

## **Recent Research and Development in Structural Technology**

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Recent research and development in railway structures in Railway Technical Research Institute have focused on maintenance of the existing structures, seismic retrofitting, development of construction technologies considering performance and economic efficiency and environmental countermeasures for comfort improvement, etc. This review firstly describes technologies for monitoring and diagnosis of the existing structures. Secondly, it describes technologies for performance improvement of the existing structures and stations, such as noise reduction, spatial expansion and comfort improvement at stations. Finally, it describes technologies for seismic countermeasures, including earth structures with high resistance to tsunami and improvement of seismic performance of the existing structures.