

Verification of Overturning of Girders Under Severe Earthquakes by Simple Analysis Model

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In designing a steel or composite structure, an overturning of the bridge girder is one of the major factors that should be taken into consideration. We should be duly taken into consideration that the overturning power is increasing by increase of the recent earthquake power. Current design method is based on the static analysis. In this research, we applied a simple analysis model to four cases of bridge girders, carried out dynamic analysis, and examined overturning of the bridge girder. As a result, we found that the possibility of overturning is low in the case of usual actual structures. It was also found that the verification of overturning of the bridge girder is possible by the simple analysis model. In this paper, we report the result of dynamic analysis, and the result of examination of the verification of overturning of the bridge girder under severe earthquakes.