

SEM031-P25

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Properties of gel non-polarized electrodes for measuring self-potential

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We report the properties of gel non-polarized electrodes for measuring self-potential. The gel non-polarized electrodes were developed for situations in which electrodes may leak solution in a quantity which is unacceptable. The gel solution was prepared in mixing a saturated solution with xanthan gum which was a polysaccharide thickener.

We investigated the properties of gel copper-copper sulfate electrodes and gel potassium chloride solution for lead-lead chloride electrode. The temperature coefficient of the gel copper-copper sulfate electrodes was from 0.2mV/degree to 0.3mV/degree. The gel copper sulfate solution and gel potassium chloride solution held gel status in the range from room temperature to above eighty degrees.

Keywords: self-potential, gel non-polarized electrode