

Analysis and remedial measure of Br no. 39 Down



This bridge is in Lucknow division of Northern Railway, which is one of the sixteen zones of Indian Railway. The bridge lies between two important cities of India i.e. Lucknow & Kanpur. In addition to it the bridge is a part of main line connecting Delhi (Capital of India) to other parts of Indian particularly eastern part & almost all major trains passes through this bridge.

The bridge was originally designed to carry meter gauge loading but currently is carrying Modified Broad Gauge loading i.e. 25t axel load.

In absence of any proven analysis system Indian Railway were sure of the carrying capacity of the bridge hence they requested Cintec to check the same & strengthen it if found weak.

Cintec international Ltd. in association with Gifford simulated the bridge by using ELFEN software which is based on FE/DE technique.

As a result of analysis it was found that the bridge is safe for carrying the current loading; however as a remedial measure in addition to horizontal anchors for stitching of minor crack, redial anchors were installed in arch barrel to counter any probable ring separation.

The analysis was counter certified by IIT-Delhi (Indian Institute of Technology), which is a premier engineering institution of India.