

# Standing Committee Report Summary

## Maintenance of Bridges in Indian Railways: A Review

- The Standing Committee on Railways (Chair: Mr. Sudip Bandyopadhyay) submitted its report on ‘Maintenance of Bridges in Indian Railways: A Review’ on January 3, 2019. Key observations and recommendations of the Committee include:
- **Classification of bridges in Indian Railways:** The Committee observed that Indian Railways has 1,47,523 bridges across its network. These bridges are classified under three broad categories which is based on the breadth of their waterway: (i) Bridges with a linear waterway of 300 meter are classified as Important Bridges, (ii) those with a linear waterway of 18 meter are classified as Major Bridges, and (iii) all other bridges are classified as Minor Bridges. As per this classification, about 92% of the bridges in Indian Railways are minor bridges. The Committee noted that such a classification may be too broad, which may lead to exclusion of large number of bridges, and unequal importance being given to only a few bridges. It recommended that the Ministry of Railways should re-evaluate their classification of bridges to bring about some parity across bridges. The Ministry should also consider other parameters (than just waterway breadth) for classifying bridges.
- The Committee noted that 37,689 bridges on the railway network are 100 years or older. However, the Railways does not classify them separately. Instead, they are kept at par with the newer or modern bridges when it comes to inspections and maintenance. These older bridges have been planned for lesser loads and service conditions that have changed substantially over time. With faster and heavier trains coming in, the safety of these old bridges may be severely compromised which may lead to safety failures. The Committee also disagreed with the contention of the Ministry that the age of a bridge has no direct bearing on its safety and only the physical condition of the bridge be taken into account while classifying a bridge. Further, several of these bridges have heritage value, and overuse or misuse of these structures may erode this value. The Committee recommended that the Ministry must come up with a protocol for inspection and maintenance of these old bridges, to ensure a greater degree of safeguards, while keeping their commercial interests intact.
- **Inspection of bridges:** The Committee observed that the Ministry relies heavily on the visual perception and evaluation of the inspecting official. This puts an undue strain on the wisdom of the inspector and their adherence to prescribed norms. Further, there is always the possibility of subjectivity creeping in. It recommended that Railways must formulate definitive guidelines for bridge inspections including those for speed restrictions in order to eliminate the need for subjectivity on the part of the inspecting official. Such guidelines should be comprehensive, unambiguous, and include all aspects or possible scenarios of bridge inspections.
- The Committee also noted that currently under water inspection of bridges (with structures partially submerged underwater permanently) is carried out once in five years. With the growth of rail traffic such an interval is too large. It suggested that the frequency of underwater inspections of bridges should be increased.
- **Use of modern technology in monitoring of bridges:** The Committee suggested that the Ministry should explore the use of modern technology for inspection of bridges. This may help in early detection of damage and lower maintenance costs. The Committee noted that currently satellite imagery is being used to detect faults in tracks. It suggested that similar technology can be extended to bridges.
- **Vacancies:** The Committee observed that Indian Railways has a dedicated category of staff for inspection and maintenance of bridges. However, against a sanctioned strength of 7,669, the actual strength is 4,517 indicating a vacancy of around 40%. The lack of manpower affects their inspection routine and most acutely in the northeast frontier railway. The Committee recommended that the Ministry should endeavour to fill these vacancies at the earliest. Further, till the time such vacancies are filled, the Ministry should set up some temporary measures, such as filling up these posts through deputation, to tide over the shortage.
- **Natural calamities:** The Committee noted that natural calamities like earthquakes, fire, cyclones, and floods have a more devastating impact on bridges as compared to other rail infrastructure. Further, in certain remote parts of the country, railway bridges often form the lone way for communications and transportation. It recommended that the Ministry should have prior planning for prompt rehabilitation and protection from injuries, loss of life, property damage, and destruction of bridges in the eventuality of natural calamities.

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