|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SMART SOLUTIONS FOR RAILWAYS-LITERATURE SURVEY** | | | | | |
| **SI.**  **No** | **Year** | **Paper name** | **Basic concept** | **Pros** | **Cons** |
| 1. | 2009 | Passenger  Monitoring Model for Easily Accessible Public City Trams/Trains | public transportation, train, tram,  passenger monitoring, passenger control, RFID distance  Reading, ticket control, RFID ticket inspection. | It's possible to travel  cross country with a single public  transportation card, using  Transport  systems of several  transport  operators. | Applicable  only for passenger  monitoring |
| 2. | 2013 | Way-side wheel crack detecting using arrayed  ultrasonic probes | It will detect the wheel crack by using ultrasonic rays | It will eliminate the failure risks of wheels, | No cost effective |
| 3. | 2011 | Crack Detection in Railway Axle Using Horizontal and Vertical  Vibration  Measurements | Investigations are carried out to  assess the possible use of vibration measurements to identify the presence of a fatigue crack in railway axles | effect of various  sources of disturbance,  namely wheel cut-off roundness,  can be more easily dealt with. | High  harmonic  distortion |
| 4. | 2012 | Robust Railway Crack Detection Scheme (RRCDS) Using LED-LDR Assembly | robust solution to  the problem of railway crack detection utilizing | cost effective | In this the range IR sensor is very less |
| 5. | 2015 | Automatic Railway Track Crack  Detection System | addressing the issue by developing an  automatic  railway track crack detection system  integrating an  infrared red (IR) crack sensing module | crack is  detected | It is not fully automatic |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 6. | 2015 | An Enhanced Crack Detection System for Railway  Track | To detect the railway crack | Obstacle  detection | This process takes a more  time |
| 7. | 2016 | Review on railway track crack detection using ir transmitter and receiver | The defect information can be wirelessly  transferred to railway safety management centre using a GSM module | Cost of the unit is less when  compared to other, No fire  hazard problem due to over  loading | It cost is very high, sometimes  signal receive not properly |
| 8. | 2017 | Automotive Crack Detection for  Railway Track  Using Ultrasonic Sensors | Ultrasonic sensor is used to detect the crack in the railway track by measuring distance from track to sensor, | The auto cracks detection method is more efficient in the technical field, Quick  response is  achieved | IR Sensor  range IS .7 to 300 micrometers |
| 9. | 2017 | Localization of an Unmanned Aerial Vehicle for  Crack Detection in Railway Tracks | Localization of a  UAV and how it can be applied for detecting cracks in a railway  track using the  concepts of image  processing. | It finds exact  location of the crack | Technique  used has a  long process where the time interval is not sufficient |

**LITERATURE SURVEY BY:**

1. A. PRIYA ANTONY
2. A. PRINCY DIANA
3. K. BAKKIYALAKSHMI
4. R. KOWSALYA
5. R. KRISHNAVENI