

## GERMANY

## FOSTERING INTER-DISCIPLINARY TRANSFER IN CONSERVATION

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The Heritage Conservation Center Ruhr ([hcc.ruhr](http://hcc.ruhr)) was founded in May 2020 and is a project of the Materials Science Department of the Deutsches Bergbau-Museum Bochum, the German Mining Museum. It is based in the Ruhr region, a landscape with a long experience in the reuse and preservation of industrial heritage. Between the Ruhr and Emscher mostly mines, collieries, blast furnaces are situated - industrial heritage here usually means former Industries in a mining context.

To start with our vision. Industrial heritage conservation measures require interaction between engineers, the natural sciences, and humanities scholars. For example, an owner asks for the coating of a corroded part of an industrial plant that is out of use and considered cultural heritage. The problem may be mostly technical if the coating is intended to be transparent. But the moment an owner asks for a pigmented coating that lasts longer, the impression of the part and the plant will change considerably. Engineers and conservators must make their decisions in a constant interaction: what will the part look like after it is coated, how do we avoid visually separating it from the rest? How do we integrate it? Or do we have to go back to a transparent coating? These questions can only be answered by conservators and cultural historians together.

To support this interaction, we are a team of three people. The project coordinator, Dr Roman Hillmann, is a building historian who evaluates historic importance and conservation ethics. Dr Julia Baak is a mechanical engineer with a doctorate on cavitation, that now works about corrosion analysis and coating of corroded parts. Thirdly, Katrin Liffers is a linguist who has developed the specific approaches that we need to transfer conservation knowledge not only to professionals, but also to lay people.

All our activities are about the transfer of technical and cultural history knowledge and its interaction. This is why Leibniz Association in Germany has financed [hcc.ruhr](http://hcc.ruhr) for three years in a funding program called Leibniz Transfer. We create these transfers through conferences and in conservation projects. Our main outcome will be a well-structured website that will lead users to articles about coatings, corrosion, re-use and various other fields needed for preservation. It will be in English and German, bringing together international colleagues and institutions. We want to spread topics of industrial heritage conservation in an interaction between humanities and natural sciences, and in awareness of climate change and the extinction of species.



Measuring of the thickness of coatings in the laboratories of German Mining-Museum Bochum. Photo: Helene Grebe



Dr Roman Hillmann, Katrin Liffers and Dr Julia Baak. Photo: J. Baak

The [hcc.ruhr](http://hcc.ruhr) interacts with continuing conservation projects. Here we take part in the development of new technologies, that are required and cannot be taken from other examples. Our main cooperation partner is the Zollverein Foundation, which is responsible for the Zollverein UNESCO World Heritage Site with its coal mine and coking plant. Here we are testing coatings of corroded metal parts on a long-term basis. Test-surfaces made more than 15 years ago on steel ovens in Hattingen in the south of Bochum are revisited, tested in our laboratories at the German Mining Museum Bochum and the experience used to make new trials on Zollverein Coking plant. We also use laboratories and graduate research from the University of Applied Sciences Georg Agricola (THGA) in Bochum, the second of our closest partners. THGA will introduce a master program Material Engineering and Industrial Heritage Conservation (MEIHC) in the winter 2021/22. This is a valuable part of





Industrial Heritage, heavily weathered: How to deal with it? Tubular coolers as part of the Ammonia-Washer in the coking plant of Zollverein. Photo: R Hillmann

our transfer strategy, because knowledge of hcc.ruhr and its partners will be taught to students in MEIHC courses.

We will take part in TICCIIH 2022 in Montréal with two themes. In one section, building engineers and architects will show examples of hard conservation facts that they deal with. The section thereby fosters transfers from related disciplines into industrial heritage conservation. Our second activity at TICCIIH 2022 will be a round-table on Heritage Conservation and Climate Change (HCCC). The catastrophe of climate change is on our heads, but we still only

begin to think of actions against it! This is why the HCCC Round-table will be a general brainstorming to collect aspects. Some we may not have thought about before. This will be a starting point to be more concrete in the future. So that a term 'sustainable' in conservation, may be more than greenwashing technologies, but to be replaced by concrete words and actual actions, and maybe also new technologies.

**Contact the author**