

Title (en)

Process and apparatus for measuring the temperature and the bath level of molten electrolyte in aluminum winning cells

Title (de)

Verfahren und Vorrichtung zum Messen der Temperatur und Badhöhe des geschmolzenen Elektrolyts in Aluminium-Schmelzflussöfen

Title (fr)

Procédé et dispositif de mesure de la température et du niveau du bain d'électrolyse fondu dans les cuves de production d'aluminium

Publication

EP 0716165 B1 19980708 (FR)

Application

EP 95420354 A 19951207

Priority

FR 9415086 A 19941209

Abstract (en)

[origin: EP0716165A1] A method for measuring the temp. and the level of a molten electrolysis bath or electrolyte in a tank for the prodn. of aluminium involves the periodic immersion of a temp. probe into the electrolyte to a determined depth that is withdrawn from the electrolyte before having attained the equilibrium temperature, then determining this temp. by extrapolation from the intermediate temperatures acquired by means of a pre-established calculation programme. In parallel with this temperature measurement, the level of the electrolyte (HT) in the tank is measured from a reference point by recording the variation in voltage between the cathodic substrate and the probe, from which the position is determined by a potentiometer and of which the voltage increases sharply when the lower end of the probe comes into contact with the electrolyte. The level of the metal (HM) can be determined in a similar manner at the electrolyte/liquid metal interface enabling the deduction of the thickness of the electrolyte (HB = HT-HM). The device used to carry out the measurements is also claimed.

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IPC 8 full level

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CPC (source: EP US)

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