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Uses of Automated Geotechnical Instrumentation Systems

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ABSTRACT: Developments occurring in electronics and instrumentation promise to lower the cost and improve the reliability of electronic systems to monitor geotechnical instrumentation. The miniaturization of electronics, reduction of power consumption, reduced component cost, and improved component reliability all help to make new instruments possible and geotechnical instrumentation more cost effective.

This paper describes the application of some of these developments to three problems and summarizes the potential benefits to the engineer from their use. The increased capabilities of instrumentation and data acquisition equipment combined with their improved reliability and lower cost will make future applications of geotechnical instrumentation more cost effective.

KEYWORDS: field instrumentation, tilt meters, piezometers, automated data acquisition