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anchors in non-cracked and cracked concrete

4.1 Non-cracked concrete; 4.1.1 Tension load; 4.1.1.1 Load-displacement behaviour and modes of failure; 4.1.1.2 Failure load associated with steel rupture; 4.1.1.3 Failure load associated with concrete cone breakout; 4.1.1.4 Failure load for local concrete side blow-out failure; 4.1.1.5 Failure loads associated with pull-out and pull-through failures; 4.1.1.6 Failure load associated with splitting of the concrete; 4.1.2 Shear; 4.1.2.1 Load-displacement behaviour and modes of failure

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Sommario/riassunto

A comprehensive treatment of current fastening technology using inserts (anchor channels, headed stud), anchors (metal expansion anchor, undercut anchor, bonded anchor, concrete screw and plastic anchor) as well as power actuated fasteners in concrete. It describes in detail the fastening elements as well as their effects and load-bearing capacities in cracked and non-cracked concrete. It further focuses on corrosion behaviour, fire resistance and characteristics with earthquakes and shocks. It finishes off with the design of fastenings according to the European Technical Approval Guideline (ETAG 001).
