

1.10.21. ESTIMATION OF NON-DESTRUCTIVE TESTING AIDS APPLICATION FOR RAILWAY TRANSPORT STOCK ELEMENTS

Sosnitskaya T.A., Head of NDT aids testing
laboratory of JSC “Locomotive repair plant”, Russia

Quality of railway transport services depends on quality of its facilities including rolling stock and railway tracks. Non-destructive testing (hereafter NDT) is a constituent element of the railway transport quality system. By means of NDT, such quality parameters as travel safety and economical efficiency of repairs and operation of rolling stock.

NDT aids allow to:

- Reveal defects of a metal discontinuity type in an object under testing;
- Measure and control geometrical dimensions of elements and other objects of testing;
- Test physical and chemical properties of elements' materials (testing objects);
- Measure and control thickness and quality of protective coatings of elements (testing objects);
- Perform technical diagnostics of units and objects of railway transport.

In the context of railway transport the testing objects are the following: rolling stock elements, rails, track, bridges, station and other engineering buildings. A role of non-destructive testing (NDT) in the system of RZHD and correlation of methods, aids and techniques were defined. The necessity for implementation of a system of testing results registration and cases of elements fracture in operation conditions is shown in the present paper. A scheme of comparative tests performance for new NDT aids is suggested.

Within the scope of the present paper matters of NDT ensuring detection of defects in rolling stock elements caused by metal discontinuity are considered; i.e. flaw detection matters.