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Survival Analysis for Refractory Cement in Thermocouples Manufacturing

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Abstract: During the thermocouple manufacturing, there is a viscosity range in which the refractory cement is to be applied; this range is termed the pot life. This pot life is affected by some operational factors, such as humidity and temperature. The focus of the present paper is to model the cement setting process by means of a growth non-linear model for predicting the pot life of the refractory cement; considering humidity and temperature as covariates and without affecting the physical characteristics of the refractory cement. Results showed that the model realized accurate predictions, which were validated in the real process.

Keywords: Growth Models, Non Linear Regression, Model Selection, Refractory Cements, Viscosity.