

PRESS RELEASE

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Path-Breaking Quantum Leap in Stationary Processing Technology

SBM Mineral Processing GmbH shows what is possible today and will be absolutely necessary in the future with construction material recycling for the company Wilhelm Büchel AG.

Throughout Europe, industrial society is facing enormous challenges in the building industry. In many booming markets in Europe the apparently almost limitless construction volume meets the necessity to prudently use mineral raw materials. The practice of careless use or even waste definitely belongs to the past. Today, it is essential to focus on mineral processing and recycling of construction materials. Pushing back the frontiers of technology is of utmost importance since approval authorities still have reservations concerning the use of recycled materials in many places. SBM Mineral Processing can proudly announce to have found a future-oriented solution for these problems, a real milestone. In close co-operation with a client the SBM engineers managed to design a processing plant for recycling material that represents a real quantum-leap for the efficient use of resources.

Meeting Highest Demands

Tender specifications were very ambitious indeed. The company Wilhelm Büchel AG from Liechtenstein wanted to replace the 120,000 tons of raw gravel previously sourced elsewhere p.a. to produce construction concrete as completely as possible. Excavated soil and mixed rubble which are abundant during the construction activities of the company should be recycled and reused for the production process of new concrete instead. Thanks to its long experience in the construction of stationary processing plants, SBM Mineral Processing managed to master this challenging task. Due to their extensive core competences the SBM experts were able to combine the essential components from crushing and screening expertise to conveying and silo technology from one single supplier.

Complex Technology in Perfect Harmony

Principally, the complete material flow is similar to classical gravel processing. Pre-crushed material is washed and classified in various steps. As usual in contemporary efficient gravel works, the purely physical process takes place from above to below following gravitation to keep the outside energy requirements to a minimum. The technological challenge lies in implementing the requirements of a future-oriented ecological sustainability in combination with the highest purity grade of the final mineral products. Washing and separation procedures as well as their position in the complete flow must fit in with each other seamlessly. Additionally, a largely automated process is desired to realise the economic demands of the client. This is valid for the separation of all ferrous and non-ferrous parts and also includes the separation of the

lightweight fractions in a pulsating upwards flow where e.g. impurities such as plastics or wood are removed reliably. At certain key points flexible adaptation to various application scenarios allows for numerous options. Upon demand, individual processing steps can be connected or disconnected during the washing process resulting in additional efficiency. Since the feed material consists of recycling materials of varying quality, the plant is provided with two completely separated closed water circuits. Processing covers every single step to the final product and finishes with drained screening which is seamlessly followed by the recipe-based removal of the grain sizes required for the respective concrete production.

Fulfilling All Requirements

Precision and highly-efficient implementation combined with a perfectly harmonised flow of operation make the difference. SBM fitted together the complete technological equipment of the plant with the precision of a clockwork, and the client gave this processing procedure a special name: BUREMA (BUechel-REcycling-MAchine). The name says it all, as the whole extremely complex plant works like a perfectly matched homogenous machine. The plant was an immediate success working extremely profitably for Wilhelm Büchel AG right from the start. The responsible persons of Wilhelm Büchel AG confirm: “Our objectives have been completely achieved, material re-integration into the concrete production cycle comes to almost 100 %.” Everybody was very impressed by the top quality of the final products: “Today we can justifiably call the output of BUREMA secondary raw materials; previous definition restrictions of recycling materials are not valid any more”, says Mario Schweizer, Sales Expert at SBM. All relevant physical and chemical properties of the raw gravel coming from BUREMA correspond to appropriate products made of primary raw materials. The high and reliably consistent quality has also convinced the approval authorities.

Fit for the Future

Harmonic matching of the individual plant components is an integral part of the successful overall concept. Thanks to the flexible design and the multitude of options the technology can easily be transferred to varying applications and markets. “We at SBM have also learned a lot during projecting and realising BUREMA. Now we know even better what is technically feasible and how it can be implemented,” underlines Mario Schweizer the valuable experience. Based on the certainty to be able to reinforce the claim to technological leadership, the design engineers of SBM Mineral Processing are confident that the authorities in major European markets such as the Netherlands, Switzerland, Austria and South Tyrol are prepared to accept secondary raw materials in tenders. Highest quality is an absolute necessity for the constantly increasing level of regulations. And here SBM is a pioneer with its technological expertise – well-prepared to fulfil future demands.

SBM Mineral Processing

The company SBM Mineral Processing GmbH from Oberweis near Gmunden is a manufacturer of premium-quality and eco-friendly plants and machines for the raw materials and recycling industries as well of concrete mixing plants for ready-mixed

and prefab concrete. As a quality and technology leader with highly-esteemed process expertise and know-how SBM is a well-established and highly appreciated global player on the world market. SBM belongs to the MFL Group represented in more than 50 countries all over the world.

Photos:

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Bild 1: It was a real challenge to find the place for a complex stationary plant with numerous processing steps in such a confined space.



Bild 2: The silos were integrated in the concrete construction and the processing unit was placed above in the steel construction (picture taken shortly before establishing the housing).



Bild 3: The SMR 10/5/4 Impact Crusher made by SBM crushes the oversize fractions to re-integrate them into the production cycle.

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