

## Identifying Model to Predict Deterioration of Water Mains Using Robust Analysis

**Authors :** Go Bong Choi, Shin Je Lee, Sung Jin Yoo, Gibaek Lee, Jong Min Lee

**Abstract :** In South Korea, it is difficult to obtain data for statistical pipe assessment. In this paper, to address these issues, we find that various statistical model presented before is how data mixed with noise and are whether apply in South Korea. Three major type of model is studied and if data is presented in the paper, we add noise to data, which affects how model response changes. Moreover, we generate data from model in paper and analyse effect of noise. From this we can find robustness and applicability in Korea of each model.

**Keywords :** proportional hazard model, survival model, water main deterioration, ecological sciences

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