

Design and Manufacturing of Curve Surface Milling Mechanism

Saurabh Veer¹, Shivam Punde¹, Vaibhav Gourkar¹, Sahil Parab¹, Prof. J. A. Kute²

¹B. Tech Student, Mechanical Engineering Department

²Assistant Professor, Mechanical Engineering Department

JSPM's Rajarshi Shahu College of Engineering, Pune, India

Abstract: *Convex surface milling plays an important role in industries requiring complex shapes. CNC machines typically handle this task but are expensive and complex. This paper introduces a manual convex surface milling mechanism that is affordable, efficient, and suitable for materials like aluminum, MDF, and acrylic. The mechanism uses a lead screw-driven curved platform beneath a stationary milling tool. Experimental tests demonstrated acceptable surface finishes comparable to CNC machining within educational and prototyping tolerances*

Keywords: Convex Surface Milling, Manual Milling, Lead Screw Mechanism, CNC Alternative, Surface Roughness.

