

Equation for Design Strength of Embedded Part of Square Steel Stopper in Railway Bridge

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It is required to improve accuracy of design strength of embedded part of stopper to suppress its damages due to earthquakes, which have been difficult to recover. Therefore, focusing on effects of arrangements of reinforcing bars placed in an embedded part of square steel stoppers at girder, we performed experiments and analysis. The results showed that the strength can be increased by changing the positional relationship between the stopper and the reinforcing bars without increasing the amount of reinforcing bars. In addition, it was also revealed that we have to consider three types of failure modes when evaluating the strength. Finally, based on the failure mechanism of each of these failures, we proposed an equation for design strength of embedded part of stopper.