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## **Product Redesign Considering Stress Mean Values**

**Juan M. Díaz-Mendoza, Manuel Piña-Monarez, and Luis Vidal**

Universidad Autonoma of Cd. Juárez  
Henry Dunant 4016, Zona Pronaf  
Cd. Juárez Chih. México, C.P. 32310  
Ph (52656-68848439 Ext. 4644

Corresponding author's E-mail: [juan.diaz@uacj.mx](mailto:juan.diaz@uacj.mx)

**Abstract:** In this paper the product redesign using the statistical material data to asses a dimensional tolerance will be discussed. In the design process, dimensional values are established based in material characteristics such material strength, hardness and others. In this study the performance of shaft under variable load that failed due fatigue material stress and failed before the expected lifetime will be analyzed. That was caused by improper product tolerance design on the part. The analysis will also show that in mechanical design, it is also important to consider material mean stress values to assure product reliability and durability. This process is important for a robust design.