

# Weight Optimization of Bed for Heavy Duty CNC Lathe Machine MGX200 using FEM

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*Abstract: In this paper, MGX200 CNC Lathe bed selected for the complete static and vibration analysis. The examination work completed to lessen the heaviness of bed without break its basic inflexibility and the precision of the machine instrument by expelling material. In this work, 3D CAD model done by using Autodesk Inventor Professional 2018 Software and analysis carried out in ANSYS 16.2 Software. The outcomes appeared with the assistance of qualities break down the impact of weight decrease on the basic trustworthiness of the machine bed when the weight decrease then decisions about the enhanced structure.*

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**Keywords: Optimization, CNC Bed, FEM**