Influence of Prestrain on Material Characteristics of An Aged Steel Material Used for Bridges

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The material characteristics of the steels are different according to the manufacturing period. In the maintenance of many aged steel bridges, it is important to understand the material characteristic of the aged steels. In this study, the material tests were executed for steel material of the various manufacturing period to investigate the material characteristic. In addition, the influence of a given prestrain on the strength and the impact toughness of the steels were clarified. As a result, it proposed the amount of the limit strain which should be considered in evaluating the impact toughness of the steels that received a local transformation by collision accidents etc.