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## Mechanical Vibrations

By J. P. Den Hartog

Dover Publications. Paperback. Book Condition: New. Paperback. 464 pages. Dimensions: 8.4in. x 5.2in. x 0.9in. This classic textbook by J. P. Den Hartog, retired professor of mechanical engineering at MIT, reflects the author's unique ability to combine the scholarly insight of a distinguished scientist with the practical, problem-solving orientation of an experienced industrial engineer. Although mathematics plays a role in the subject, Den Hartog employs the simplest possible mathematical approaches. His lucid explanations of complex problems are presented in a direct style and supported by illustrative models. Numerous figures in the text enhance its value as a basic foundation in a field which Den Hartog calls a necessary tool for almost every mechanical engineer. The author examines such topics as the kinematics of vibration (including harmonic motions and non-harmonic periodic motions), degrees of freedom, gyroscopic effects, relaxation oscillations, Rayleigh's method, natural frequencies of torsional vibration, Karman vortices, and systems with variable elasticity. Drawing on his experience as an engineer in private industry and in the U. S. Navy's Bureau of Ships, Den Hartog applies theory to practice, discussing the effects of vibrations on turbines, electrical machines, helicopter rotors and airplane wings, diesel engines and electrical transmission lines. As a special aid...



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