In a case where a high and low density paste were both used by the same manufacturer, the grids of the plate with the high density paste showed this inability to form a protective layer on the first cycle, while the grids of the low density paste developed a PbO₂ corrosion layer in a normal manner. However, after eleven capacity cycles, no appreciable difference in the amount of corrosion product was observed between high and low density plates.

Conclusions

Attempting to gain protection against corrosion by overpasting the grid or by increasing the thickness of the active material above the grid is ineffective. The composition of the paste from which the active material is made, or the paste density, has an effect on the thickness of the corrosion product during the first few cycles, but the thickness of the active material does not. Any possible effect of overpasting is due to mechanical support of the corrosion product at the critical stress areas which thus may delay cracking and delay dislodgment of active material.

Acknowledgment

The authors wish to thank the International Lead-Zinc Research Organization, Incorporated, and the Naval Research Laboratory for their support of this research.

Manuscript submitted March 12, 1973; revised manuscript received Nov. 26, 1973. This was Paper 32 presented at the Miami Beach, Florida, Meeting of the Society, Oct. 8-13, 1972.

Any discussion of this paper will appear in a Discussion Section to be published in the December 1974 JOURNAL. All discussions for the December 1974 Discussion Section should be submitted by Aug. 1, 1974.

REFERENCES


Errata

In the paper “Stability and Stirring in Crystal Growth from High-Temperature Solutions” by Hans J. Scheel and D. Elwell which appeared on pp. 818-824 in the June 1973 JOURNAL, Vol. 120, No. 6, the line drawings given as Fig. 7 and Fig. 8 on page 823 are interchanged.

In the paper “The Nucleation with SnCl₂-PdCl₂ Solutions of Glass Before Electroless Plating” by C. H. de Minjer and P. F. J. v.d. Boom which appeared on pp. 1644-1650 in the December 1973 JOURNAL, Vol. 120, No. 12, the micrographs given as Fig. 1 and Fig. 2 on page 1645 are interchanged.