

**GOVERNMENT OF INDIA  
RAILWAYS  
LOK SABHA**

UNSTARRED QUESTION NO:2810  
ANSWERED ON:18.08.2011  
TECHNOLOGY FOR PREVENTING ACCIDENTS  
Gandhi Shri Dilip Kumar Mansukhlal

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

- (a) whether Indian Institute of Technology, Kanpur has prepared and submitted 12 projects to the Railways under the Technology Mission for Railway Safety to prevent train accidents;
- (b) if so, the complete details thereof;
- (c) whether the Railways have prepared any viability report after conducting study on these 12 projects;and
- (d) if so, the details thereof and if not, the reasons therefor?

**Answer**

MINISTER OF THE STATE IN THE MINISTRY OF RAILWAYS (SHRI K. H. MUNIYAPPA)

(a): Yes, Madam.

(b) to (d): A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (b) TO (d) OF UNSTARRED QUESTION NO.2810 BY SHRI DILIPKUMAR MANSUKHLAL GANDHI TO BE ANSWERED IN LOK SABHA ON 18.08.2011 REGARDING TECHNOLOGY FOR PREVENTING ACCIDENTS

(b) 12 Research projects were formulated by Indian Institute of Technology(IIT), Kanpur under Technology Mission for Railway Safety (TMRS) and were sanctioned in Railway Budget 2003-04. The projects were started between February, 2005 and August, 2005. The duration of the projects was 3 years, with additional six months for transfer of technology. The following projects were taken up under TMRS:

1. Satellite Imaging for Rail Navigation (SIMRAN)
2. On-Board Diagnostics on Diesel and Electric Locos
3. Track Side Bogie Monitoring System
4. Development of Derailment Detection Devices
5. Sensors for Detecting Hotboxes, Hot Wheels
6. Corrosion Prevention of Rails
7. Wheels and Axles of Improved Metallurgy
8. Development of Measuring Wheel Technology
9. Environmental Friendly Coach Toilet Discharge System
10. Rail Flaw Detection Instrumentation
11. Improved Rail Fastenings
12. Fog-Vision Instrumentation

(c)&(d) The viability/implementation status of these projects is given below:

(i) Based on the project "Satellite Imaging for Rail Navigation (SIMRAN)" a work has been sanctioned in Railway Budget 2011-12 to implement Real time Train Information System(RTIS) on an all India basis.

(ii) A project 'Remote Monitoring and Management of Locomotives and Trains (REMMLOT)' has been initiated in Diesel Locos based on research carried out in "On-Board Diagnostics on Diesel and Electric Locos" project. Implementation of REMMLOT has already started.

(iii) Although the research objectives, as originally envisaged by IIT/Kanpur and Railways, have been achieved in the following projects, further study or detailed field trials are required before their implementation on Indian Railways can be considered:

- (a) Track Side Bogie Monitoring System
- (b) Development of Derailment Detection Devices
- (c) Sensors for Detecting Hotboxes, Hot Wheels
- (d) Corrosion Prevention of Rails
- (e) Wheels and Axles of Improved Metallurgy
- (f) Development of Measuring Wheel Technology
- (g) Environmental Friendly Coach Toilet Discharge System

(iv) In case of the following projects, the objectives have not been achieved as technology could not be developed by IIT/Kanpur:

- (a) Rail Flaw Detection Instrumentation
- (b) Improved Rail Fastenings
- (c) Fog-Vision Instrumentation