

[54] **PROCESS OF PREPARING A POTASSIUM STANNATE-STANNIC OXIDE SOL TIN ELECTROPLATING SOLUTION**

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Related U.S. Application Data

[63] Continuation of Ser. No. 198,620, Oct. 20, 1980, abandoned.

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[57] **ABSTRACT**

A process for the production of a stannic oxide sol-potassium stannate tin plating solution is disclosed comprising the steps of:

- anodically dissolving stannous tin in a potassium electrolyte such as potassium hydroxide to form potassium stannite in a first electrolytic cell including an anode compartment and a cathode compartment;
- simultaneously preventing the potassium stannite from migrating from the anode compartment to the

cathode compartment by interposing therebetween a permselective ion exchange membrane (e.g., an anionic permselective membrane); oxidizing said potassium stannite to form a potassium stannate-containing solution by suitable means such as by contacting an oxygen-containing gas with the potassium stannite in a scrubbing tower; electrodialytically transferring potassium cations of said potassium stannate-containing solution from an anode compartment of a second electrolytic cell to a cathode compartment of said second electrolytic cell while simultaneously preventing migration of tin anions from said anode compartment to the cathode compartment by maintaining a cation permselective dialytic membrane between the anode and the cathode; and recovering a stannic oxide sol-potassium stannate solution from the anode compartment of said second electrolytic cell.

**16 Claims, 1 Sheet Drawing,
22 Pages Specification**

The file of this unexamined application may be inspected and copies thereof may be purchased (849 O.G. 1221, Apr. 9, 1968).



