STATISTICAL QUALITY CONTROL
WIRE ROD STEEL PRODUCT
AT PT. KRAKATAU STEEL (PERSERO) Tbk. CILEGON

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ABSTRACT

The era of globalization forced the industry into a higher level of competition. PT. Krakatau Steel (Persero), Tbk Cilegon as one steel company in Indonesia which has a flagship products namely wire rod steel with a diameter of 5.5 mm and SWRM8 application program must continuous to improve the quality of their products to be able to survive in the competition. Case studies conducted in this study is quality control of production processes both in variability using generalized variance control chart and the improved generalized variance, and the mean process with $T^2$ Hotelling control chart, but it also wants to know the cause of out of control production process, as well as calculate capabilities wire rod steel production process based on results of mechanical tests with quality characteristics that yield strength, tensile strength and elongation were analysed by multivariate. Results of the analysis showed that in the period of January 2013, the process was under control in variability, but not under control in the process of its mean, while in the period from February 2013 has not been controlled in both the variability and the process mean. Quality characteristics are a major cause of uncontrolled tensile strength process is caused by material factors, human, machine, measurement, methods, and environment. Wire rod steel production process in the production period in January and February 2013, both are capable because Cp value obtained is greater than 1, so that the process can be said to be capable.

Keywords: $T^2$ Hotelling Control Chart, Generalized Variance Control Chart, Improved Generalized Variance Control Chart, Capability Process.
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