

REAL-TIME RAILWAY FISHPLATE MONITORING SYSTEM

*Project report submitted in partial fulfilment of the requirements
for the award of degree of*

BACHELOR OF TECHNOLOGY IN “ELECTRONICS AND COMMUNICATION ENGINEERING”

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Affiliated to J.N.T.U. KAKINADA)**

TAMARAM (P.O), MAKAVARAPALEM (M.O), NARSIPATNAM (R.D)

ANAKAPALLE DIST

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BONAFIED CERTIFICATE

This is to certify that the project entitled "REAL-TIME RAILWAY FISHPLATE MONITORING SYSTEM" in partial fulfilment for the of degree of Bachelor of Technology in **ELECTRNICs AND COMMUNICATION ENGINEERING** at Makavarapalem, ANAKAPALLE is an bonafied work carried out by **R.MOUNICA (18811A0426), CH.SATYA (19815A0404), P.PRAVALLIKA DEVI (18811A0425), V.YERRANNA (18811A0434)** under the guidance and supervision during 2018-2022 and it has been found suitable for according to the requirements of the university.

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EXTERNAL EXAMINER

ABSTARCT

Fishplate joint monitoring is of utmost importance in rail communication system to avoid accidents. Rail accidents generally occur due to the derailment of trains from the track. One of the primary reasons of derailment of train is losing alignment of rails due to loosened fishplates. So, monitoring rail alignment and fishplate bolt position is required to ensure railway safety and security. In this paper, a **REAL-TIME RAILWAY FISHPLATE MONITORING SYSTEM** is proposed.

The proposed system keeps track of the position of every bolt of each fishplate and alerts a central railway monitoring center as well as nearby stations and approaching train drivers if any bolt gets loosened. This system utilizes GSM communication and is capable of working in areas where cellular network at least 2G is available. An embedded system detects the fault location with the help of a sensors and raises warning as soon as any bolt rotation is detected.

The proposed system is comparatively much cheaper. Besides, in a simulation-based warning accuracy test, the results of the system show high accuracy which indicates the effectiveness of the system. Accidents probability and frequency are expected to be reduced significantly by this system.