Abstract

It is observed that Indian Railway network has several hundreds of bridges which are more than 100 years old and needs to be repaired or rehabilitated for normal services of Rails. The Railways bridges have been subjected to higher loads and speed which is concerning factors to the Designers of Railway Bridges. Hence, an attempt has been made through this study to assess the health of a bridge under normal and defect condition of bridge member. Through successful health monitoring, the performance of bridge can be monitored and catastrophic
Performance Studies on a Model Under-Slung Railway Bridge

failure events can be prevented. This paper presents the damage assessment through Structural Health Monitoring (SHM) of an under-slung railway bridge model, fabricated using aluminum material. The performance of bridge model has been evaluated under centric and eccentric loading experimentally under normal and defective members and compared with theoretical performance of bridge model under same loading condition. Experimental and analytical results have been compared to evaluate the damage assessment which helps in understanding the performance of bridge structure.

References


Index Terms

Computer Science
Applied Sciences

Keywords

Structural health Monitoring deflection.