

## Theoretical and Experimental Analysis of End Milling Process with Multiple Finger Inserted Cutters

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**Abstract :** Milling is the process of removing unwanted material with suitable tool. Even though the milling process is having wider application, the vibration of machine tool and work piece during the process produces chatter on the products. Various methods of preventing the chatter have been incorporated into machine tool systems. Damper is cut into equal number of parts. Each part is called as finger. Multiple fingers were inserted in the hollow portion of the shank to reduce tool vibrations. In the present work, nonlinear static and dynamic analysis of the damper inserted end milling cutter used to reduce the chatter was done. A comparison is made for the milling cutter with multiple dampers. Surface roughness was determined by machining with multiple finger inserted milling cutters.

**Keywords :** damping inserts, end milling, vibrations, nonlinear dynamic analysis, number of fingers

**Conference Title :** ICAME 2014 : International Conference on Automotive and Mechanical Engineering

**Conference Location :** Tokyo, Japan

**Conference Dates :** May 29-30, 2014