

Liebherr continues its commitment to research as one of the main sponsors of the reference construction site on the West Campus in Aachen

Aachen (Germany), 20 February 2020 – The Center Construction Robotics, of which the Liebherr Tower Cranes division is a founding member, enables science and industry to conduct research under real conditions.

It is important for Liebherr to work closely with research: "Our innovations are born on the construction site. That is why we see our involvement in the powerful research network at RWTH Aachen as a perfect opportunity for developing innovations early, with a view to the future and with clear market focus" says Stefan Strauch, Production Managing Director of Liebherr's tower crane division.

RWTH Aachen University officially handed over a 10,000 square meter site to the Center Construction Robotics (CCR) in the Construction Cluster for its envisaged reference construction site. An interdisciplinary team of RWTH Aachen academics will use digitalization as its research basis in the Center Construction Robotics in conjunction with a European industry consortium at this construction site of the future – research topics will include many issues from pre-production of construction elements to fully automated construction sites. The reference construction site, a pilot project starting up temporarily on Campus West, will serve as a reality laboratory. New construction processes and products, networked machines, the implementation of robots, software solutions, as well as teaching, working and communication concepts will be tested under real construction site conditions here. The Federal Ministry of Education and Research is currently funding an initial research project. In addition to Liebherr's tower crane division, PORR AG, EIFFAGE, LEONHARD WEISS GmbH & Co. KG, HILTI AG and Autodesk GmbH are main sponsors from the industry. They provide financial and infrastructural support for the reference construction site.

Thomas Rachel (Parliamentary State Secretary in the Federal Ministry of Education and Research), Dr. Jan Heinisch (State Secretary in the Ministry for Regional Identity, Communities and Local Government, Building and Gender Equality of the Land of North Rhine-Westphalia), Marcel Philipp (Lord Mayor of Aachen) and Professor Ulrich

Rüdiger (Rector of RWTH Aachen University) praised the project headed by the Academic Director of the Center Construction Robotics, Professor Sigrid Brell-Cokcan. Other high-level representatives of four faculties involved in the research consortium Construction of RWTH Aachen – among them Professor Katharina Schmitz (Head of the Institute for Fluid Power Drives and Controls) and Professor Markus Oeser (Decan of the Faculty of Civil Engineering) – attended the official start of this groundbreaking project.

Other sponsors of the reference construction site

The Center Construction Robotics will be planning and coordinating operations of the reference construction site on Campus West. This collaborative project was made possible for the most part on the basis of a Crowdsourcing effort by all members of the Center Construction Robotics, members of the Center Mobile Machinery, the AACHEN BUILDING EXPERTS e. V. and a number of RWTH institutions. In addition to the main sponsors, various companies from a range of industry sectors are similarly involved in the reference construction site, including Doka GmbH, KUKA Deutschland GmbH, Saint-Gobain, Annen GmbH + Co.KG, Lamparter GmbH & Co. KG, Robots in Architecture Research UG, BROKK AB, Wurst Stahlbau GmbH, Volvo Construction Equipment Germany GmbH.

Federal government funds first research project with 3.2 million euros

The first research project “Internet of Construction (IoC)” at the reference construction site is a joint venture of three institutes and seven industry partners. The Ministry of Education and Research is contributing 3.2 million euros within the scope of the research program “Innovations for Production, Services and Employment of Tomorrow”, which is scheduled to continue for three years. Thomas Rachel, Parliamentary State Secretary in the Federal Ministry of Education and Research, explains: “The construction sector has always been one of the key industries in Germany and is therefore hugely important. We want to support industry efforts to master the challenges faced by digitalization. That is why the Federal Ministry of Education and Research is sponsoring the development and implementation of an innovative information network for the partners involved in the construction. The project aims to improve adherence to schedules and construction quality in general.

Furthermore, the project will generate new collaboration models for the construction sector of the future.”

Reference construction site in accordance with the excellence strategy of RWTH Aachen University

Professor Ulrich Rüdiger, Rector of RWTH Aachen University, highlighted the importance of the reference construction site in context with the excellence strategy: “The development of this reference construction site follows the concept of excellence here at RWTH Aachen. Infrastructures used jointly, will further the collaboration within RWTH and with our partners. A reality laboratory of this kind complies exactly with the central focal points of our application: Knowledge. Impact. Networks. In collaboration with many partners, we will be generating knowledge on the reference construction site with enormous social implications. This is the first step in a transformation process, which will trigger far-reaching positive developments.” Marcel Philipp, Lord mayor of Aachen, welcomed the temporary implementation of the reference construction site: “Over the coming years, we will be building the future of Aachen as a research location on Campus West. Initially, we will be focusing on the future of the construction sector. It will allow us to highlight the fact that all industries will be affected by the coming digital transformation. And fact is that many great solutions are created right here in Aachen.”

The goal: Development of a far-reaching network of strong partners

The reality laboratory forms the starting point for the development of a far-reaching European and regional network for research, industry and teaching joint ventures in the area of construction transformation. The reference construction site will bring together partners from all areas of the construction sector, as well as regional partners like AACHEN BUILDING EXPERTS e. V., educational institutions of the construction industry association (Bauindustrieverband), the Aachen Chamber of Trade (Handwerkskammer) and bauformstahl, the central industry association for construction involving steel in Germany, as a key component of that network. In effect, the network will allow the knowledge transfer of research results and teaching concepts directly to the industry by way of focused development and further education projects. The new international Master in Construction & Robotics at RWTH Aachen University

will commence in April 2020 with Bachelor-level students from four different disciplines: Mechanical Engineering, Computer Science, Civil Engineering and Architecture.

Fair use principle will allow access to the reference construction site for many stakeholders

“We find it very important to ensure that as many stakeholders as possible will be able to utilize the construction site as a ‘living lab’ for transformation”, explains Professor Sigrid Brell-Cokcan the philosophy behind the reality laboratory. “Start-ups, businesses, public stakeholders, private individuals or research institutions from the construction industry – everyone will be able to access the construction site facilities provided by industry partners and the outdoor areas as maker spaces as part of the fair-use principle.” Anyone contributing to or adding infrastructure to the joint venture project, will be given the opportunity to utilize the construction site facilities at a reduced cost or even free of charge for a specific amount of time with professional supervision. The temporary reference construction site will additionally be made available as a basis for various student projects and a variety of teaching formats across multiple faculties.

Caption

liebherr-reference-construction-site-main-and-secondary-sponsors-project-stakeholders.jpg

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