

Bending reinforcement of concrete wall using S&P slot-applied laminates

Project: Reinforcement of liquid manure pit in Inwil, Switzerland (LU / CH)

Year: 2014

Description: With the dismantling of the cladding, it was necessary to reinforce the 3.8-meter-high outer wall against additional bending moment at the middle of the wall. According to static calculations, an application of 3 m long S&P CFK-laminates 150/2000 (dimensions 20 x 1.4mm) in pairs, spaced 50cm apart, was necessary. To avoid additional UV protection coats and work, the laminates were inserted into ca. 8-mm-wide milled slots. The load-transferring application of the laminates is ensured using S&P Resin 220, 2-K epoxy adhesive, which is applied on a prepared bearing substrate in an unloaded state (empty tanks).

Materials: 545 m' S&P slot-insertion laminates, type 150/2000, 20 x 1.4 mm, $F_{td} = 46$ kN

Construction time: The application of the S&P slot-applied laminates was carried out in 10 working days.

Images: *a) Sketching in / milling / taping of the vertical slots (depth 25mm)*
b) Application of S&P Resin 220 on the cleaned laminates
c) Inserting the laminates (2 pieces per slot)
d) Completed reinforced outer wall

