

**GOVERNMENT OF INDIA  
RAILWAYS  
LOK SABHA**

UNSTARRED QUESTION NO:3248  
ANSWERED ON:14.12.2006  
UPGRADATION OF INSPECTION EQUIPMENT FOR RAIL BRIDGES  
Singh Shri Sitaram

**Will the Minister of RAILWAYS be pleased to state:**

- (a) the details of the present inspection system of rail bridges;
- (b) whether the Government has taken any steps to upgrade the inspection equipment of rail bridges;
- (c) whether there has been inordinate delay on the part of Research Design and Standards Organisation in the technical upgradation of the equipment; and
- (d) if so, the reasons therefor and the time by which the advanced inspection system is likely to be introduced?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF RAILWAYS (SHRI R. VELU)

(a) to (d): A statement is attached.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 3248 BY SHRI SITARAM SINGH TO BE ANSWERED IN LOK SABHA ON 14.12.2006 REGARDING UPGRADATION OF INSPECTION EQUIPMENT FOR RAIL BRIDGES.

(a): A well laid down system of multi tier inspection of bridges is followed on Indian Railways. All the bridges including old and distressed bridges are inspected thoroughly once a year at various levels as laid down in Railway Codes and Manuals. For distressed bridges, an increased frequency of inspections has been laid down in the Manuals. The steel superstructures of all bridges are subject to detailed technical checks once every five years and once a year for the floor system of early steel girders. The inspection of substructure of Bridges is done by close visual inspection and hammer tappings to check for any cracks or hollowness of masonry.

(b): Yes, Sir. Action has also been taken for modernization of Bridge Inspection & Management System. It is planned to make the existing inspection and monitoring system more scientific by importing modern technology where found necessary for inspection and assessment of condition of bridges. Pilot projects in following areas of health monitoring of bridges have been successfully completed on various Zonal Railways with the help of specialized foreign agencies:

- (i) Acoustic Emission Testing of Railway Bridges
- (ii) Fatigue Testing & Residual Life Analysis of Steel Bridge Structures
- (iii) Under Water Inspection of Bridges
- (iv) Non-Destructive Testing of Bridges
- (v) Strain Gauging & Load Rating of Bridges
- (vi) Mapping of unknown foundation & integrity testing of foundations

Besides this, Rail-cum-Road Testing Laboratories equipped with state of art Non-Destructive Testing Equipments are under procurement for nine Zonal Railways. It has also been planned to have one Mobile Bridge Inspection Unit at each of the sixteen Zonal Railway. Two Mobile Bridge Inspection Units have already been procured and are under commissioning. Procurement of another two Mobile Bridge Inspection Units has been sanctioned in Rolling Stock Plan 2004-05.

(c) & (d): No, Sir. Introduction of new technology on a large network such as Indian Railway has to be done in a systematic and programmed manner. The procurement of equipments for all Zonal Railways, training of Railway Engineers and implementation of modern technologies on Indian Railway system etc. is likely to be completed by 2010.