

Proposals for the Optimization of Steel Bars in Construction

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<Abstract> In China, a wide variety of steel bars have been used as reinforcements in concrete structures, however, their strength only lean towards low and ductility of some of these bars may be too bad, hence, they can hardly meet requirements of the development of concrete structure. On the basis of the main requirements of load-bearing reinforcements in concrete structures, an analytical comparison between strength, ductility, stability of quality, anchoring performance, suitability of construction and economics etc. of existing steel bar has been made. According to the national conditions of China and the great changes of building construction market at present, some proposals concerning the popularization of grade III steel bar and high-strength wires and strands, development of small diameter grade II, III steel bars, optimization or elimination of cold drawn steel bars and further advances on forming a complete set of technology for reinforcement of steel bars etc. are also presented. This paper is also provided for the references of building design department and metallurgical enterprises.