

A 10,000 m² floor without a single joint for CDC



A 10,000 m² high-performance and completely seamless floor was cast for CDC Germany within just a few days. It consisted of two panels of 120 m x 42 m without any joints. The design was made possible by SigmaSlab[®], a concrete reinforcement technology which combines CCL's post-tensioning systems with Dramix[®] steel fibers.

The challenge

CDC needed a robust concrete floor with minimal joints for their new logistics center in Niederaula, Germany. The objective was to reduce cracks and noise generated by frequent vehicular movement during loading and unloading. As rebar-reinforced concrete has a high carbon footprint due to its use of steel and concrete, G.v.G. was interested in exploring alternative construction technologies that are more sustainable, less labor-intensive, and cost-effective.

The solution

After discussions with Bekaert's concrete reinforcement experts, G.v.G. offered CDC the possibility of a SigmaSlab[®] solution. This would give CDC a floor with no joints at all! By not using traditional reinforcement, the SigmaSlab[®] installation process at CDC was 20% faster. It reduced steel consumption by 70%, cutting the carbon footprint of the project by more than 50%. The elimination of joints reduced the maintenance of the floor and of forklifts. Reduced materials and

labor, combined with increased durability and lower maintenance of the slab over its lifetime, results in lower total cost of ownership of the project. Finally, this robust construction solution with high crack control guarantees a longer life span of the floor.

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Project Specifications

Project type: Distribution center
Application: Seamless floor
Product: SigmaSlab[®]

Partners

General contractor: CDC1 Niederaula GmbH
Flooring contractor: G.v.G. Industriebodenbau GmbH & Co. KG, Germany

