

OSKAR VON MILLER FORUM

Press Release

Opening of the exhibition *Visionäre und Alltagshelden* (Visionaries and Everyday Heroes) at the Oskar von Miller Forum on 9 November 2017 at 6:30 pm

Engineers play the leading role in the exhibition entitled *Visionäre und Alltagshelden. Ingenieure – Bauen - Zukunft* (Visionaries and Everyday Heroes. Engineers – Build - Future). As inventors, designers, entrepreneurs and doers, they implement spectacular project ideas while also responding to society's everyday needs. The exhibition outlines the historical development of the profession, building a bridge to the present and giving an outlook on the future. Protagonists and milestone projects, traditional building projects and innovations document the social, cultural and technological relevance of civil engineering.

The Oskar von Miller Forum presents the exhibition in cooperation with the M:AI Museum für Architektur und Ingenieurkunst NRW. As part of the opening on 9 November 2017 at 6:30 pm, civil engineer Bill Addis from the University of Cambridge will give a lecture about modern structural engineering yesterday and today. Bill Addis has been studying the history of construction engineering and building materials for nearly 40 years. Dipl.-Ing. Univ. Michael Kordon, 1st vice president of the Bavarian Chamber of Civil Engineers (*Bayerische Ingenieurekammer-Bau*), will give a welcoming speech, followed by Ursula Kleefisch-Jobst, General Curator of the M:AI - Museum für Architektur und Ingenieurbaukunst, who will present an introduction to the exhibition.

The exhibition is open from 10 November 2017 until 14 January 2018, from Tuesdays to Sundays from 12 noon to 6 pm; admission is free. The publication supporting the exhibition will be published in November 2017 by DETAIL Verlag.

THE IDEA

"We want to drink clean water, drive on safe bridges, live in good, earthquake-proof and beautiful houses and enjoy the appearance of the places we live in."

Wilhelm Vossenkuhl in the publication for the exhibition

Philosopher Wilhelm Vossenkuhl uses these words to describe people's basic needs, such as protection, supply and mobility, thereby underscoring the social, cultural and technological relevance of construction engineering.

The exhibition aims to explore the profession of structural engineers and the construction sector as a key industry in economic, social and societal terms. At the same time, it portrays the fascinating and diverse range of services offered by engineers and hence by the construction industry in all facets: captivating, comprehensive, innovative and solution-oriented. Looking back on history and focussing on current projects, it presents

renowned engineers, their innovations and buildings against the background of the respective social, economic and political influences.

"In every single segment of their work, in each individual project, construction engineers have the whole of life in mind and not just the solution to one problem, and they have to think about the entire spectrum. The building materials and structural considerations are as inseparable from health as they are of questions of profitability or urban planning or environmental protection. This overall responsibility is hard to top."

Wilhelm Vossenkuhl in the publication for the exhibition

THE EXHIBITION

The exhibition is structured in two core sections. An overall presentation shows the historical development of the profession: milestone projects, innovations and outstanding protagonists are linked to social and economic events.

The second part positions extraordinary current projects in the context of the challenges and needs of society. The wide range of disciplines involved in today's construction sector shows how the profession has evolved from one of traditional structural engineers to one of engineers who think and act in interdisciplinary terms.

Part 1 – Overall presentation – Networks of engineering expertise

The history of construction is presented in the context of social, political and economic events with a unique focus on connections and networks among eminent engineers, inventors and entrepreneurs. This three-dimensional portrayal allows visitors to learn more about the collaboration of leading figures in the history of the building and to discover unexpected interconnections.

Part 2 – Milestones for the future

The second part of the exhibition presents recent architectural engineering highlights. The building process of spectacular and innovative structures in the spheres of transport/mobility, water, energy and building engineering is presented in photos, illustrations, models and videos.

Examples:

Yavuz Sultan Selim Bridge 2016

This 1408-metre-long novel suspension bridge spans the Bosphorus and connects Europe with Asia.

Bayerische Zugspitzbahn 2017, Garmisch-Partenkirchen, Germany

The aerial cable car carries half a million passengers to the top of the Zugspitze every year. It only crosses one pylon during its 4.5-kilometre trip, and its 3,213-metre free span is the longest in the world.

The Brenner basis tunnel, Austria/Italy

The underground railway tunnel between Innsbruck and Bolzano, scheduled to be completed by 2025, will be the longest railway tunnel in the world, with a length of 64 kilometres.

New Oxford Circus, London, UK

Located in the heart of London, Oxford Circus is crossed by 43,000 people and 200 cars every hour. A novel traffic management system that is new to Europe provides more space for pedestrians and cyclists.

Floating wind farm – Hywind, Scotland

At the end of 2017, a wind farm will be commissioned off the coast of Scotland with five wind turbines mounted on floating foundations.

Emscher Conversion Project 2020, Ruhr Region, Germany

The ecological conversion of the Emscher River to a regional drainage system is an enormous construction challenge that follows the end of mining operations in the Ruhr area.

Burj Khalifa 2010, Dubai, United Arab Emirates

Towering 829.8 metres with its antenna, this building is presently the world's tallest skyscraper. It gave rise to a new type of structural system known as the "buttressed core," characterized by extraordinary transverse and torsional stiffness.

Life Cycle Tower (LCT) One 2012, Dornbirn, Austria

A renewable raw material, wood is gaining new significance in building. Constructed in a wood hybrid design, the Life Cycle Tower is the first wooden high-rise to reach a height of 27 metres.

Roof of National Stadium in Warsaw 2011, Warsaw, Poland

Stadium roofs made of light, translucent membrane materials point the way to the future –unobstructed views for spectators and cameras, mobility and optimal light conditions for the playing field and athletics tracks.

ICD/ITKE RESEARCH PAVILION 2013/14, Stuttgart, Germany

Computer-based design and simulation methods and computer-controlled production chains as well as novel fibre composites today enable us to approach the complex structures and models found in nature.

THE PROGRAMME ACCOMPANYING THE EXHIBITION

9 November 2017, 6:30 pm

Lecture to celebrate the opening of the exhibition (registration: info@ovmf.de)

Bill Addis / University of Cambridge

Bauingenieurwesen – gestern und heute (structural engineering – yesterday and today)

16 November 2017, 6:30 pm

Discussion round with

Daniel Straub / Chair of Engineering Risk Analysis and Reliability, Technische Universität München (TUM) and Norbert Gebbeken / President of the Bavarian Chamber of Civil Engineers

Risikomanagement im Bauwesen (Risk management in structural engineering)

30 November 2017, 6:30 pm

Lecture "Brenner Base Tunnel"

Daniel Schwarz / BBT SE, Innsbruck

30 November 2017, 6:30 pm

Lecture and discussion with

Annette Bögle / HCU HafenCity University of Hamburg and Oliver Fischer / Chair of Concrete and Masonry Structures, Technische Universität München (TUM)

Ingenieure und ihre Verantwortung für die Gesellschaft (Engineers and their responsibility for society)

11 January 2018, 6:30 pm

Lecture and discussion with

Knut Göppert / sbp schlaich bergemann partner / Stuttgart and Kai-Uwe Bletzinger / Chair of Structural Analysis, Technische Universität München (TUM)

Innovationen und neue Materialien im Bauwesen (Innovations and novel materials in the construction sector)

VENUE AND OPENING HOURS

Oskar von Miller Forum, Oskar-von-Miller-Ring 25, 80333 Munich

www.oskarvonmillerforum.de

10 November 2017 until 14 January 2018, Tuesdays to Sundays, 12 noon to 6 pm

Free admission

The M:AI will present the exhibition in North Rhine-Westphalia in the first half of 2018. A publication (in German) accompanying the exhibition will be published by DETAIL-Verlag.

OSKAR VON MILLER FORUM

The Oskar von Miller Forum is an educational initiative of the Bavarian construction industry for construction engineers and is sponsored by *Stiftung Bayerisches Baugewerbe* (Bavarian Construction Industry Foundation). With its programme, the international and interdisciplinary forum provides outstanding input and inspiration for the education of future civil and environmental engineers and architects at the Technical University of Munich and of construction technicians at the College of Construction Engineering.

The Oskar von Miller Forum offers regular events about architecture and engineering. Lectures by internationally renowned scientists, civil engineers and architects and exhibitions devoted to construction engineering give a broad audience insight into the topic of building.

Museum für Architektur und Ingenieurkunst NRW M:AI – always on location, never the same place.

The Museum für Architektur und Ingenieurkunst NRW has been devoted to current topics of construction culture since 2005. While its office is based in Gelsenkirchen, it does not have a permanent exhibition building. Taking the form a mobile museum, it is unique worldwide. The M:AI tours through all of North Rhine-Westphalia, but also the other federal states of Germany, mainly featuring exhibitions since 2008. M:AI develops a unique presentation design for each topic, making the exhibition building itself the most striking and largest exhibit.