



STRENGTH

With a Certain Light Touch

Autoclave aerated concrete's attributes of lightness, strength and environmental virtues make it an increasingly attractive building material. And as the industry's pioneer and leader, Dutch-based Aircrete Europe is moving into new global markets, taking with it its powerful and unique "technological partnership" concept. Colin Chinery reports.

Aircrete - autoclave aerated concrete (AAC) - is an environmentally friendly, lightweight, foam concrete building material. Resource and cost-efficient, it's a "perfect combination of lightness and strength," said Wojtek Horala, Business Development Manager of world leading panel technologies provider, Aircrete Europe.

The Netherlands-based company specialises in delivering the most innovative turnkey AAC plants and cutting-edge plant technology around the world. With more than 40 years of experience and a 30-strong innovative team, Aircrete Europe uses advanced technologies and process knowledge as the foundation for its unique and tailored plant solutions.

"Aircrete is providing greener, faster and better building technologies for the world of tomorrow," said Mr Horala.

AAC building materials are used in the social, housing, industrial and commercial markets. Asia and South America in particular are growth regions, served from Europe by more than 100 factories; 30 in Germany, 25 in Poland and eight in the UK.

Impressive Benefits

"AAC has a perfect combination of lightness and strength," stated Mr Horala. "It is concrete, so it's structural, and it is light because of the thousands of entrapped air bubbles within it. The latter defines the

high thermal conductivity, the fire proof and lightness of structures and the benefit this brings during installation. We are talking about a very efficient building product made relatively cheaply out of abundant natural raw materials. It's a massively applied product."

A specialist company in a relatively small industry operating a niche market with just five European suppliers of this type of machinery, Aircrete Europe's competition is from larger, volume-orientated companies delivering machines across a range of industries. In contrast Aircrete Europe is a specialist, its forte turn-key factories and innovative technology to the specific AAC niche market.

"We go much deeper, with a scope of offering and serving way beyond simple machinery supply," said Mr Horala. "As technology partners for our clients we start every project with extensive preparation, listening to the customer's requirement and investment expectations, evaluating the local market, and then designing a factory to suite, fully optimised for logistics, operational preferences and costs. So every factory is different, we don't have machines off the shelf."

Headquartered in Oldenzaal in the east Netherlands, the €20million turnover Aircrete Europe is a family-owned company founded by Willem van Boggelen, whose revolutionary engineering and customised plant systems have made a unique and defining imprint on the sector. ▽



“We constantly strive to innovate and improve our systems; this is one of our beliefs and way of working. This goes beyond machine supply into process know-how, and means a lot in terms of an existing factory.

“If you have a factory and wonder how you can improve performance, our engineers will review and carry out what we call a plant scan or technical audit to evaluate the quality of the factory, bottlenecks and potential improvement area. And I would say this is the biggest differentiation between us and the competition.”

This intimacy with the ‘coal face’ is reflected in the company’s Mexican operation, where the investment arm of Aircrete Group, the mother company of Aircrete Europe, is a shareholder.

“Since we deliver the systems and also own the factory this puts us in a unique position,” said Mr Horala. “For example, we know how to set up a shift programme, what it means to have a power outage, or how to deal with staffing issues. This is what we offer our customers, and it goes far far beyond machine supply.”

With a dedicated team of highly qualified engineers and technology experts continuously working to improve systems, Aircrete Europe is investing continuously in innovation and process technology to enable its customers to secure the competitive advantages of cutting-edge technology and high quality building solutions.

Trend Setter – and Watcher

“We support our customers by closely following the latest construction trends in the global markets. We have partnerships with local and international architects, building authorities and civil engineers directed towards increasing and customising our wide and innovative product solutions for the world of tomorrow.

Mr Horala concluded: “Aircrete Europe is a full technology partner not just a machine supplier, and this results in a far higher value service for our customers. And as a world leader we have the capacity and the technology, and are always open for new partnerships and new opportunities.”

Formerly part of the Dutch conglomerate Stork, it became independent in 2002, and since 2013 has been a member of the Aircrete Group focusing on fully integrated business solutions and investment opportunities related to the autoclaved aerated concrete industry in selective high growth markets.

“It is now our mission and strategy to bring this proven building material to Latin America and North America, and we are also looking at China and the Middle East,” said Mr Horala. “We want to help these countries build faster, more efficiently, and more environmentally friendly. You build in weeks instead of months and you lessen the consumption of raw materials.”

Traditionally AAC is made into block shapes ready for building – a material very familiar in Britain. “Blocks are great; they have thermal installation, fire-proof-ness and ease of high workability. But we make AAC in large format with re-enforced steel so that the products are load-bearing – and this opens up a completely new range of applications and benefits putting them ahead of the alternatives in the building market.”

Aircrete’s unique structural load-bearing elements can be used up to four levels high. In high rise buildings AAC is used as partitioning, as in the tallest building in the world, the 828m (2,717 ft) 163 floor Burj Khalifa tower in the UAE.

The unique Aircrete Europe system of cutting line also allows for the efficient production of AEC panels – large format, pre-fabricated elements – which according to Mr Horala are “one step above the traditional, bringing a new type of product and new advantages.”

One of the most important innovations brought to the market by Aircrete is the Super Smooth cutting line that allows for production of superior quality AAC products with an exceptional finishing. The main characteristic is the extremely smooth surface which has revolutionised the way buildings can be designed and built.

“Out of the hundred factories in Europe only a few have the capacity to produce these re-enforced elements and these are the ones that have our technology. We are the provider of the world leading panel technologies,” said Mr Horala.

With different capacities and kinds of product, and with waste levels defined, the cutting line is a key factor. “This is the heart of an AAC plant and the place where the factory product portfolio is defined,” he added. “Picking the right technology for cutting is critical in this business.”

Partners in Technology

All Aircrete Europe machines are first built and tested, then disassembled and shipped to a site for assembly. “This is where other suppliers finish their job but we are technology partners with the customer for the long run.”

The company’s outstanding customer focus can be seen in the time its engineers and service teams devote on the factory floor, talking with the operators and understanding issues and problems. And as a full technology partner, Aircrete Europe makes its expertise and experience from plants and markets widely available across its client base.

