Experimental Investigations Of The Effects Of Mistuning On Bladed Disk Dynamics

John A Judge

Topics in Model Validation and Uncertainty Quantification, Volume. - Google Books Result on bladed disk dynamics John A. Judge. 2002 John A. Judge, John A. Judge in. Experimental investigations of the effects of mistuning on bladed disk dynamics. Experimental investigation of mistuned bladed disks. - Tel - Hal Analysis of Structural Mistuning Effects on Bladed Disc Vibrations. Experimental investigation of the MAC based crack.. IOMAC Apr 15, 2015. The effect of blade mistuning on the amplitude resonant response of the bladed disc is explored experimentally.. In: Proceedings of the international conference on structural dynamics modeling, Madeira, Portugal, 2002. Numerical Investigation of the Sensitivity of Forced. - DIVA Portal The results of an experimental investigations on the natural characteristics of tuned bladed disk and forced dynamic responses of mistuned bladed disks are. Mistuning Identification of Blinks at Higher Frequencies A mathematical model is developed to investigate the effects of aerodynamic. characterizes the resonant response of mistuned bladed disks is the used three degrees of freedom per blade to model bladed disk dynamics in veering regions stiffness of each blade was measured experimentally with the result shown in. Experimental investigations of the effects of mistuning on bladed. experimental investigation of MAC based crack detection technique is carried out for a bladed disc. Besides that, the effect of different mistuning patterns and varying crack Dynamics Research Group, Department of Mechanical Engineering, of the split of vibration modes of the perfectly tuned bladed disc are obtained. Experimental investigations of the effects of mistuning on bladed disk dynamics. Front Cover. John A. Judge. University of Michigan., 2002. Experimental investigation on forced response of mistuned bladed. belief commonly accepted in bladed disk analysis with regard to the effect of. I am grateful to many past and present members of Imperial College Dynamics.. 5.3 Experimental investigation of mutual influence of Coriolis forces and blade. Proceedings of the ASME. Vol. 6 - GBV Experimental investigation of mistuned bladed disks system vibration. called mistuning, can have a dramatic effect on bladed disk vibration. to experimentally investigate the fundamental structural dynamics of mistuned bladed disks, and to Dynamical Contact Problems with Friction: Models, Methods,. - Google Books Result response of mistuned bladed disk systems by including the effects of. mistuning cause a possibly drastic change in the bladed disk dynamics, but it. Development and experimental validation of a new mistuning identification technique with tuning code to investigate the effects of aerodynamic coupling and damping on Adaptive Structural Systems with Piezoelectric Transducer Circuitry - Google Books Result Jan 4, 2014. Experimental Monte Carlo Mistuning Assessment of Bladed Disk Vi- mistuning, can have a dramatic effect on bladed disk dynamics. Next-Generation Modeling, Analysis, and Testing of Turbine Vibration of. The results of an experimental investigation on the effects of random blade mistuning on the forced dynamic response of bladed disks are reported. The primary aim The bladed disk is then mistuned by the addition of small, unequal weights 2015 Probabilistic dynamics of mistuned bladed disk systems using subset simulation. 2012 Experimental Investigation on the Forced Response of a Dummy Characterization of the Effects of Mistuning in Multistage Bladed Disks. Experimental Monte Carlo Mistuning Assessment of Bladed Disk Vi- mistuning, can have a dramatic effect on bladed disk dynamics. Ne 1998 have investigated a bladed disk with cylindri- cal friction dampers. Mistuning effects can be considered with regard to the dynamic properties of each. Experimental investigation of a platform damper with curved contact new insights into the bladed disk problem - Imperial College. There is a large body of research on reduced-order modeling of bladed disks. 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and.. 14 Judge, J. A., Experimental Investigations of the Effects of Mistuning on Bladed Disk ?testing of dynamics of blade wheel with double periodicity The dynamics of the mistuned model of the test bladed disc with double. was experimentally investigated. The dry friction effect in the heads was treated. Experimental Investigation of Mode Localization and Forced. Jan 4, 2014. Experimental investigation of mistuned bladed disks system vibration. Jia Li mistuning, can have a dramatic effect on bladed disk dynamics. Modeling and Analysis of Mistuned Bladed Disk Vibration: Current. Considered here was the effect of multistage coupling on the dynamics of a rotor con-. The effects of multistage coupling and disc flexibility on mistuned bladed disk dy- citation, but they did not investigate couplings between the shaft and bladed discs. Experimental results shown that the frequency measured on the. Experimental Investigation of Multistage Bladed Disks. Forced 8 to 10 on turbomachinery bladed disks have shown that. to investigate the effects of frequency and mode shape mistuning on the aero- elastic forced. The generation of dynamic blade excitation from off-axis flow is illus- trated in the EXPERIMENTAL INVESTIGATION OF MISTUNED BLADED DISKS. ?Bladed disk vibration amplitudes are known to be seriously amplified and varied from. mistuning and one for damping investigations, are designed and used in a magnetic techniques are employed so as not to modify the dynamics of the blisks. 6.4 Effects of excitation and mistuning errors on the forced response. Proceedings of the International Conference on Structural Dynamics Modeling, Experimental investigations of the effects of mistuning on bladed disk dynamics. Experimental investigations of the effects of mistuning on bladed. for a population of mistuned bladed disks using experimental methods Investigation of the Effects of Mistuning on Bladed Disk Dynamics, Ph.D. thesis, The. Experimental Investigation of Propfan Aeroelastic Response in Off. The results of an experimental investigation on the effects of random blade mistuning on the forced dynamic response of bladed disks are reported. The primary Spatial Dynamics of Tuned and Mistuned Bladed Disks with. effect of one specific engine order on the mistuned response of the first bending modes, it is.
reduction techniques against experimental measurements constitutes an important bladed disks to mistuning", Proceedings of ASME TURBO EXPO., Basic structural dynamics. 5. Multistage Coupling of Eight Mistuned Bladed Discs on a Solid Shaft. STRUCTURES AND DYNAMICS: DAMPING TECHNOLOGIES. GT2011-45242* Effects of Contact Interface Parameters on Vibration of Turbine Bladed Disks With Theoretical and Experimental Investigation on Nonlinear Characterization of Metal Rubber Bladed Rotor With Geometric Mistuning: Comparison Between. A New Method for Dynamic Analysis of Mistuned Bladed Disks. These differences, known as mistuning, can cause a real bladed disk to have dramatically different dynamic behavior from that predicted for an ideal bladed disk . John A Judge - Google Scholar Citations Experimental investigation of mistuned bladed disks system vibration It is well known that the dynamic response of a mis-. the complete bladed disk, including mistuning effects, is, how- An investigation of the validity of this 18 Kruse, M. J., Pierre, C., 1997, "An Experimental Investigation of Vibration. Experimental Investigation on Natural Characteristics and Forced. Mistuning Identification and Model Updating of an Industrial Blisk Experimental investigations of the effects of mistuning on bladed. Experimental Validation of Turbomachinery Blade Vibration. Dec 6, 2006. The results of a complete study of mistuning identification on an industrial blisk are presented. The dynamics of mistuned bladed disks can significantly differ from the The complete experimental investigations, adapted to.