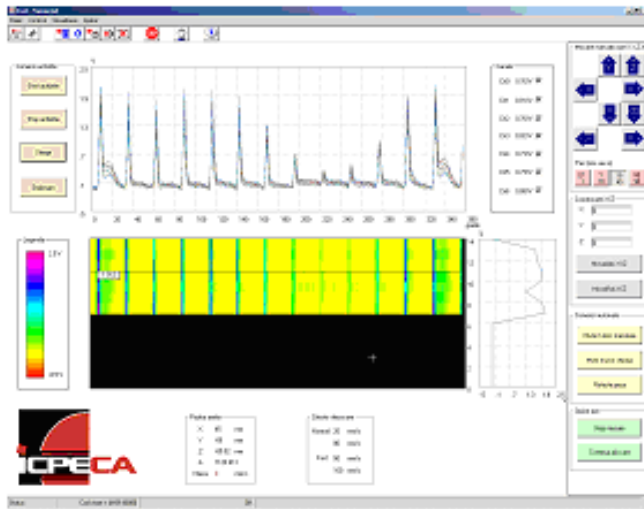


Automatic non-destructive testing system



DESCRIPTION:

The equipment is made for non-destructive testing of railway ball races during the repair process of railway carriage. A magnetic field sensor obtained from nanostructured materials locates the facile errors by magnetic leakage process. It is making a map of current errors from the surface of bearing shown the shape and size of its. The equipment is made from a mechanical part (manipulator with four degree of freedom), a part for

measurement and analyzing of data and a part of command and control of equipment.

The equipment has new sensor obtained from nanostructured amorphous materials having a high sensitivity at low magnetic fields. Also, the result of testing is presented as a map which use a color scale which permits to locate the errors and to appreciate its depth.



Constructive technical characteristics:

- Used proceed: magnetic flux;
- Sensor: rows of 8 nanostructured sensors;
- Mechanical system: four degree of freedom (3 translations X, Y, Z and a rotation);
- Ring diameter: min. 120 mm; max. 150 mm x 1350 mm.

ECONOMIC EFFECTS:

- increasing the safety to estimate the quality of railway bearings at periodic inspections
- avoidance the railway accidents

USERS:

Railway equipment companies.

