

The effect of certain ions on the internal stress of bright copper electrodeposits

Gana, R. E.; Figueroa, M. G.; Larraín, R. J.

Abstract

The effect of low concentrations (0–100 mg l⁻¹) of F, Cl, Br, I, As, Sb, Bi, Ni, Zn, Fe, Ag, Te, Se, Pb, and S on the internal stress of bright copper electrodeposits was studied. The following solution containing 30 mg l⁻¹ of thiourea as a brightening additive was used as the electrolyte: CuSO₄·5H₂O (225 g l⁻¹), H₂SO₄ (60g l⁻¹). It is shown that the internal stress of copper electrodeposits can be considerably reduced by addition of Se(IV), Cl, Br, or I to the above electrolyte.

Keywords Copper, Physical Chemistry, 5H₂O, H₂SO₄, Thiourea