

Evaluation of motorcycle safety barrier normative

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Abstract

Among European Countries, Spain first issued a Standard, UNE 135900:2005, further updated in 2008, that deals with homologation and effectiveness evaluation of road restraint systems components designed to reduce harm for bikers impacting on them. An in depth analysis and critical review of this standard is reported in this paper.

Beside a close examination of the standard requirements, numerical models of the crash test stated by the standard have been set up and simulated to study the effects of slight speed and approach angle variations on test results, remaining within tolerance gaps allowed by the standard. Model were validated against experimental data.

Together with the expected increasing severity of the impact according with speed, a strong influence of approach angle on injury parameters was found. Possible improvements to the norm, in order to make it more robust, are suggested.