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RF Remote Operated Railway Track Cleaning Robot

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Abstract: *This paper aims to design and develop a prototype for a cost efficient Railway track cleaning machine which would prove to be an alternative to the current system in place if implemented and optimized. As we see many problems of uncleanness due to waste on track, it is a human responsibility and at the same time the government has to look at the track to clean the garbage. In India, it is common for every track in which state or which station there is problem, as we have admitted that it is problem which contributes to our effort to solve or reduce to some extent. The prototype will be design having similarities to original railways. The proposed prototype is designed to clean the track, as in India as we see a very less effort is made for cleaning purpose. We are designing a machine which is automated by using radio frequency so that it can be operated in both static and dynamic conditions. Human safety is our priority; hence, project is fully automated and will be easy to Operated. The robot is manually controlled via a remote allowing operators to clean tracks from a safe distance without the need for physical presence on the tracks. Equipped with advanced sensors and collection mechanisms, the robot can navigate the tracks autonomously, ensuring a thorough and consistent cleaning process..*

Keywords: Automation, Railway Track Cleaning, RF remote, Robotics, Wireless Technology

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