

## **Large-scale fire tests should bring clarity - modular construction is being further researched in North Rhine-Westphalia**

**The Ministry for Regional Identity, Local Government, Building and Digitalization of the Land of North Rhine-Westphalia is funding a project on innovative building by the Center Building and Infrastructure Engineering of RWTH Aachen Campus. This includes a series of large-scale fire tests of entire room cells, which will be carried out at the Fire Testing Centre Erwitte of the Materials Testing Office of North Rhine-Westphalia (MPA NRW).**

**Erwitte, 11th October 2022** - Today, the Center Building and Infrastructure Engineering (CBI) starts the first of six planned large-scale fire tests on entire modular room cells under standardized fire loads at the Materials Testing Office of North Rhine-Westphalia at the fire testing center in Erwitte. The aim of the series of tests, which are funded with 350,000 € by the Ministry for Regional Identity, Local Government, Building and Digitalization of the Land of North Rhine-Westphalia, is to gain further knowledge about the fire resistance of modular building constructions. With the tests, CBI would like to contribute to further strengthening modular construction not only in North Rhine-Westphalia but throughout Germany and to streamlining planning and approval processes in the future. CBI of the Construction Cluster on RWTH Aachen Campus has already been investigating the topic of modular building since 2019. In addition to numerous representatives from science and industry, Ina Scharrenbach, Minister for Regional Identity, Local Government, Building and Digitalization of the Land of North Rhine-Westphalia, is also on site and will personally get an idea of the trials.

"Modular construction can be a key to quickly creating affordable housing. Safety is also the top priority in modular construction. That is why good and targeted fire protection research is extremely important. With the support of the state government of North Rhine-Westphalia, the fire protection performance of modular steel buildings will be examined in greater detail through series of tests. We hope that the results will be used to develop generally applicable fire protection certificates for modular buildings, so that approval processes can be streamlined in the future. With the funding, we are thus giving the impetus for faster and safer construction not only in North Rhine-Westphalia, but throughout Germany," explains Scharrenbach.

Modular construction, and in particular the room cell construction method, is a promising answer to the challenge on the real estate market. Modular construction has developed in many ways in recent years and offers a fast and high-quality creation of residential, health, education and care real estate. It is therefore right that all parties involved pull together to overcome challenges. Dr. Carl Richter, Managing Director of CBI, comments on the modular construction activities in North Rhine-Westphalia and especially on RWTH Aachen Campus: "We were able to successfully continue our consortial cooperation on RWTH Aachen Campus with industry and authorities and thus establish a hotspot for modular and room cell construction in North Rhine-Westphalia. We are very happy that with the research project funded by the state of North Rhine-Westphalia we can contribute to a possible standardization for room cell construction beyond the state borders." The Erwitte Fire Testing Centre of the North Rhine-Westphalia Materials Testing Office supports the project. The largest test stand at the Fire Testing Center was specially adapted for these fire tests so that complete steel modules can be tested under normative full fire and actual load assumptions. The completion of the fire test series is planned for 2024.



**Photo caption:** Thomas Krause-Czeranka (MPA NRW), Jörg Blöming (Member of State Parliament District Soest), Ina Scharrenbach (Minister for Regional Identity, Local Government, Building and Digitalization of NRW), Carl Richter (CBI) and Hendrik Henneböhl (Mayor of Erwitte) at the Materials Testing Office NRW

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## **RWTH Aachen Campus**

RWTH Aachen Campus helps to make the research competence of RWTH Aachen University more visible. The project creates a network of science and industry. Experts conduct research on defined, relevant topics. Clusters represent the long-lasting research areas. These are divided into Centers in which interdisciplinary teams of scientists and industry consortia work together on specific future issues with visionary approaches.

[www.rwth-campus.com](http://www.rwth-campus.com)

## **Construction Cluster**

The Construction Cluster deals with innovations and new technologies as well as their implementation and introduction in the construction industry. One focus is the networking of devices and machines in order to digitally map the increasingly complex construction processes in the context of Building Information Modelling (BIM) and thus design construction projects more efficiently and optimally support strategic planning. The following Centers form the main research areas in the Construction Cluster: BIM Center Aachen, Center Building and Infrastructure Engineering, Center Construction Robotics, Center Mobile Machinery and Center Factory Planning.

<https://www.rwth-campus.com/en/research/construction-cluster/>

## **Center Building and Infrastructure Engineering (CBI)**

The Center Building and Infrastructure Engineering (CBI) in Construction Cluster was launched at the beginning of 2019 with ten enrolled companies. Meanwhile, 28 companies from various areas of the construction industry are active in the CBI. Together with industry and authorities, the CBI aims to implement innovations and technology transfers more efficiently and thus bring them more quickly from the laboratory to the construction site. An important part of this is the development of standards.

<https://cbi.rwth-campus.com/en/>

## **Fire Test Centre Erwitte of the Materials Testing Office of North Rhine-Westphalia (MPA NRW)**

The MPA NRW as a state enterprise of the federal state of North Rhine-Westphalia fulfils important tasks to ensure the safety of buildings in Germany. Today, the Fire Test Center is one of the leading test centers for the fire behaviour of building materials and components in Europe and is notified on the basis of the European Construction Products Regulation.

<https://www.mpanrw.de/en/>

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