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(54) Title: ELECTROCHEMICAL SENSING CIRCUITS

(57) Abstract

An electrochemical cell sensing circuit for an electrochemical cell having a working electrode, a counter electrode and a reference electrode in an electrolyte, which in use, when a gas to be analysed is introduced into the cell, generating a current between the counter electrode and the working electrode, and a potential at a position in the electrolyte is sensed by the reference electrode. The circuit comprising power supply means (12, 13, 14, 15, 16, R4, R5, D1) for applying an offset voltage to the counter electrode (c) relative to the working electrode (w), an amplifier means (A3, A5) for monitoring the voltage difference between the reference electrode (r) and the working electrode (w) and operable in use to feed back a current to the working electrode (w) through a feed back loop, and thereby tend to maintain the working electrode (w) at substantially the same potential as the reference electrode (r), the circuit includes measuring means (15, 16, 17, S1, R3, C2, A3) for measuring the current feed back by the amplifier (A2, A3) to the working electrode (w) as a measure of the cell current flowing between the working electrode (w) and the counter electrode (c).

