Quality characteristics analysis for the assembly of the elements from the construction of a mechanism for adjusting the seats in the automotive industry

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Abstract. Statistical control of a technological process is a method that is based on a series of tools that allow documentation, understanding, monitoring and supervising of the entire process, in order to ensure quality finished products. When the technological process is complex, statistical methods contribute to an early identification of systematic deviations, so that the quality characteristics are within the allowable tolerance limits. Thus, statistical control is a preventive method of quality management. The analysis of the capability of a production process is mainly used to determine the capability of the process to ensure com-pliant products, by analyzing certain monitored data that are representative of that process. The paper presents a study on the statistical control of some pieces from the construction of electric motors used to adjust the seats of vehicles. For each piece, 8 measurements were made, the volume of each measurement having 50 elements and the results were interpreted through a software application developed for this purpose and made in the Java language. The software analyzes a database consisting of the values of the dimensions of the measured pieces and identifies whether these values have a statistically normal distribution and falls within the permissible tolerance limits.

Keywords: statistical control, capability, automotive industry

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