

- (ii) An older version of ATP called Auxiliary Warning System (AWS) is presently functional on 413 RKMs in the Mumbai suburban section of Central Railway (289 RKMs) and Western Railway (124 RKMs).
- (iii) Train Collision Avoidance System (TCAS) is an indigenous Automatic Train Protection (ATP) System being developed in association with 3 Indian manufacturers. The system has been installed on Lingampalli – Vikarabad – Wadi, Vikarabad – Bidar section (250 RKMs) on SCR. Extensive field trials and safety validation of the system to Safety Integrity Level 4 (SIL-4) by Independent Safety Assessors (ISA) has been completed. Product of all the 3 firms has been approved by RDSO for developmental orders for speeds up to 110 Kmph in Absolute Block Sections. Trials on Automatic Signalling System and for speed upto 160 Kmph is under progress.

The system is being further implemented on 1199 RKMs on South Central Railway for extended trials.

- (iv) Four works of Modern Train Control System on 640 RKMs is being implemented for extensive trials of ATP system based on European Train Control System (ETCS L-2) Technology on Nagpur – Badnera, Jhansi – Bina, Yerraguntalla – Renigunta and Vizianagram – Palasa sections, totally 640 RKMs on the busy Golden Quadrilateral and Diagonal routes on Indian Railways.
- (d) Single Rail Tester (STR)/Double Rail Tester (DRT)/Hand – Held Weld Tester are used for Ultrasonic Flaw Detection testing to identify the probable internal flaws in rails and Welds. For identification of any deterioration in track geometry, Track Recording Cars (TRC) and Oscillation Monitoring System (OMS) are run at pre defined periodicity. Results of these systems are used for planning maintenance input in the track.

Collision of trains on railway tracks

†2345. SHRI NARAYAN RANE: Will the Minister of RAILWAYS be pleased to state:

- (a) whether 50,000 people have been killed during last three years due to the collision of trains on railway tracks;
- (b) if so, the details thereof;
- (c) whether Government has identified the railway tracks where people are killed in large numbers;

†Original notice of the question was received in Hindi.

- (d) if so, the details thereof along with the details of the places; and
- (e) whether Government has made arrangements to avoid accidents at such identified places?

THE MINISTER OF RAILWAYS (SHRI PIYUSH GOYAL): (a) and (b) No, Sir. Only two persons died during last three years due to the collision of trains on railway tracks.

- (c) to (e) Do not arise.

Development of suburban railway network in Bengaluru

2346. SHRI RAJEEV CHANDRASEKHAR: Will the Minister of RAILWAYS be pleased to state:

- (a) whether Railways and the Government of Karnataka have reached an agreement on the use of railway land for the development of Bengaluru's suburban railway network;
- (b) if so, the details thereof;
- (c) whether the Detailed Project Report (DPR) of the project has been prepared; and
- (d) if so, the details thereof?

THE MINISTER OF RAILWAYS (SHRI PIYUSH GOYAL): (a) As of now, alignment of Bengaluru Suburban network is largely designed to pass through Railway land. This matter is mutually agreed.

- (b) Total land requirement for the project is 355.28 Hectare (ha.) as under:—

(i) Railway land	—	250 ha.
(ii) State Govt. land	—	34.69 ha.
(iii) Private/homestead land	—	70.59 ha.

(c) Detailed Project Report (DPR) of the project has been prepared once. The same is under revision and updation to prioritise suburban corridors as instructed by Government of Karnataka (GoK).

- (d) DPR is under revision.

Revenue loss due to passengers opting for air travel

2347. DR. SANTANU SEN: Will the Minister of RAILWAYS be pleased to state:

- (a) whether there is any plan for privatisation of Railways, if so, the details thereof;