Dynamic Analysis on Coupled Vibration of Strapdown INS Damping System

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Abstract

In order to decrease the structural vibration effect ,an analysis method of coupled vibration on strapdown INS damping System is proposed.

Results of coupled vibration analysis study on layout of strapdown sensors show that selecting reasonable layout and strapdown stiffness is very important to decrease the torsion rotation, and the structural vibration effect can be minimized by optimization design of layout and stiffness.

The results of an example illustrate that damping system based on coupled vibration analysis can efficiently reduce the structural translation-torsion coupling response.

Keywords： strapdown INS； damping system； coupled vibration； layout