# MONITORING BASED MAINTENANCE FOR UNDERGROUND CABLES UTILIZING SENSOR NETWORKS

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## *ABSTRACT*

*In recent years, underground cables have been deteriorating. In order to maintain sustain-ability of those cables which have significant influence on society, economical and rational maintenance management should be carried out. The development of cables health monitoring systems, such as deriving evaluation techniques for the field structural condition of existing structures and identification techniques for the significant engineering properties of new structures, can be considered as the first step in resolving the above problem. New evaluation method needs to be devised to estimate the deterioration of cables via temperature, leakage current and partial discharge. Numerous verification tests on the new method have been conducted.*

## *KEYWORDS*

Underground cables, Cables health monitoring systems, Temperature, Leakage current, Partial discharge