

Influence of the Reliability Index on the Safety Factor of the Concrete Contribution to Shear Strength of HSC Beams

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Abstract : This paper presents a study on the influence of the safety factor in the concrete contribution to shear strength of high-strength concrete (HSC) beams according to TS500. In TS500, the contribution of concrete to shear strength is obtained by reducing diagonal cracking strength with a safety factor of 0.8. It was investigated that the coefficient of 0.8 considered in determining the contribution of concrete to the shear strength corresponds to which value of failure probability. Also, the changes in the reduction factor depending on different coefficients of variation of concrete were examined.

Keywords : reinforced concrete, beam, shear strength, failure probability, safety factor

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