GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

UNSTARRED QUESTION NO:462
ANSWERED ON:21.11.2002
EUROPEAN TRAIN CONTROL SYSTEM
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Will the Minister of RAILWAYS be pleased to state:

(a) whether Railway Ministry is considering `European Train Control System` for locomotive system;

(b) whether similar type of system being developed by Konkan Railway and other Railways in India;

(c) whether there is huge difference between European and Indigenous system;

(d) if so, the details thereof and the benefit to be accrued;

(e) whether Government propose to consider indigenous proposal;

(f) if not, the reasons therefor; and (g) if so, the details thereof and whether Government will support the Indian proposal?

Answer

MINISTER OF STATE IN THE MINISTRY OF RAILWAYS (SHRI BANDARU DATTATRAYA)

(a) A pilot project of European Train Control System(ETCS) was sanctioned in 1999- 2000 on Central Railway at a cost of about Rs.50 crores. The first tender for this work was discharged owing to high cost and non-compliance. Subsequently, it has been decided to keep this project on hold in view of high cost.

(b) Konkan Railway Corporation Ltd have developed an Anti Collision Device(ACD) to prevent collisions at high speed. The system, in its present version, however, is not similar to European Train Control System. No other Railway in India is developing any similar system.

(c) Yes,Sir.

(d) The major differences between the two systems and benefits to be accrued are given below:

ETCS

ACD

ETCS-2 system is an automatic train protection system with mobile train radio. The system works on the principle of target distance and target speed. Movement authority, speed restrictions and other information are transmitted to locomotive using radio. Passive balises are used for determining train locations. Movement authority is calculated by Radio Block Centre (RBC) based on the information about the status of track conditions, level crossing gates and of interlocking system at the stations. A visual display is provided in the locomotive and it is continuously updated about the available distance and the optimum speed at which a driver may proceed.

System envisages

? Automatic Train Protection and Speed Control
? Approach warning at level crossings
? Approach warning to work men at station
? GSMR based mobile train radio communication
? Temporary speed restriction enforcement

ETCS provides cab signalling facilitating smooth train operation during adverse visibility conditions.

Anti-Collision Device on the other hand are microprocessor based communication devices, fitted on locomotives, brake vans and located in stations & level crossings. These give distinct identification to the locomotives and brake vans and using the global positioning system and angular deviation count principle, detect `collision like` situations and initiate application of brakes in the locomotives in a range of 3 kms. The ACDs also help in detecting train partings and initiate warning signals at level crossings.

System envisages

? Prevention of collisions at high speed in station area.
? Detects collision like situation in block section in a range of 3 Kms
? Detects train partings
? Initiates warning at level crossing gates

(e) Yes,Sir.

(f) Not appliable in view of (e)

(g) Extended field trials of the indigenous Anti-Collision Device are already in progresson Jalandhar-Amritsar section of Northern Railway. The Government will support theindigenous ACD system for adoption on Indian Railways based on successfulcompletion of extended field trials and subject to availability of fund.