

DEVELOPMENT OF A DEVICE TO MEASURE GAUGE SPREADING IN TRAFFIC

A derailment occurred, caused by the timber waybeams on a bridge rotating under the train and spreading the rail gauge to such an extent that the train fell between the rails. This problem is not unique to that one case, and there are many bridges where the waybeams are known to move in this way. In addition, the rail gauge may spread at curves as a result of rail or fastener movement, particularly where the sleepers are timber and in poor condition.

There is therefore a need for a method of measuring the dynamic gauge spread under a train, in a cheap and simple way, so that sites where there is a danger of derailment can easily be identified and corrected.

In this report a measuring system is proposed. This prototype gauge spread measuring system gives readings which agree with independent measurements of rail movement, and which are consistent for nominally similar trains. The report recommends that a production version should be developed.