Two-Day National Symposium on Geosynthetics for Highways and Railways Inaugurated at CSIR-CRRI, New Delhi

Apex Infrastructure Leaders, Engineers, and Researchers Convene to Drive Performance Enhancement, Distress Mitigation, and Sustainable Transport Corridors

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The two-day National Symposium on **"Geosynthetics for Performance Enhancement and Distress Mitigation in Highways and Railways"** officially commenced today at the CSIR-Central Road Research Institute (CSIR-CRRI) Auditorium in New Delhi. Jointly organized by CSIR-CRRI and the Geosynthetics Society (GS), Pune, the symposium convenes leading policymakers, infrastructure authorities, geotechnical specialists, and industry experts to address critical engineering solutions for national highway networks, high-speed rail lines, and strategic mountain corridors.

Inaugural Highlights

The symposium was inaugurated following the ceremonial lighting of the lamp and the national song. Opening the session, **Ms. Minimol Korulla**, Vice President of Geosynthetics Society, Pune, presented an overview of the symposium's goals, emphasizing the necessity of standardizing field practices and adopting advanced polymeric materials to improve structural durability.

In his Welcome Address, **Dr. Chalumuri Ravi Sekhar**, Director, CSIR-CRRI, underscored CRRI's leadership in applied transportation research, observing:

"Geosynthetics are no longer supplementary construction alternatives; they have emerged as core design imperatives for sustainable, resilient, and high-performance transportation corridors in India's multimodal infrastructure growth story."

Prof. G.L. Sivakumar Babu, President of the Indian Geotechnical Society (IGS) and Chairman of the CSIR-CRRI Research Council, highlighted the strategic imperative of integrating geosynthetic applications with resilient, eco-efficient engineering practices. Guest of Honour **Shri Vivek Bhushan Sood**, Executive Director, Railway Board, addressed Indian Railways' modernization initiatives, emphasizing track-bed stabilization, heavy-haul capacity, and vibration mitigation using geosynthetic systems.

Delivering the Chief Guest address, **Shri Amarendra Kumar**, Director, National Highways & Infrastructure Development Corporation Limited (NHIDCL), elaborated on the deployment of geosynthetic ground engineering solutions in challenging terrains, steep slopes, and high-altitude highway

projects across India's North-Eastern and Himalayan corridors. The inaugural session concluded with formal felicitations and a vote of thanks proposed by **Dr. K. Ravinder**, Head, International Liaison and Training (ILT), CSIR-CRRI.

Key Technical Themes and Day 1 Deliberations

The technical agenda for Day 1 addressed key operational challenges and innovations across highway and railway sectors:

- Distress Remediation in Reinforced Soil (RS) Walls: A panel discussion moderated by Prof. Ashish Juneja (IIT Bombay) brought together senior experts from NHAI (Mr. L.M. Padhy), MoRTH (Mr. Bidur Kant Jha), IIT Tirupati (Prof. Murali Krishna), CSIR-CRRI (Dr. Kanwar Singh), and leading consultants to deliberate on diagnostic evaluations, forensic investigations, and repair methodologies for RS retaining structures.
- RS Wall Success Stories & Field Insights: Expert lectures delivered by Prof. B.V.S. Viswanadham (IIT Bombay), Dr. P.S. Prasad (CRRI), Dr. Alok Bhowmick (B&S Engineering Consultants), and Ms. Atasi Das (Infraprojects Ltd.) showcased real-world case studies, best practices, and dos and don'ts in geogrid-reinforced walls.
- Geosynthetics for Resilient Rail Infrastructure: Chaired by Mr. Vivek Kapadia (IIT Gandhinagar), sessions focused on geosynthetic design in high-speed rail systems (Prof. Amit Prashant, IIT Gandhinagar) and vibration isolation via closed-cell polymeric foams (Dr. Nasim Aktar, CRRI), accompanied by technical presentations from industry leaders including Maccaferri Environmental Solutions, TechFab India, Strata Geosystems, and Geoquest India.

Look Ahead: Day 2 Highlights (8 September 2026), the second day of the symposium will feature:

- Sustainable Pavement Stabilization: Technical sessions on granular and bituminous layer reinforcement, geogrid-reinforced asphalt overlays, end-of-life plastic geocells for green pavements, and subsurface drainage solutions.
- President of the Geosynthetics Institute (GSI) delivering a lecture on *"Cradle to Grave Considerations for the Resilient Performance of Geosynthetics in Transportation Infrastructure"*.
- Ground Solutions & Rockfall Protection: Case histories on sloped embankments, rockfall protection embankments, and rock-shed cushioning systems presented by researchers from IIT Jodhpur, LASA, and industry practitioners.
- Industry Forum & Roadmap: A panel on field implementation challenges and future standards, followed by the concluding session outlining the national roadmap for geosynthetics adoption.


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