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Al Tasnim Group invests in the future with two High Capacity block making machine plants in Muscat and Sohar

For four decades, the family owned company Al Tasnim Group has got a solid reputation for quality, the company has grown to be the one that leads the industry in contracting, manufacturing of cement products, building finishes products & roads, asphalt & infrastructure works, amongst other product offerings. Being a technology and innovation leader in the concrete products making machines, the Hess Group attracted the attention of Al Tasnim Cement Products, which has been looking for high performance and high capacity vibrating press, advanced and flexible software and state of the art batching and mixing plant, in addition to premium aftersales service, Al Tasnim aims to maintain its pioneer position in the Sultanate of Oman.

The mixing plant, machine and handling system were supplied by Hess, while the curing racks was ordered to Rotho, and the other local works and supplies Al Tasnim could manage it with its highly skilled and experienced staff.

SM3375 / SM400 Mixing plant

The production of high-quality concrete products requires mixing technology that delivers precise results each and every batch, Hess SM-Series mixing technology consistently dis-

penses very good concrete mix in short time, the SM-Series of planetary mixers feature:

- Self-supporting construction with lower and upper frame.
- Stopping and starting the loaded mixer is possible anytime.
- Two large discharge openings in the mixer floor.
- Clean-out time significantly reduced due to minimal deposit build-up (special water inlets).
- Special cement input device allows dust-free cement adding operation.

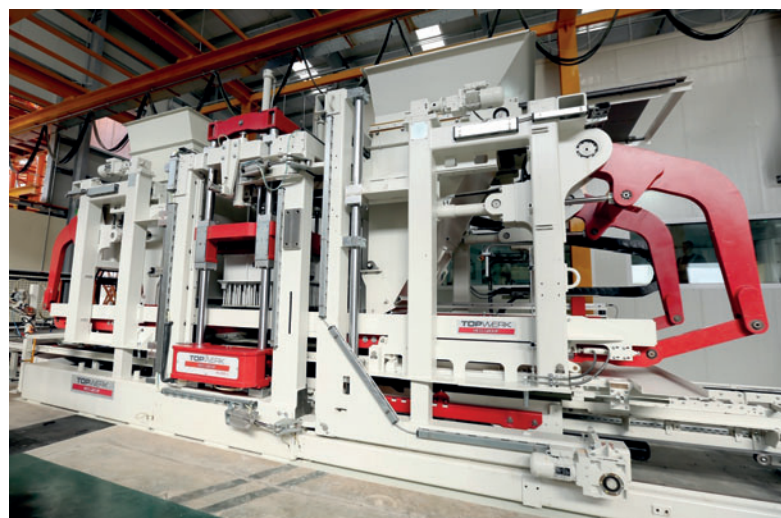
The SM400 mixer is equipped with frequency converter to adjust the speed according to the mix recipe, for example for using Silica in the mix it is required to reduce the speed to avoid the heat.

Machine RH2000-3 MVA

The RH 2000-3 is a high end production machine which combines many years of machine building experience with the latest proven M-Version technology, from the most exact dimensional tolerances to the strongest durability in concrete den-



SM3375 / SM400 Mixing plant



Hess RH 2000-3



Manufacturing Excellence

Unrivalled performance technology that delivers high quality innovations. Greater Output.

High reproducibility. Less Waste.
Reduced Downtimes. Easier to operate and maintain.

World-class know-how. Every Cycle.



Concrete block making machines | Mixers
Transport and handling systems | Slab presses
Pipe and manhole making machines
Machines for concrete infrastructure products
AAC plants | Value adding lines and systems

sity, the pallet size 1400x1300 mm and production area of 1300x1250 mm, twin vibration table which can only be offered by Hess, along with amplitude control and the Hess patented oil bath vibrators. Furthermore, the machine face mix and base mix silos and filling boxes are equipped with laser sensor to measure the concrete level accurately for even filling of the mould in the whole production area.

The M Technology is the latest technology in the industrial hydraulics, with Rextroth Multi-Access Control (MAC8) all movements and positioning mechanisms of machine components are controlled by a dedicated hydraulic system and CNC Control unit which communicates with PLC of the machine, maintaining equal oil pressure on both side of cylinders provides sequence benefits provides in unrivalled results: Harmony, Precision and Performance. the smooth and easy operation of the M-Version RH2000-3 production machine assures the greatest economic efficiency for the producer in his marketplace.

Twin vibration table amplitude controlled with oil bath.

Hess maintains the most advanced operating system with fully electronic control which extremely accurate, the rotation speed and amplitude can be adjusted and programmed for optimal results during mould filling and main compaction operations, Ideal compaction for complete range of products achieved in short cycle times, the advantage of the oil bath vibrators which are mounted in closed casings filled with oil is the reduced downtime with lower maintenance because of the permanent lubrication of the bearings, running dry inside the casing is impossible.

Fully automatic transfer and handling system

To cope with the speed of the RH2000, it is necessary that the handling system can be harmonized to manage the cycle time with smooth operation, that is why Hess provides the

Digital innovations & know-how transfer in the concrete block industry

Qualified employees are the key to success. That also applies to the concrete block industry. To this end, Hess from Burbach has already established the Hess Training Academy in 2016. The training programme, which now also takes place in Canada, Australia, Dubai and Russia as well as in Burbach, is based on a basic course as well as intensive training in mechanics, hydraulics, control, process engineering and concrete technology. The training units build on each other and enable the successive training and advanced training of the employees. The training courses are practically oriented and thus closely related to the everyday challenges in the industry. In five-day blocks the participants learn the main points of the individual technical areas and can incorporate experiences from their own companies. In addition to the structure of a concrete block making machine, the basic programme includes explanations of major topics such as machine settings, maintenance intervals and the principles of concrete technology for the manufacture of concrete products. Moreover, the basic course includes work safety training tailored to the machines. Hess thus banks on best practice to increase productivity.

Furthermore, Topwerk is presenting two further innovations in after-sales service at the bauma 2019 that will optimise digital know-how transfer. The machine manufacturer from Wahlbach makes use of augmented reality.

Through the use of smart glasses there will in future be extended support for maintenance and cooperation between the machine operator and the Help Desk employee. The AR glasses enable the Support employee, together with the machine operator, to check the existing situation directly - as if he were on site - and to determine the possible solutions. Recommended actions can be given over the telephone or displayed directly in the glasses. The machine operator thus has the possibility to act "hands-free" and to directly implement the help desk employee's instructions and suggestions. Written instructions can be translated into over 140 languages with the smart glasses, thus greatly facilitating communication. In addition to the functions mentioned, maintenance instructions can be displayed, photos and videos captured in HD quality and streamed, and further experts all over the world can be brought in.

The Topwerk app has been created hand-in-hand with the smart glasses, which are available for the Hess, Sr Schindler, Prinzing Pfeifer and Hess AAC companies. Depending on the group company, the app contains not only company information, but also functions to accompany the AR glasses, information on the service portfolio and contents of the Training Academy, which are freely accessible following participation.

Topwerk is thus extending digitisation in the concrete block industry by a new level.





Fully automatic transfer and handling system

servo-driven V-belt conveyor after the machine, and because the solid blocks is an important product for the customer, Hess provided 24 Ton finger cart, elevator and lowerator, with heavy duty chains and rigid structure, the production of solid blocks can be as efficient and smooth as the production of hollow blocks, also the latest cuber fully electric driven with servo motors and loading capacity of 700 kg and additional four sided stone squeezer were installed with very short cycle time in the wet side.

Al Tasnim decided to go for manual strapping of the ready products, but with flexibility for future upgrade, Hess provided the heavy-duty slat conveyor with I-profile to give the customer the flexibility especially for vertical strapping without shipping pallets.

Software expansion, external networking ability and data recording.

The automation and integration is an emerging need in the Middle East, the demand for automatic data transfer between the plant and the Company's ERP software is increasing rapidly, the recipes and production data are saved in the usual SQL data format, and can be read and processed with Al Tasnim own ERP system.

Additionally, each pallet which is produced by the machine, is given an ID which can then be followed through the entire plant (including chambers), the system stores all data related to the product with the assigned ID such as vibration duration and force, block height, the quality characteristics and time and date, these can be used later for automatic follow-up inspection or ejection, all the saved product parameters are also assigned in turn to the data recorded in the batch, such as machine, machine location, product, job, shift and so on. This means that all the layers recorded in a stack can be traced back with all the product parameters.

"Nowadays, the customers expect much more than a machine to produce concrete, the Middle East market is shifting dramatically to be technology oriented" Said Mohammed Tayseer Qasem General Manager of Top Werk Middle East.

The after sales service was also a very decisive factor for the customer to decide buying from Hess, with the increasing number of machines in the Middle East under the umbrella of Top Werk Group, Top Werk Middle East has been expanding and recruiting talents from the region, to maintain premium after sales support for the client of Top Werk companies.



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FURTHER INFORMATION



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