

Ensuring Quality and Innovation: The Role of Laboratory and “Development and Technology” Department

Autoclaved aerated concrete has developed into a successful product in many countries around the world in recent decades. This success is based on the exceptional properties of this material. High strength with low weight, low drying shrinkage, low thermal conductivity and high fire protection are just some of the outstanding properties: All this at an economical price. However, for manufacturers – especially newcomers – ensuring consistent quality and efficient production requires extensive process knowledge and reliable technology.

Wehrhahn customers are supported in their search for locally available raw materials. Detailed analyses are carried out in the technical centre.



Established producers know what requirements must be placed on the raw materials used. However, there are also many ‘newcomers’ who have invested in an autoclaved aerated concrete production plant or intend to do so, who have no or only limited process knowledge. Wehrhahn recognized this fact many years ago and supplies not only highly efficient technology, but also the complete package for the necessary process engineering. This comprehensive package provides newcomers with the essential support needed for a successful market entry.

The Role of the Wehrhahn Laboratory

The Wehrhahn laboratory offers the key to a successful market entry. Customers are already supported in their search for locally available raw materials. Detailed analyses are then carried out in the technical centre in the Headquarters in Delmenhorst, Germany.

Once the optimum raw materials have been selected, the production of autoclaved aerated concrete begins in a manner similar to large-scale produc-



Sebastian Sanders, Product Manager AAC at Wehrhahn

"Customised solutions are often required for changing and globally varying market requirements. A trusting partnership with our customers throughout the entire system life cycle is important to me and the entire Wehrhahn team. New impulses from demanding customer requirements, and our own innovative ideas as well as the constant further development of proven plant technology are important in order to be and remain competitive.

As 'Product Manager Aerated Concrete', it is important to me to analyse, understand and continuously improve processes. I am responsible for providing reliable system technology for current and future market requirements. It gives me great pleasure!"

tion later in the factory. The Wehrhahn technical centre makes it possible to produce AAC in classic block dimensions (e.g. 600 mm x 200 mm x 150 mm). A 500 litre autoclave is used for the autoclaving process. The autoclave control system is exactly the same as that developed by Wehrhahn for large-scale production (WACO). This means that the entire cycle consisting of vacuum, pressure ramp-up, holding phase and controlled pressure release can be reproduced.

The manufactured blocks are then tested for their physical properties in accordance with the applicable standards. Finally, the crystal structure is analysed in an X-ray diffractometric analysis (XRD). The quality and quantity of the formed tobermorite has a significant influence on the quality of the autoclaved aerated concrete.

The laboratory specialists give the "green light" once all quality parameters have been met, and the customer can be sure of being able to produce excellent AAC. Incidentally, the same specialists are also on site during the commissioning of the plant and accompany the customer until the plant fulfils all guaranteed parameters.

The laboratory services are therefore an indispensable part of every Wehrhahn AAC project.

The 'Development and Technology' Department

At Wehrhahn, the laboratory is an integral part of the 'Development and Technology' department, which drives continuous innovation and product improvement. Innovations often originate from customer requirements and are implemented into new machines and production systems.

The primary objectives of the department include:

- Developing machines and technologies for future-proof autoclaved aerated concrete products that meet the demands of different global markets.
- Ensuring consistency in development by integrating innovations and Continuous Improvement Processes (CIP) into all projects immediately upon implementation.

The Wehrhahn laboratory in conjunction with the 'Development and Technology' department are the cornerstones for the continuous further development of Wehrhahn systems and technologies. Customers all over the world rely on this. ●



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