

1.10.42. AUTOMATED NON-DESTRUCTIVE TESTING AND MEASUREMENT SYSTEMS FOR RAILS

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Rail track NDT inspection is one of the ways how the current state of weld integrity can be assessed. Different technologies were used for testing of rails. The inspection techniques covered were as follows: Phased Array, Ultrasonic, Eddy Current, Digital Radiography for welds and visual tracking. Due to the higher demand of speed of trains, the tracks are subjected to extensive predictable or unpredictable stresses in the material, which usually results in rail track failures. Worldwide, the statistics predict that high percentage of those failures resulted in accidents of large magnitude. Thus, continuous monitoring and predictive maintenance is the only way to safeguard the railways against such disasters. New SPG 80 and of old handcart NW 60 for examination of mistakes in rails with new and old ultrasonic machine and tandem ultrasonic heads is compared. Automated Non-Destructive Testing and Measurement Systems for Rails is adopted for assuring higher reliability and safety railway traffic. For rail inspection we used also others techniques. Such procedures use usually for confirmation of found mistakes round examination of measuring train.