

EVALUATION OF NON-LINEAR FILTER CONFIGURATIONS FOR THE STATE ESTIMATION OF CONICAL TANK SYSTEM

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The objective of process control is to maintain a process at the desired operating conditions safely and efficiently, while satisfying environment and product quality requirements. In most of the process industries use conical tanks because of its shape contributes to better drainage of solid mixtures. There are many uncertainties to deal with in process control model measurement uncertainties and uncertainties in terms of different noise sources acting on the system, it can be well handled by kalman filter state estimation. So control of conical tank presents a challenging problem due to its non-linearity. States of a conical tank are to be estimated using kalman filter. PID controller is the most commonly used controller in industries due to its simple and robustness. The performance of kalman filter are analyzed with Gaussian noise source operating conditions.

