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METHOD FOR DISTINCTION OF STRESS-STRAIN CONDITION STATUS MODELS OF INTEGRITY CONSTRUCTION BY DEFORMATION IMAGES
(pp. 33–39)

Annotation. With the help of test periodic welded frame dummies, on which have been pasted super-broad-band (from 10–2 up to 108 Hz) ferroelectric micro-sensing transducers on the basis of thin films Pb (Zr 0,53 Ti 0,47) O3 thickness (~2,0) micron with bonding pad 0,8 mm2, have been developed and approved a way of shock testing and identification is intense – strained conditions of steel designs. The method algorithm is included: 1) the serial shock-excitation with build-up of an force impact impulse; 2) registration of dynamic deformation responses with the help of the sensing transducers pasted on dummy; 3) the Fourier analysis of responses and construction of series of nonlinear and linear areas of deformation images; 4) extraction of diagnostic attributes and informative parameters for discrimination of extent of stress level and (or) damage of integral design

Keywords: complex designs, parameters of stress level, deformation vibrations, the Fourier an image, nonlinear dynamic, magnetic method, ferroelectric sensing transducers, Structural Health Monitoring

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