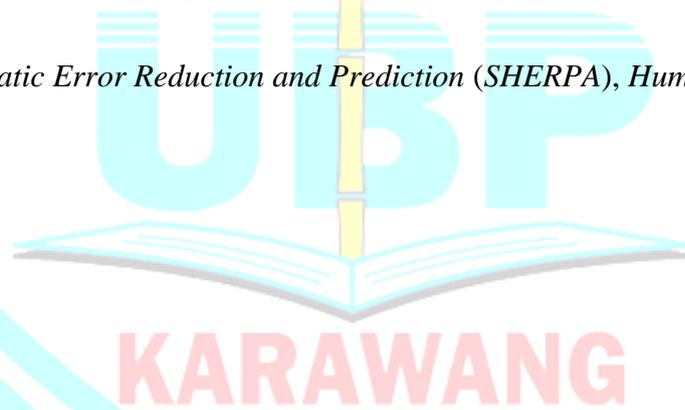


## ABSTRAK

PT. TJ Forge Indonesia adalah perusahaan yang bergerak di bidang suku cadang otomotif. Pada lini machining diffbox 3, khususnya di op 20 (mesin drilling), ditemukan masalah ketidaksesuaian diameter produk akibat pengecekan yang tidak akurat. Operator menggunakan alat ukur yang salah dan tidak melakukan kalibrasi berkala, menyebabkan produk cacat lolos ke proses berikutnya. Faktor utama yang memicu masalah ini adalah human error. Penelitian ini bertujuan untuk mengurangi kesalahan pengukuran dan meningkatkan kualitas produk dengan menerapkan metode Systematic Human Error Reduction and Prediction Approach (SHERPA), yang berfungsi memprediksi dan mengurangi potensi kesalahan manusia di tempat kerja. Setelah penerapan mesin Poka-Yoke sebagai alat kontrol, terjadi penurunan signifikan jumlah produk cacat di area Diff Box 3, dari 504 pcs (1,33%) pada periode Juni-Oktober menjadi 202 pcs (0,66%) pada periode November-Maret. Hasil ini menunjukkan bahwa metode SHERPA dan penggunaan Poka-Yoke efektif dalam meningkatkan akurasi pengukuran dan mengurangi produk cacat secara signifikan.

Kata Kunci : *Systematic Error Reduction and Prediction (SHERPA), Human Error, Poka-Yoke*



## **ABSTRACK**

*PT. TJ Forge Indonesia is a company engaged in the automotive parts industry. On the machining diffbox 3 line, specifically in op 20 (drilling machine), a problem was found with product diameter discrepancies due to inaccurate checks. Operators used the wrong measuring tools and failed to perform regular calibration, resulting in defective products passing to the next process. The primary cause of this issue was human error. This study aims to reduce measurement errors and improve product quality by implementing the Systematic Human Error Reduction and Prediction Approach (SHERPA), which functions to predict and reduce the potential for human error in the workplace. After implementing the Poka-Yoke machine as a control tool, there was a significant decrease in the number of defective products in the Diff Box 3 area, from 504 pieces (1.33%) during the June-October period to 202 pieces (0.66%) during the November-March period. These results indicate that the SHERPA method and the use of Poka-Yoke are effective in improving measurement accuracy and significantly reducing defective products.*

*Keywords: Systematic Error Reduction and Prediction (SHERPA), Human Error, Poka-Yoke*

