A Study on the Characteristic of Noise and Vibration in the Industrial Robot about the Characteristic of the High Precision Reduction

Woohyung Kim and Jintai Chung

Key Words: Industrial robot (산업용 로봇), High precision reduction (고정밀 감속기), Dynamic characteristic (동특성)

Abstract: This paper is studied the noise and vibration tendency of the industrial robot about the characteristic of the high precision reduction. The industrial robot is installed six reductions because of composed with six axes. We investigate the noise vibration characteristic and the stiffness of the reduction through the signal and system analysis. The analytic model of the industrial robot is made of the rigid body and the equivalent properties of the reduction. And we analyze the dynamic characteristic of the industrial robot. To verify the analysis result, we exam through the impact test.