

# Tennis stadium at the Rothenbaum

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## Repair of roof structure Center Court

The traditional tennis facility at Hamburg's Rothenbaum was comprehensively redesigned in 1997 according to the plans of the architectural office Schweger and Partner in its current appearance of the tennis stadium, the DTB and press building as well as the spectator areas. The Center Court and the spectator terraces were provided with a textile roofing, the inner part of which can be opened within a few minutes. At that time, the movable interior roof was the largest convertible roof in Europe with a roof area of 3,000 m<sup>2</sup> and was extremely innovative in the technical design of the drives and was a pioneering feature for all convertible stadium roofs realised later on worldwide. Sobek und Rieger Engineering, under the project management of Alfred Rein, was responsible for the roof construction consisting of a highly tensioned steel/cable structure with a free span of approx. 100 m, the textile covering made of technical polyester fabrics and the drive system.

After more than 20 years of use, the roof structure was comprehensively repaired in 2019 under the engineering planning of AR Ingenieure. The membranes of the inner and outer roof were renewed, the corrosion protection of the steel construction was repaired and the drives of the inner roof were comprehensively reconditioned. In the course of the repair work, non-destructive testing of the suspension ropes was also carried out using the

## Project details:

Year: 2019

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Location: Hamburg, Germany

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Building owner: DTB Marketing + Stadion GmbH

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Client: Textil Bau GmbH

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Services:

Object, structural and workshop planning

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Other parties involved: Paul Schüler, org. Design

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magnetic-inductive method, whereby ropes that were no longer sufficiently strong were replaced with new ones

The refurbished tennis stadium passed its first major test during the Hamburg European Open, which took place from 20-27 September 2020. The final match between Andrey Rublev and Nikoloz Basillashvili could be played undisturbed under a closed centre court roof, regardless of external weather conditions.

AR INGENIEURE

