

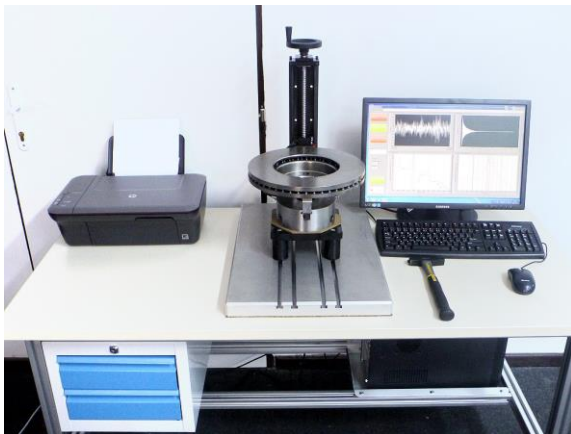


## HARDWARE-SOFTWARE COMPLEX TO DETECT DEFECTS CAR BRAKE DISCS

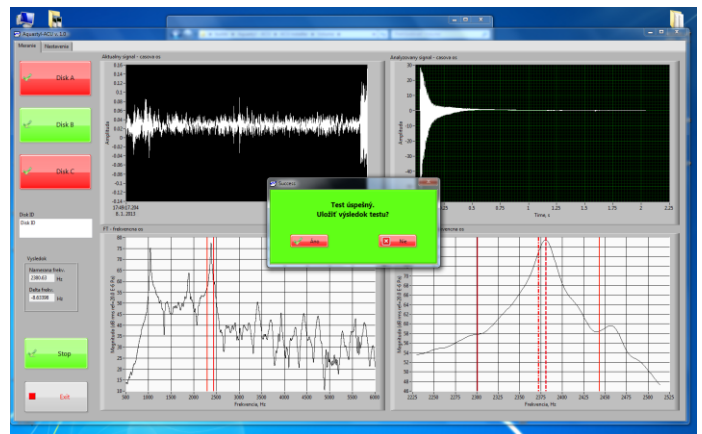
On the automotive industry flaw detection is an important part of the technological process of production as separate units and integral assemblies. After production, all parts are carefully scrutinized for the presence of visible or hidden defects in their structure. Particular attention is paid to the nodes from which directly affects the safety and comfort of the driver and passengers of the vehicle, such as the brake system. Flaw detection is carried out in accordance with the specifications of brake discs. Unlike visible defects, analysis of the internal structure requires additional equipment and procedures. One of the methods for the study is the analysis of the amplitude-frequency characteristics.

To find the defect of the final product was analyzed sound that is produced by vibrating the brake disc. Sound is measured with a sensor system, located next to the disk and analyzes frequency characteristics. The results obtained are processed using the integrated module of the mathematical model.

Hardware and software system consists of a sensor system, a data acquisition module and software, which is the main part of the complex, where you can manage the work measurement system analysis module and generating a report of inspections.



*Installation for testing of automotive brake discs*



*Software interface to manage the testing process*