Title Constructed probability spectra

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Abstract

Test engineers continue to search for improved ways to link collected field vibration data with control profiles used to drive laboratory vibration tests. Industry vibration tests are typically performed at intensities differing from those experienced in the field, and almost always differ in duration from actual time in transit. To prevent unrealistic under and/or over testing, the selection of test control parameters is of keystone importance. This presentation will describe an analysis technique that facilitates and expedites laboratory random vibration testing based entirely upon captured field data. This simple technique identifies the distribution of vibration intensity and associates time with intensity as experienced in transit. This helps eliminate the need to artificially adjust test intensity and avoids the practice of trading time for intensity in order to accelerate tests.