

Approach of Measuring System Analyses for Automotive Part Manufacturing

Authors : S. Homrossukon, S. Sansureerungsigun

Abstract : This work aims to introduce an efficient and to standardize the measuring system analyses for automotive industrial. The study started by literature reviewing about the management and analyses measurement system. The approach of measuring system management, then, was constructed. Such approach was validated by collecting the current measuring system data using the equipments of interest including vernier caliper and micrometer. Their accuracy and precision of measurements were analyzed. Finally, the measuring system was improved and evaluated. The study showed that vernier did not meet its measuring characteristics based on the linearity whereas all equipment were lacking of the measuring precision characteristics. Consequently, the causes of measuring variation via the equipment of interest were declared. After the improvement, it was found that their measuring performance could be accepted as the standard required. Finally, the standardized approach for analyzing the measuring system of automotive was concluded.

Keywords : automotive part manufacturing measurement, measuring accuracy, measuring precision, measurement system analyses

Conference Title : ICESMSA 2014 : International Conference on Engineering Systems Modeling, Simulation and Analysis

Conference Location : Madrid, Spain

Conference Dates : March 27-28, 2014