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   Sommario/riassunto   "Since 2012, the subsequent reinforcement of reinforced concrete components with bonded reinforcement has been regulated in a separate guideline. This includes the dimensioning of the adhesively bonded strips made of carbon fiber reinforced plastic (CFRP), which, in addition to the complex iterative bending design, have a very complex bonding behavior. For this purpose, the German Committee for Structural Concrete developed a model for the verification based on experimental evaluations, in which the occurring tensile forces are partly transferred into the component via intermediate elements (partial distances between flexural cracks). Simultaneously, simplified but more inaccurate verification formats were made available to reduce the complexity of the verification. For an early assessment of the use of bonded CFRP strips, different tools have been developed in this paper for reinforced concrete components with a rectangular cross-section depending on the different verification formats. For this purpose, the design parameters were
   considered separately for pure bending strength and bonding behavior. For a simple calculation, tables for the design with dimensionless coefficients were obtained by analogy with the reinforced concrete construction, with which the required cross-section area for the CFRP strips can be determined by means of a limited stretching from the simplified verification of the flexural load bearing capacity. For a more

economical solution, the more precise verification of the force transmission on the intermediate elements was configured in an Excel workbook, because this results in an extraordinary iterative calculation effort."