

Investigations on the Suitability of Ultra High Performance Concrete for the Production of Gear Wheels and Roller Bearings

Initiative: "Experiment!" (beendet)

Ausschreibung: Explorative Phase

Bewilligung: 08.12.2015

Laufzeit: 1 Jahre 6 Monate

Projekt-Website: [https://www.uni-due.de/massivbau/](https://www.uni-due.de/massivbau/forschung_trag_verformungsverhalten_zahn_kugel_uhpc.php)

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Is Ultra High Performance Concrete (UHPC) suitable for the production of highly stressed mechanical machine components such as gear wheels and roller bearings? If this question can be answered with "yes", revolutionary approaches for the production of gear wheels and roller bearings will appear with properties that are not feasible with conventional materials such as steel. Using UHPC, lightweight, non-corrosive and non-conductive gear wheels and roller bearings could be produced with a high compressive strength and surface hardness, respectively, as well as a low thermal conductivity and a free moldability. In an exploratory phase the feasibility of machine part production with ultra high performance concrete will be explored.

Projektbeteiligte

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