

Extended life testing and in use verification of Ag/AgCl/0.5M KCl Reference Electrodes for Buried Applications.

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Ag/AgCl/0.5M KCl permanent reference electrodes are widely used in the buried cathodic protection applications to measure the extent of cathodic protection of a structure. They provide a stable reference to measure against and hence monitor the level of cathodic protection provided. Reference electrodes however are prone to contamination before use and also deterioration during operation. As they are relied on to provide stability it is very difficult to determine when the reference has failed or the structure is incorrectly protected. This paper details the development of a reference electrode with an in-built verification feature to enable monitoring of the performance of the electrode. In conjunction with the development of this cell we are working with Nottingham University to develop a standard test procedure for both extended life testing and stability testing of these cells. Currently only the stability figure is measured, documentation would have us believe that the extended life data is calculated from the chloride content of the cell which alone cannot be relied on to provide an accurate extended life assessment.