناير/ كانون الثاني – مايو / أيار 2021 ، نمواً ملحوظاً بلغت نسبته 181 % لتسجل ما قيمته 135 مليون دولار، مقارنة بنحو 48 مليون دولار خلال نفس الفترة من العام الماضي .

وأوضح التقرير الشهري الصادر عن المجلس التصديري لمواد البناء والحراريات والصناعات المعدنية أنه تم التصدير خلال 5 أشهر الأولى من العام لنحو 67 دولة منها 23 دولة لم يتم التصدير لها خلال نفس الفترة من العام الماضي .

وقد استحوذت بعض الدول على 77.8 % من إجمالي صادرات مصر من الإسمنت تصدرتها ليبيا والتي استحوذت على 19.8 % من إجمالي الصادرات بما قيمته 26.792 مليون دولار، تلتها كينيا مستحوذة على 16.3 % بما قيمته 22.09 مليون دولار، واحتلت ساحل العاج المرتبة الثالثة من حيث الدول المستوردة للإسمنت المصري مستحوذة على 12.5 % الصادرات بقيمة بلغت 16.921مليون دولار، ثم السودان بنحو 14.970 مليون دولار، وفي المرتبة الخامسة أوغندا بما قيمته 9.991 مليون دولار، فيما بلغت صادرات مصر من الإسمنت إلى غانا نحو 8.511 مليون دولار .

وبلغت صادرات الإسمنت إلى الكاميرون خلال الـ 5 أشهر الأولى من 2021 بلغت 5.757 مليون دولار ، فيما احتلت الولايات المتحدة الأمريكية المرتبة الثامنة من حيث الدول المستوردة بما قيمته 4.302 مليون دولار ، ثم فلسطين بما قيمته 3.091 مليون دولار، فالسنغال بنحو 2.523 مليون دولار .

www.youm7.com

المملكة المغربية

مصنع لافارج هولسيم المغرب الواقع في مدينة سطات يحتل الرتبة الثانية عالمياً

تبوأ مصنع لافارج هولسيم المغرب الواقع في مدينة سطات المرتبة الثانية عالمياً من حيث أكثر المصانع كفاءة في مجموعة لافارج هولسيم . وتم إنشاء مصنع الإسمنت الحديث هذا في عام 2005 ، على أساس الالتزام بحماية البيئة ، وقد شارك منذ أكثر من 15 عاماً في تطوير مناطق الدار البيضاء الكبرى والجنوب .

وأنتج هذا المصنع 1.7 مليون طن من الإسمنت ، ويوفر منتجات متنوعة لتلبية احتياجات المنطقة فيما يتعلق بالإنشاءات الفردية والمجمعات العقارية وأعمال البنية التحتية الرئيسية .

وتؤكد المجموعة أنه إجمالاً ، فإن 5 من أصل 6 مصانع للإسمنت التابعة لشركة لافارج هولسيم المغرب هي ضمن أفضل 20 مصنعاً عالمياً ، وذلك وفقا للتصنيف الذي يغطي 129 مصنعاً مدمجاً في الشبكة الدولية للمجموعة . ويعتمد هذا الترتيب على معايير الأداء الصناعي من حيث الكفاءة والتكلفة والتنمية المستدامة (الصحة والسلامة والبيئة والجودة) .

وجدير بالذكر أنه تم اختيار مصنع إسمنت سطات كمصنع تجريبي في إطار مشروع "مصنع الغد" . وتهدف هذه المبادرة إلى تنفيذ أحدث الابتكارات في تكنولوجيا الأتمتة والروبوتات والذكاء الاصطناعي والصيانة التنبؤية في جميع المصانع .

المصدر: https://aemaal.ma/

نشاطات عربية

منتدى المائدة المستديرة "دور السياسات العامة في تنفيذ الاستراتيجيات"
المكان: شرم الشيخ ، جمهورية مصر العربية
التاريخ: 24 - 26 أكتوبر / تشرين الأول 2021
الجهة المنظمة: المنظمة العربية للتنمية الإدارية – جامعة الدول العربية
للحصول على كافة التفاصيل يرجى التواصل مع د. داليا نصار / مشرف اللقاءات المهنية
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الصالون الدولي الثالث والعشرون للبناء ومواد البناء والأشغال العمومية
المكان: قصر المؤتمرات ، الجزائر
التاريخ: 07 - 11 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: BATIMATEC EXPO SPA
هاتف / فاكس:+21323354562 / +21323354561 / +21323354560 / +21323354555
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الموقع الإلكتروني: www.batimatecexpo.com

المؤتمر والمعرض العربي الدولي للصناعات الصغيرة والمتوسطة
المكان: قصر المعارض ، الجزائر
التاريخ: 04 - 06 ديسمبر / كانون الأول 2021
الجهة المنظمة: الاتحاد العربي لتنمية الصادرات الصناعية (AUIED) والشركة العامة للمعارض والتصدير الجزائرية (SAFEX)
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الموقع الإلكتروني: www.auied.com

الملتقى الثالث للمناطق الصناعية ودورها في جذب الاستثمار وتنمية الصادرات
المكان: طنجة ، المملكة المغربية
التاريخ: 14 – 16 ديسمبر / كانون الأول 2021
الجهة المنظمة: المنظمة العربية للتنمية الصناعية والتقييس والتعدين
الموقع الإلكتروني: www.aidsmo.org

دورات تدريبية عربية

البرنامج المتكامل لإعداد القادة
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 10 - 19 أكتوبر / تشرين الأول 2021
الجهة المنظمة: معهد التنمية الإدارية
للحصول على كافة التفاصيل يرجى التواصل مع إدارة التدريب:
جوال واتساب وفايبر: 00201091780140
بريد إلكتروني: Training@iadmena.com

إعداد الخطط المالية وقياس وتقييم الأداء المالي
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 31 أكتوبر / تشرين الأول - 04 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
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إدارة أزمات التواصل
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 18 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
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إنشاء وتطوير نظم الإحصاء
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 18 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
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الانتقال من بيئة العمل الرقمية إلى بيئة العمل الذكية
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 18 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
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مهارات البحث عن المعلومات في البيئة الرقمية
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 18 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
للحصول على كافة التفاصيل يرجى التواصل مع إدارة التدريب:
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إدارة الجودة الشاملة والتميز المؤسسي
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 23 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
للحصول على كافة التفاصيل يرجى التواصل مع إدارة التدريب:
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مهارات التفاوض وإعداد العروض وإبرام العقود
المكان: القاهرة ، جمهورية مصر العربية
التاريخ: 14 - 23 نوفمبر / تشرين الثاني 2021
الجهة المنظمة: معهد التنمية الإدارية
للحصول على كافة التفاصيل يرجى التواصل مع إدارة التدريب:
جوال واتساب وفايبر: 00201091780140
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كيفية تحديد القدرة اللازمة لتدوير ناقل مطاطي

إعداد مهندس أقدم / نمير عبدالغني محمود / معمل سمنت بادوش الجديد - العراق -

تعتبر النواقل المطاطية (belt conveyors) من أفضل الأنظمة لنقل المواد والمنتجات النهائية كأكياس السمنت حيث تتألف منظومة الناقل المطاطي من حزام مغلق ذي مقاومة عالية للشد بسبب وجود طبقات من الألياف الداعمة داخله تحافظ على تماسكه أثناء العمل ، ويتألف كذلك من أسطوانتين قائدة ومقادة (driver & driven) مرتكزتين عند نقطتين بينهما مسافة محددة وبينهما عدة أسطوانات صغيرة تحت الناقل يرتكز عليها الحمل المنقول.

من خصائص الناقل المطاطي أن صيانته سهلة وغير مكلفة وأن لديه القدرة على نقل وتفريغ المواد ذات الكثافة العالية بكميات كبيرة واقتصادية وكفاءة عالية عبر مسافات طويلة . يمكن أن يكون الناقل المطاطي بشكل أفقي أو مرتفع أو منخفض بزاوية أو جميع ذلك .

عند تصميم منظومة الناقل المطاطي يجب أن نأخذ بنظر الاعتبار النقاط التالية : (الأبعاد ، سرعة الناقل ، أقطار الأسطوانات القائدة والمقادة ، موقع وترتيب الأسطوانات ، القدرة الميكانيكية المطلوبة ، المحرك الكهربائي ، قطر القارنة ، أقصى سعة تحميل).

تعريف مفردات المعادلات:
القدرة اللازمة P(KW) ، العزم على محور الأسطوانة القائدة T(N.m) ، السرعة الزاوية ω(rad/s) ، قوة سحب الناقل F(N) ، نصف قطر الأسطوانة القائدة R(m) ، قوة الإعاقة D(N/m²) .

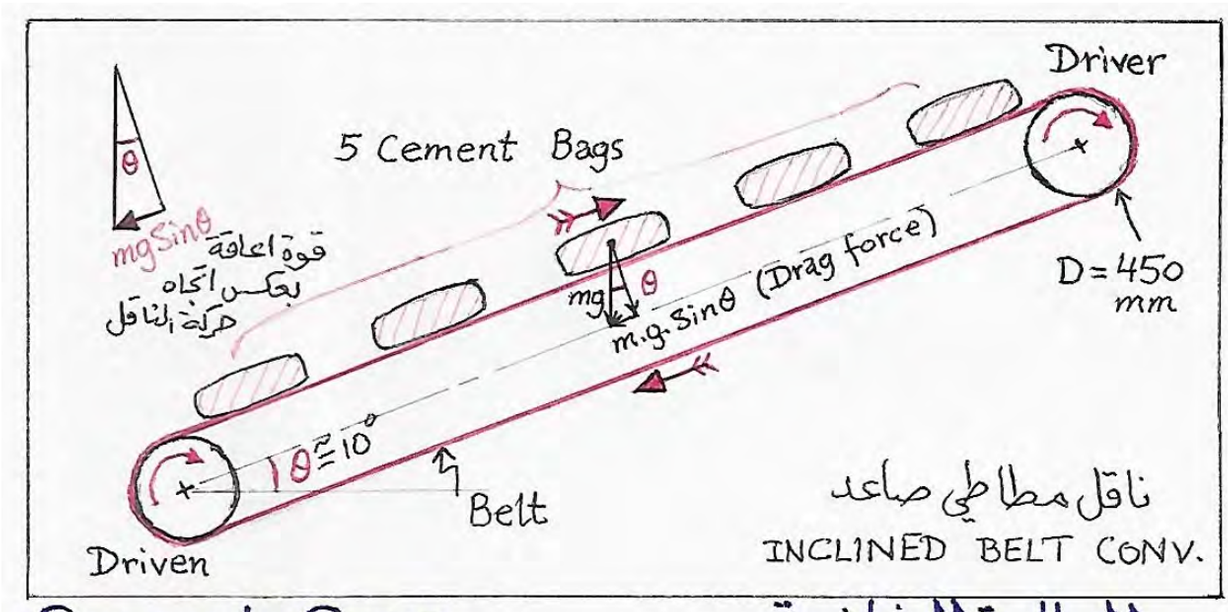
فرض القيم: كتلة الحزام المطاطي = 100 kg ، نصف قطر الأسطوانة القائدة = 0.225 m ، سرعة دوران الأسطوانة القائدة = 60 rpm ، المسافة بين مراكز الأسطوانات = 5 m

- الحالة الأولى: الناقل أفقي ، زاوية الميلان = صفر
القوة الساحبة للحزام المطاطي = (وزن الكيس الواحد X عدد الأكياس) + وزن الحزام المطاطي
F = ((50 X 9.81) X 5) + (100 X 9.81) = 2452.5 + 981= 3433 N
T = F X R = 3433 X 0.225 = 772 N.m
P = T X ω = 772 X (2 X 3.14 X 60/60) = 4848 W ؛ Power required = 4.8KW

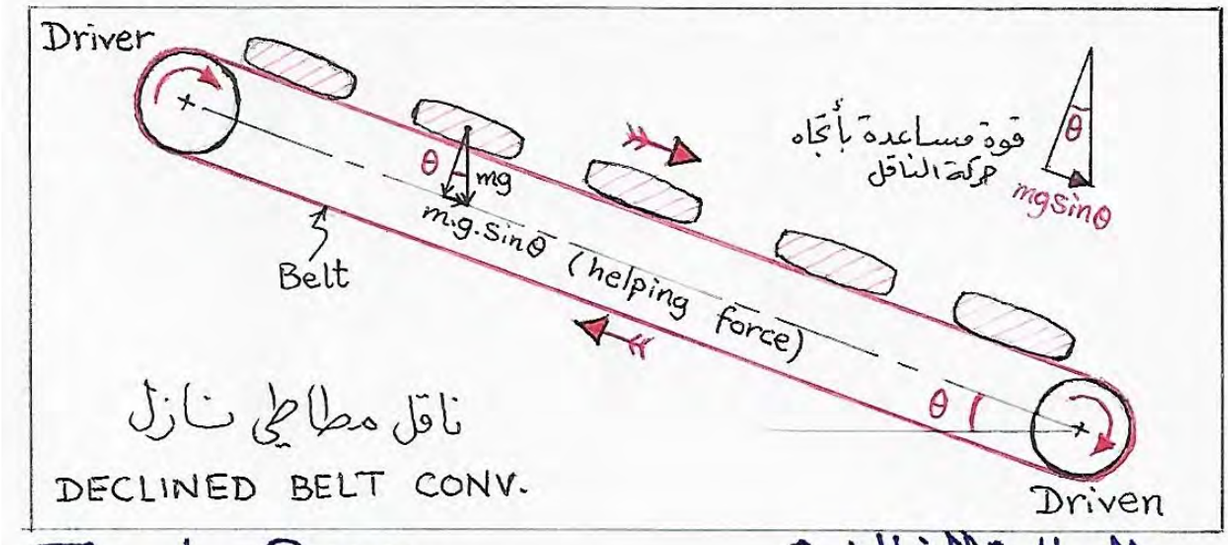
- الحالة الثانية: الناقل صاعد ، زاوية الميلان = 10 درجات ،لاحظ المخطط أدناه .
القوة الساحبة للحزام المطاطي = (وزن الكيس الواحد X عدد الأكياس) + وزن الحزام + قوة الإعاقة
فقوة الإعاقة تتمثل بمركبة وزن أكياس السمنت = 250 X 9.81 X Sin 10 عكس اتجاه حركة الناقل ، كما أن هناك إعاقة وزن الحزام العلوي ولكنها تحذف بسبب القوة المساعدة لوزن الحزام السفلي مع اتجاه الحركة.
F = ((50 X 9.81) X 5) + (100 X 9.81) + ((50 X 9.81) X 5) Sin 10 = 3859 N
T = F X R = 3859 X 0.225 = 868 N.m
P = T X ω = 868 X (2 X 3.14 X 60/60) = 5451 W ؛ Power required = 5.4KW

- الحالة الثالثة: الناقل نازل ، زاوية الميلان = 10 درجات ، لاحظ المخطط أدناه .
القوة الساحبة للحزام المطاطي = (وزن الكيس الواحد X عدد الأكياس) + وزن الحزام - القوة المساعدة
فالقوة المساعدة تتمثل بمركبة وزن أكياس السمنت = 250 X 9.81 X Sin 10 باتجاه حركة الناقل .
F = ((50 X 9.81) X 5) + (100 X 9.81) - ((50 X 9.81) X 5) Sin 10 = 3007 N
T = F X R = 3007 X 0.225 = 676.5 N.m
P = T X ω = 676.5 X (2 X 3.14 X 60/60) = 4248 W ؛ Power required = 4.2KW

قارن الآن بين قيم القدرة المطلوبة والتي على أساسها سيتم اختيار المحرك الكهربائي والمرتبط به صندوق تحويل السرعة (الكير موتور) سيتبين أن أقل قدرة مطلوب توفيرها هي في الحالة الثالثة ، أما أعلى قدرة مطلوبة فهي في الحالة الثانية .



Second Case الحالة الثانية



Third Case الحالة الثالثة

الصحة والسلامة المهنية

إعداد م. رئيس مهندسين
صباح أحمد محمود

السلامة المهنية: هي مجموعة من النظم والتدابير التي توليها إدارات المصانع الحديثة أهمية كبيرة والتي بموجبها يتم حماية العامل والمنشأة من الأخطار والإصابات المحتملة أثناء العمل.

فروع السلامة المهنية :

1. الأمن الميكانيكي : ويختص بطرق الوقاية من الأخطار الميكانيكية الناتجة عن الآلات والعدد اليدوية والميكانيكية ومجمل الظروف المسببة لذلك .
2. الأمن الكهربائي : ويركز على طرق الوقاية من أخطار الكهرباء ويهتم بوضع لوائح تعليمات للوقاية من الأخطار الكهربائية .
3. الأمن الكيميائي : ويركز على طرق الوقاية من الأخطار الناتجة عن مداولة المواد والعمليات الكيميائية أيضاً .

الإصابات :

هي ذلك الحادث غير المتوقع والذي ينتج عنه تلف من درجة معينه للإنسان أو الآلة ويؤخر سير العمل .

أنواع الإصابات :

1. مباشرة : ناتجة عن التعرض الفجائي لحادث يؤدي إلى ضرر مثل : سقوط مادة كيميائية حارقه على جسم الإنسان... إلخ .
2. غير مباشرة : ناتجة عن ممارسة العمل لفترة طويلة في مكان ما يتعرض فيه العامل لمواد ضارة دون الأخذ بالشكل الجيد لمستلزمات الوقاية الصحية / الفردية كانت أو الجماعية / المفترضة.

أسباب الحوادث أو الإصابات في العمل :

- قلة التوجيه وضعف التدريب من قبل المختصين المتخصصين لهذا الغرض .
- ضعف الخبرة لدى العاملين (ضرورة الانتباه إلى إعداد الكادر وتأهيله وتدريبه لما يتناسب مع تطوير الآلة التي يعمل عليها) .
- سلوك العامل أثناء العمل (يجب أن يتصف العامل بالاتزان والجدية وعدم العبث والمزاح أثناء العمل واتخاذ وظيفة العمل المناسبة لضمان عدم تعرضه للإصابة) .
- الحالة الصحية للعامل (مراعاة واقع العمل الصحي بما يتناسب مع واقع العمل المنسوب إليه) .
- الحالة النفسية للعامل (مراعاة الحالة النفسية وتفهمها والتعامل معها بما يتناسب مع مصلحة العمل) .
- عدم استعمال وسائل الوقاية الفردية (الخوذة ، الكمامة ، النظارة الوقائية ، .....إلخ) .
- عدم وجود وسائل وقاية الآلة (أغطية نواقل ، حبال أمان ، حواجز.....إلخ) .
- إهمال الصحة وعدم التقيد بمعلومات الطبيب.

أثر حوادث العمل على الإنتاجية الساعية :

- الإنتاجية الساعية = كمية الإنتاجية ÷ عدد ساعات العمل .

أي أن الإنتاجية الساعية تتأثر بحجم الإنتاج وعدد ساعات العمل .

- هناك ارتباط وثيق ما بين ساعات العمل وعدد الحوادث وذلك بسبب توقف المصابين عن الإنتاج .

واجبات لجنة السلامة العامة :

· وضع لوائح الأمن الصناعي مبيناً فيها التعليمات بشكل واضح .

· تصميم التقارير والسجلات والخاصة بالحوادث .

· إعداد البرامج التدريبية بالتنسيق مع مسئولي التدريب والأقسام .

· إعداد التقارير الدورية عن الحوادث .

· عمل دراسات دورية مبنية برسوم إحصائية وتقييم نتائج الإجراءات المستخدمة .

أنواع الحرائق:

الحرائق الناتجة عن مواد صلبة : (أخشاب ، ورق ، نفايات ..... إلخ) .

الحرائق الناتجة عن مواد سائلة : (النفط ومشتقاته ، محاليل كيميائية..... إلخ) .

الحرائق الكهربائية : (مس وشرارات كهربائية ، انفجارات في بعض القواطع) .

مواد الإطفاء:

· الماء : لا يستخدم في إطفاء حرائق النفط وبعض المواد الكيميائية .

· CO_2 : غير قابل للاشتعال (أثقل من الهواء) .

· الرغوة الكيميائية : وهي فقاعات مملوءة بثاني أكسيد الكربون .

· المساحيق الكيميائية : وهي مواد إطفاء فعالة في حالة حريق الزيوت

بعض المواد السامة وطرق الإسعاف الأولي من تأثيراتها:

1 - HNO_3 : تأثيره مهيج للمجاري التنفسية وللعين وفيه خطورة على الحياة .

- الإسعاف اللازم: هواء نقي ويوضع المصاب مستلقيا على ظهره ويستنشق الأكسجين ويعالج بمرطبات طبية معروفة لدى الطبيب .

2 - H_2SO_4 : أبخرته تهيج الغشاء المخاطي .

- يحمل المصاب إلى العيادة الطبية لغسل المجاري التنفسية بمحلول $NaHCO_3$

3 - NaOH ,KOH : تأثيره مهيج وحارق .

- الإسعاف اللازم : يحمل المصاب إلى العيادة الطبية ويجب أن يستنشق بخار الماء مضافاً إليه حمض الليمون مع شرب الحليب والعسل .