

From Waste to Wealth: CSIR-CRRI and JSW Steel, Salem Partner to Build Steel Slag Roads in Tamil Nadu

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On 24 January 2026, in a significant step towards promoting sustainable infrastructure and the circular economy, the CSIR–Central Road Research Institute (CSIR-CRRI) and JSW Steel Limited, Salem Works have entered into a strategic partnership to utilize steel slag—an industrial by-product—in the construction of durable and eco-friendly roads in Tamil Nadu.

The collaboration aims to convert steel slag, traditionally considered industrial waste, into a valuable construction material for road infrastructure, thereby exemplifying the national vision of **“From Waste to Wealth.”** The initiative aligns with Government of India policies on resource efficiency, reduction of carbon footprint, and large-scale adoption of green technologies in public infrastructure.

The collaboration aims to promote the scientific valorisation of steel slag and its effective utilization in steel slag road construction, contributing to India’s circular economy, resource efficiency, and green infrastructure goals. JSW Steel Limited, Salem Works, one of the major steel manufacturing units of the JSW Group entered into this partnership with CSIR-CRRI under a sponsored research project titled “Development of Customized Steel Slag Valorisation Process for Techno-economic Conversion of EOF and LRF Steel Slag for Various Road Applications at JSW Salem Works.” The project focuses on converting Electric Optimization Furnace (EOF) and Ladle Refining Furnace (LRF) steel slag into processed slag aggregates suitable for use in bituminous road construction.

The MoA signing ceremony was held at JSW Steel Limited, Salem Works, in the distinguished presence of Dr. N. Kalaiselvi, Director General, CSIR and Secretary, Department of Scientific and Industrial Research (DSIR). Addressing the gathering, the DG, CSIR highlighted the national and global impact of CSIR-CRRI’s Steel Slag Road® technology, which has already been successfully implemented across multiple states in India by leading steel producers such as AMNS India, Tata Steel, JSW Steel, Rashtriya Ispat Nigam Limited (RINL), Jindal Steel, and Arjas Steel, under CSIR-CRRI’s technical guidance. She noted that the present initiative would enable the first implementation of Steel Slag Road technology in the state of Tamil Nadu.

The agreement was formally exchanged between Dr. Chalumuri Ravi Sekhar, Director, CSIR-CRRI, and Shri B. N. S. Prakash Rao, Executive Vice President and Plant Head, JSW Steel Salem Works, marking the official commencement of the project. Senior officials from CSIR-CRRI, including Dr. Vinod Karar, Head, PME Division, and Mr. Satish Pandey, Senior Principal Scientist and inventor of the Steel Slag Road® technology, were present at the ceremony. The event was also attended by senior leadership from JSW Steel Salem Works, reflecting a strong institutional commitment from both organizations.

The project will involve laboratory characterization of steel slag, development of customized processing protocols, construction of a demonstration road section near Salem, and long-term performance monitoring to validate field performance. By reducing dependence on natural aggregates, minimizing

industrial waste, and lowering the carbon footprint of road construction, the initiative aligns with national priorities such as Aatmanirbhar Bharat, sustainable development, and circular economy practices. The partnership is expected to serve as a replicable model for other steel plants and support wider adoption of steel slag in road infrastructure across the country.



