

Floor slab reinforcement with S&P CFK-Laminates 150/2000

Project: New building of a primary school in Nebikon, Switzerland (LU / CH)

Year: 2014

Solution: For the conversion of a fire brigade building into a primary school, the client wished to integrate some of the existing structure into the new building. To bear the new loads, the floor slab had to be reinforced with a new layer of in-situ concrete on top and S&P CFK-laminates on its underside. Furthermore, new columns required a local adaptation of the studrails (punching shear reinforcement). The concrete surface was prepared by sandblasting, onto which the laminates are then mounted transversally with S&P Resin 220, securing a force-transferring bond. The structure is not loaded during the reinforcement work period.

Materials: 3'000 m of S&P CFK-laminates, type 150/2000, various cross-sections

Timeframe: The reinforcement with S&P CFK-laminates was carried out in four weeks.

Images: *a) Testing the tensile adhesive strength on the sandblasted bearing substrate*
b) Detail of reprofiling with S&P Resin 230 in the area around a ceiling ledge
c) Application of the first layer of CFK-Laminates
d) Section of completed floor slab reinforcement, seen from below

