# Inertia Identification of Parallel Machine Tools


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**ABSTRACT**

Parallel machine tools have characteristics of high static rigidity, high performance control etc. Therefore, parallel machine tools have become a new machine tool in next generation. In order to precision simulate dynamic response with variational loads and uncertain inertia, detailed equations of motion are required. Consequently, this paper presents a dynamic equations using Lagrange ’s equation in quasi-coordinates based on Stewart parallel mechanism. Then, mass and inertia are identified using the minimum position errors and velocity errors on legs based on the particle swarm optimization algorithm.



Keywords : Stewart parallel connection mode platform ; Inertia identification ; PSO


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