Remote controlled instant off surveys – technological advancements

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Instant-off survey are used to provide important information about the functionality and operation of cathodic protection of buried pipelines. However, traditional measurement campaigns where the CP system is being switched on/off while technicians are performing field measurements may take a long time (weeks or months) and will not provide information on the continuous evolution of the pipeline instant-off potential or other parameters. This paper presents results from a small- and large-scale test of a remote-controlled GPS time-synchronized remote monitoring system, capable of capturing the instant-off potential at every logger position, when synchronized with a rectifier interrupter unit. Additionally, the loggers have a built-in line-current measurement module, that allows for detection of changes in the CP consumption between logger positions, detailed coating impedance analysis and detection of 3rd party coating damage incidents. The functionality is illustrated through examples.