عنوان مقاله:

Time Domain Simulation of Chatter in Reaming:Torsional-Axial and Bending Modes of Vibrations

محل انتشار:

دومین کنفرانس بین المللی و هشتمین کنفرانس ملی مهندسی ساخت و تولید (سال: 1386)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

A time domain approach is used in this paper to study the cutting conditions in reaming process that leads the system to regenerative chatter vibrations. Axial strain plus torsional- axial coupling and the first mode of bending of reamer are considered in the model. A model of cutting and thrust forces proportional to chip cross sectional area and process damping proportional to cutting speed is considered. Variation of time delay due to torsion of tool in response to torque changes is introduced to the model. A simulation using a numerical Euler integration technique has been used to find the time domain solution.

کلمات کلیدی:

Reaming, Torsional, Axial, Regenerative chatter, Dynamic time delay