

Dr. Jitendra Singh pushes "Steel" slag roads for hilly terrains

Workshops planned in hill States/UTs beginning from J&K next week

CSIR road repair technology moves to market as Technology Development Board (TDB) signs pact with Industry partner

A ready-to-use pothole repair mix, named 'ECOFIX' capable of turning Steel slag into durable, instant repair option

प्रविष्टि तिथि: 20 JAN 2026 5:35PM by PIB Delhi

Union Minister of State (Independent Charge) for Science and Technology, Dr. Jitendra Singh recommended the use of steel slag-based technology for sustainable road construction, particularly in difficult and hilly terrains, noting that its adoption in the Himalayan States and UTs remains limited and needs to be accelerated through targeted outreach and training.

Addressing an event marking the signing of an agreement between the Technology Development Board (TDB) and Visakhapatnam-based Industry partner "Ramuka Global Eco Work Private Limited" for commercial production of ECOFIX, a ready-to-use pothole repair mix, the Minister said workshops were now being organised to familiarise state agencies with the technology .

The Minister said a two-day workshop on Steel slag technology would be held next week in Jammu & Kashmir followed by other States and UTs as well, aimed at sensitising engineers and officials from road construction departments about its application and benefits. According to the Minister, several Himalayan and hill states stand to gain the most from the technology because of shorter working seasons, heavy rainfall and frequent road damage, yet awareness on the ground remains uneven.

Tracing the journey of the technology, Dr. Jitendra Singh said trials had begun around two years ago, starting with pilot projects in places such as Surat in Gujarat and parts of the Northeast, including Arunachal Pradesh. Since then, steel slag-based road repair solutions have been used to varying extents in states like Karnataka, Uttar Pradesh, Assam, Gujarat, Jharkhand and Andhra Pradesh. However, he pointed out that many potential users, including senior engineers in some states, were still unaware of its availability, underscoring the need for proactive dissemination by both government agencies and industry partners .

The occasion also marked the formalisation of an agreement enabling the commercial rollout of 'ECOFIX', a pothole repair mix developed by the CSIR-Central Road Research Institute (CRRI) and now being taken to market with TDB support. The product uses processed iron and steel slag, converting

industrial waste into a construction input, and is designed as a ready-to-use mix that can be applied even in wet or waterlogged conditions, reducing repair time and traffic disruption .

Officials said the technology has undergone laboratory validation and field testing under Indian climatic and traffic conditions, with studies indicating better durability and lower lifecycle costs compared to conventional repair methods. The use of steel slag also aligns with broader circular economy goals by reducing dependence on natural aggregates and addressing the challenge of industrial waste disposal .

Speaking at the event, Dr. Jitendra Singh stressed that publicly funded research must translate into visible public benefit. He said innovations such as ECOFIX demonstrate how science can move from laboratories to everyday life by addressing routine but critical problems like potholes, which affect road safety, vehicle damage and commuter stress. He also highlighted the changing nature of public-private partnerships, noting that in this project the private partner's investment matched government support, signalling a shift towards more balanced collaboration .

The Technology Development Board along with the Visakhapatnam based company plans to establish an iron and steel slag processing facility with an annual capacity of nearly two lakh tonnes, with commercial production expected to begin by the end of 2027. The location near major steel plants is expected to ensure steady raw material availability while creating direct and indirect employment in the region .

Concluding, the Minister said wider adoption of steel slag technology could help states build more resilient roads, particularly in regions prone to heavy rainfall and extreme weather, while also supporting sustainability and cost efficiency. He called on the media and state governments to play a role in spreading awareness so that such technologies reach areas where they are needed most, especially in the Himalayan belt.

The agreement signing ceremony was attended by Dr. Kalaiselvi, Director General, CSIR, Rajesh Kumar Pathak, Secretary, Technology Development Board, Dr. CH. Ravi Sekhar, Director, CSIR-Central Road Research Institute, senior officials from the Department of Science and Technology, the Technology Development Board and the Council of Scientific and Industrial Research and the representatives of Ramuka Global Eco Work Private Limited.



Union Minister Dr. Jitendra Singh speaking during signing of an agreement between the Technology Development Board (TDB) and Visakhapatnam-based Ramuka Global Eco Work Private Limited for commercial production of ECOFIX, a ready-to-use pothole repair mix, at National Media Centre(NMC), New Delhi on Tuesday.



NKR/FK/AV

(रिलीज आईडी: 2216483) आगंतुक पटल : 478
इस विज्ञप्ति को इन भाषाओं में पढ़ें: Urdu , हिन्दी