

LITERATURE SURVEY

Team ID:

Project Title: Smart Solution for Railways

Dr. A. Benjamin Joseph¹: Even with greatest of ideas to avoid railway accidents, many trains accidents still happen worldwide. This paper shares an idea on how to avoid train collision by using an automated control incorporated in the trains

Mir Sajjad Hussain Talpur: To keep the railway system running smoothly, continuous track monitoring is needed. These days, the railway system is manually supervised. As a result, there is a greater risk of disasters, such as fatalities.

Vatsala Sharma: Indian Railways is the largest railway network in Asia and additionally world's second largest network operated underneath a single management. Due to its large size it is difficult to monitor the cracks in tracks manually. This paper deals with this problem and detects cracks in tracks with the help of ultrasonic sensor

attached to moving assembly with help of stepper motor

Shaofu Lin¹: Based on the research results of smart cities and smart transportation in related fields at home and abroad, combined with the application trends of internet technology and big data technology in railway informatization, this paper attempts to give a clear definition of smart railway from the perspective of smart city development.

Yafang Jia: It also proposes the overall structure of the top-level design of the smart railway, and the application of the smart railway in combination with the development needs of the construction of the Jing-Zhang high-speed railway.

Shaoyang : The Arduino UNO is a microcontroller that serves as the system's backbone. The framework has the potential to be extremely beneficial to our country's railway economic growth.

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Sakdirat Kaewunrue: Due to the harsh environments and severe loading conditions,

caused by the traffic growth, heavier axles and vehicles and increase in speed, railway tracks are at risk of degradation and failure. Condition monitoring has been widely used to support the health assessment of civil engineering structures and infrastructures.

Alirez Alemi : Now condition monitoring has wide applications in the railway industry, and various monitoring approaches have been proposed for the inspection of wheel and rail conditions. In-service condition monitoring of wheels provides the real-time data required for maintenance planning, while in-workshop inspection is normally done at fixed intervals carried out periodically. In-service data acquisition can be divided into on-board and wayside measurements.

Rakesh V. Pise: The IR transmitter and receiver total station for railway track geometry surveying system. Railway Crack Inspection is dedicated as a measure of railway safety. The defect information can be wirelessly transferred to railway safety management centre using a GSM module and it includes defect level and location information which is acquired by embedded GPS receiver

