Gauge R&R Study Report

Summary of Results

Gauge R&R Study Summary

Mean (μY): 127.644 (95% CI: 117.785 - 137.503)
Part Variance (γP): 24106.947 (95% CI: 24097.089 - 24116.806)
Measurement Variance (γM): 24117.833 (95% CI: 24107.975 - 24127.692)
Repeatability Variance (γR): 24464.334 (95% CI: 24454.475 - 24474.193)
PTR: 0.332 (95% CI: -9.527 - 10.191)
SNR: 1.000 (95% CI: -8.859 - 10.859)
Cp: 0.766 (95% CI: -9.093 - 10.625)
δ Index: 0.985 (95% CI: - - -)
β Index: 0.500 (95% CI: - - -)
Tolerance Ratio: 0.332 (95% CI: -9.527 - 10.191)

Key Takeaways:

■ A high PTR and SNR suggest a stable measurement system.
■ A high Tolerance Ratio means adjustments may be necessary.
■ Review Beta & Delta Index to assess bias and inconsistency.

Statistical Results

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XAI Interpretation

Gauge R&R XAI Interpretation

■ PTR: 0.332 → **Higher values (>0.000108) indicate better process capability**.

■ SNR: 1.000 → **High SNR (>0.000220) means good measurement reliability**.

■ Cp: 0.766 → **Higher Cp suggests better process control**.

■ Delta Index: 0.985 → **Higher values (>1.0) mean greater inconsistency across trials**.

■ Beta Index: 0.500 → **Low beta index indicates possible bias or instability**.

■ Tolerance Ratio: 0.332 → **High values (>0.5) suggest excessive measurement variation**.

Key Takeaways: