

CSIR-CRRI and BPCL Received India Book of Records Asia Book of Records Recognition for Innovative Use of End-of-Life Plastic in Road Infrastructure

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CSIR-Central Road Research Institute (CSIR-CRRI), in collaboration with Bharat Petroleum Corporation Limited (BPCL), has been recognized by the **India Book of Records** and **Asia Book of Records** for establishing the record titled **“First Roadblock Section Constructed Using Technical Textile Geocell Made from End-of-Life Plastic.”**

The felicitation ceremony was held at the Auditorium, CSIR-CRRI, New Delhi, in the gracious presence of **Dr. (Mrs.) N. Kalaiselvi, Director General, CSIR and Secretary, DSIR.**

This achievement marks an important milestone in sustainable road infrastructure development by demonstrating the scientific and practical utilization of end-of-life plastic waste in the construction sector. The recognized technology involves the development and application of technical textile geocells manufactured from processed end-of-life plastic, offering an innovative pathway for converting difficult-to-manage plastic waste into value-added infrastructure materials.

Director CSIR-CRRI, Dr. Ch. RaviSekhar shared that this initiative addresses two critical national priorities: sustainable waste management and resilient road construction. By integrating end-of-life plastic into geocell-based roadblock applications, the technology contributes to circular economy objectives while reducing the environmental burden associated with plastic disposal.

Speaking on the occasion, Dr Ambika Behl Scientist F from CSIR-CRRI said This accomplishment reflects the strength of collaborative research between CSIR-CRRI and BPCL, and reinforces our commitment to developing scalable, field-oriented technologies that contribute to sustainable and resource-efficient road engineering. This recognition by the India Book of Records and Asia Book of Records is an important milestone in demonstrating how scientific innovation can address the growing challenge of end-of-life plastic waste management through practical infrastructure solutions. Sh. Gagandeep Singh, Scientist E from CRRI shared that the key aspect of this work was ensuring that the end product not only addressed waste utilization objectives but also met engineering performance requirements in terms of structural integrity, durability, and field applicability. Extensive material characterization, performance evaluation, and validation studies were undertaken to assess the suitability of the developed geocell system for road applications.

Dr. Mahesh Kasture Chief Manager BPCL highlighted the importance of industry-academia collaboration in translating research into scalable field applications. The achievement also reflects India's growing commitment toward sustainable infrastructure solutions aligned with environmental stewardship and

resource efficiency. Dr. T. Chiranjeevi, GM (R&D), BPCL, informed that with the present working mandate of refineries, the formulation of this project was undertaken as part of BPCL's sustainability goals and helps in fulfilling some of its requirements.

Finally, the overall achievement of the record was highlighted and the vote of thanks was proposed by Dr. Vinod Kumar, Chief Scientist, CSIR-CRRI.

The record recognition by Asia Book of Records acknowledges the novelty and impact of this first-of-its-kind demonstration in road engineering.





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