

# AAC

Autoclaved  
Aerated  
Concrete

## WORLDWIDE ACADEMY

Istanbul, Türkiye | May 29-31, 2024



# AAC Academy *presented by AAC Worldwide*

With the first AAC Academy, your trade journal AAC Worldwide is expanding its range of services. The AAC Academy is a specialised event exclusively for decision makers and plant managers in the autoclaved aerated concrete industry.

The core component of the AAC Academy is an intensive and interactive workshop, complemented by technical and scientific presentations. Furthermore, a visit of a state-of-the-art autoclaved aerated concrete plant will be offered.

An exclusive social programme invites you to expand your professional network.

## Key facts AAC Academy Istanbul, May 29/31, 2024

- *Workshop 1:* Challenging the interfaces of production, quality management and marketing with various focal topics.
- *Workshop 2:* Sustainably increase profit contribution by optimising processes and costs along the value chain in purchasing.
- *Keynote:* Prof. Dr. Alper Ilki, Professor of Structural Engineering at Istanbul Technical University (ITU): State-of-the-art design and -construction with AAC in seismic regions.
- *AAC Academy Sponsor Presentation: Representative of Progress Group*

- *Market Place:* Networking and knowledge exchange with international key actors of the AAC industry.
- *Plant Tour:* Visit to the state-of-the-art production plant (blocks and panels) of Türk Ytong, Istanbul.
- *Social Programme:* May 29: Welcome reception incl. drinks and snacks.  
May 30: Exclusive boat trip on Bosphorus river incl. dinner with local delicacies on the river bank.

The contents of the workshops are prepared and planned in close consultation with industry experts and specifically to the needs of the participants. The workshops are moderated and conducted by internationally recognised experts with relevant and long-term experience in the autoclaved aerated concrete industry.

The primary goal of the AAC Academy is to impart specialist knowledge that will help to find and optimise important levers in the company. By participating in the AAC Academy, companies invest in their most valuable asset – their employees!

The AAC Academy is a specialised event exclusively for decision makers and plant managers in the AAC industry.

LIMITED CAPACITY

AAC Academy Istanbul  
registration fee: 1490 €

Registration at  
[www.aac-worldwide.com](http://www.aac-worldwide.com)



## A complex approach to autoclaved aerated concrete – the path from raw material to sustainable exterior wall

Turbulent times bring unrest but are also a guarantee for creativity and change. The industrial production of AAC stands for this development. Equipped with a wealth of tradition, the technology is synonymous with the pursuit of aesthetic value, energy-efficiency and ecology. It is therefore worthwhile to invest in the future, not only in modern plant technology, but also in the skills and abilities of the employees.

This workshop is intended to discuss the challenges at the interfaces of production, quality management and marketing with the following main topics.

### Raw materials

- a) Interactions of raw materials in the interfaces of the production process. Which corrective actions have a decisive influence?
- b) Technological aspects for sustainable cement selection – towards the path to recarbonation by using CO<sub>2</sub>-reduced CEM II cements.
- c) New laboratory method for the quantitative determination of the cost/performance ratio of building materials for use in the AAC industry.

### Quality management

- a) Key technological parameters at all stages of production – control and implications in case of deviations from the target value.
- b) Impairment of tobermorite formation, causes and process control.

c) Development of cracks in certain stages of production, causes and process control.

d) Determination of the true composition of building materials in the freshly prepared slurry as a basis for error analysis and mix design optimization.

### The external wall

d) Composition, mode of action and possible functional defects in the interfaces of the integral components - from the AAC block to the adhesive and plaster systems.

e) Cracks in the external wall. What are the root causes? A survey from the AAC blocks, over the masonry until the plastering system as such.

f) Performance comparison of the aerated concrete wall with other external wall systems. How to develop a product-market strategy for performance selling of building materials by using a holistic approach of product properties, processing advantage and customer benefit?

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Prof. Dr. Jürgen Oecknick, Managing Director of PSA Zurich Area GmbH, Switzerland – 40 years of professional practice in the national and international building materials industry and as a university lecturer on the subject of building materials process technology & marketing; experience in the manufacture and distribution of cement, concrete and autoclaved aerated concrete; he has worked for Schwenk, Dornburger Zement, Holcim and others.



SPEAKER

## Sustainably increase profit contribution by optimising processes and costs along the value chain in purchasing

In the AAC sector, the purchase of raw materials, packaging and energy plays a major role and determines the profitability of the company. Transparency about these essential costs and resulting optimizations will determine a company's competitiveness in the future.

For this reason, the workshop will deal with the following focal points:

1. How do I professionalize purchasing with the help of detailed, region-specific manufacturing cost analyses and price trends, using the AAC industry as an example?
2. What resulting levers emerge to optimize conditions and achieve savings?
3. What opportunities do I have to generate additional savings through targeted and data-driven negotiations?

The practical workshop will give you a deep insight into possible improvements in purchasing, which can be directly implemented in companies with an impact on results.



Jens Hornstein is 51 years old, Senior Partner and member of the management board at Kerkhoff Consulting. For more than 16 years, he has been assisting companies – including those in the construction and chemical industries – in optimizing their purchasing and supply chains with the aim of optimizing processes and structures as well as generating savings. Before joining Kerkhoff Consulting, the industrial engineer worked in purchasing at Bosch in China and Germany.

## Seismic Response of AAC Structures: State-of-the-art testing, -design and -construction in seismic regions

This keynote will focus on seismic behaviour of load-bearing blocks and wall panels with a minimum density class of 600 and minimum strength class of 5. The first comprehensive studies investigating the seismic response of AAC structural components was started in 2003 at the University of Texas at Austin. Various type of load-bearing walls constructed with blocks or panels were tested under reversed cyclic loadings.

More recently, another comprehensive research project started in 2015 at Istanbul Technical University (ITU) and Middle East Technical University (METU), which was funded by Turkish Autoclaved Aerated Concrete Association (TAACA). Both universities performed material tests, wall tests, and structure tests constructed with wall panels. In addition, METU also tested infill walls with a density class of 400 and strength class of 2.5.

In this presentation, the results of the experimental tests conducted within this project from material scale to full-scale building scale and the seismic design rules developed for load-bearing AAC structures in the light of these experiments will be shared. Furthermore, the reasons of relatively rare use of load-bearing AAC structures in Turkey, despite its obvious advantages, and opportunities for improved seismic performance of AAC block non-structural infill walls to avoid damages and resulting casualties and injuries will be discussed.

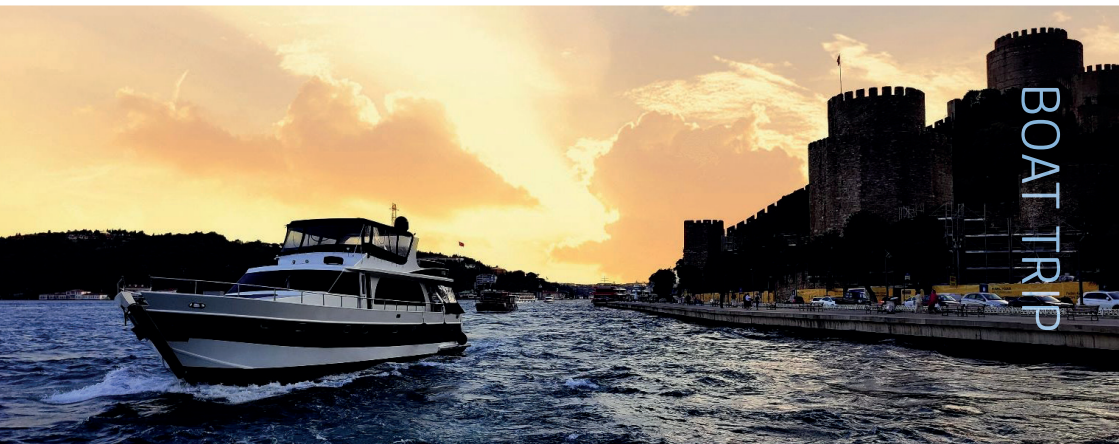
Finally, an evaluation of potential use of AAC structures right after earthquakes for sheltering purposes will be presented focusing on its rapid assembly features and comfort with respect to other alternatives.

# SPEAKER



Alper Ilki is Professor of Structural Engineering at Istanbul Technical University (ITU), Türkiye. Some of many of his professional achievements are:

- Author/co-author of 85+ journal papers (SCI or SCIE) and 220+ international conference papers
- Supervised/co-supervised 20 completed Phd theses and 71 MSc theses
- Ranked among top 2% researchers worldwide in civil engineering based on citation score in 2020 (Stanford University and Elsevier)
- Ranked as the top researcher at ITU Civil Engineering Department based on the academic activities conducted between (2016-2021) and (2017-2022) with the score of 100% (by ITU Administration)
- Member of Board of Directors for Turkish Catastrophe Insurance Pool, DASK (2017-)
- President/Member of Board of Directors for Turkish Earthquake Foundation TDV (2021/2018-2021)



# BOAT TRIP



## Visit to the state-of-the-art production plant (blocks and panels) of Türk Ytong, Istanbul

The logo for Türk Ytong, consisting of the word "YTONG" in a bold, black, sans-serif font, centered within a solid orange square.

Türk Ytong was established in 1963 by a group of engineers and investors led by Bülent Demiren, an entrepreneurial engineer, in partnership with Sweden's Ytong International AB, by the approval of the Council of Ministers. Türk Ytong started production in 1965 in its first factory in Istanbul-Pendik with a capacity of 50.000 m<sup>3</sup>.

Today, a total of six plants with a production capacity of up to 2.5 million m<sup>3</sup> of Ytong and 50,000 m<sup>3</sup> of Multipor operate in Turkey in a 25 percent partnership with the Xella Group. Türk Ytong is Turkey's leading and one of the world's leading AAC producers.

### AAC Academy Sponsor

The logo for Progress Group, featuring the word "PROGRESS" in white, bold, sans-serif font on a blue rectangular background, followed by the word "GROUP" in black, bold, sans-serif font on a yellow rectangular background.

As a leading full-range supplier for the reinforcement industry, Progress Group develops machines and plants for manufacturing autoclaved aerated concrete reinforced panels. An increasing number of AAC panels are used in prefabricated construction, produced with highly automated solutions and complete logistic systems.

With its CAD, ERP and MES systems for business and production processes Progress Group also delivers integrated software solutions for AAC producers.

*presented by*

**AAC** WORLDWIDE

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