

VIBRATORY APPARATUS

ABSTRACT OF THE DISCLOSURE

In a vibratory apparatus including vibratory speed detecting means for detecting a vibratory speed of a vibratory machine, a self-excited oscillation controller for amplifying the output of the vibratory speed detecting means at a feed-back gain K , receiving the output of the vibratory speed detecting means as a positive feed-back signal, a power amplifier for power-amplifying the output of the self-excited oscillation controller and a vibratory exciter receiving the output of the power amplifier for vibrating the vibratory machine, the feed back gain K is changed in accordance with the equation; $K = K_1 \Delta r + K_2 (\Delta r)^3 + K_{cr}$, where Δr represents the amplitude difference between a predetermined amplitude and the present amplitude, K_1 , K_2 constants, and K_{cr} critical stability gain.