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STUDY ON SATELLITE SEGMENT VIBRATION TEST TECHNOLOGY

Abstract

The vibration test technology of satellite segment is studied in this paper. Based on minimizing the test points' accumulated relative errors between entirety and segment vibration test, the algorithm solving the input acceleration spectral for satellite segment vibration test is derived. Vibration tests are carried out on both satellite entirety and its segment using the method mentioned above. The results show good coincidences between tests and theory, and the response differences between entirety and segment tests depend on their dynamical characters. The algorithm presented in this paper ensures the segment responses to be the best approximation of entirety responses. Key words: satellite; segment; vibration test; response error; segment input