

# **Semi-Automatic Measuring Device for Survey Selected Parameters of the Railway Roads**

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## **SUMMARY**

Many countries are building new railway roads or extending the existing ones to reduce congestion and improve the urban environment. Such connections are related to the issues of operational safety of rail vehicles. An important factor influencing this safety is the reliable track infrastructure on which the vehicles moves.

Therefore, monitoring the geometric condition of the railway roads is an investment aimed at more efficient damage control and optimization of the repair and maintenance schedule, allowing to minimize emergency interventions limiting the efficiency of the transport system to only planned repairs.

The paper authors described a developed multi sensor device for acquisition, processing, and assessing the technical state of selected parameters of the railway roads. The choice of optimal sensors consisted in finding a balance between the usefulness, the possibility of data integration and the final price of the device. The sensors selected in this way allow one to carry out the tasks of a traditional measuring trolley and railway draisines in one device. Furthermore, surveying devices measure all technical parameters in one pass, significantly reducing the time.

The results of the development work have to increase the reliability of the current track infrastructure, which will improve the comfort of passengers and their safety.

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