Railway Track Crack Detection

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Abstract: *Railway track crack detection systems are pivotal for the safety and efficiency of global railway networks, utilizing advanced technologies such as sensors, signal processing algorithms, and communication modules to continuously monitor track conditions. These systems proactively identify anomalies, enabling timely maintenance actions to prevent accidents, reduce downtime, and enhance operational efficiency. By providing real-time insights into track health, they facilitate better decision-making and resource allocation. The integration of predictive maintenance and advanced analytics further optimizes maintenance schedules and reduces costs. As the railway industry evolves, ongoing research and development will be crucial to advancing these systems, ensuring the continued safety and sustainability of railway infrastructure*

Keywords: Sensors, algorithms, monitoring, maintenance, analytics