

NASA Goddard Space Flight Center Materials Branch Report

WR No: 2362 **Request Date:** 10/11/01 **Completed Date:** 10/12/01

To: Jong Kadesch/Code 562

From: Len Wang /Code 541 Ext:X6-0962

Subject: Chip capacitor coating analysis

Work Description:

One chip capacitor was submitted for coating thickness and composition analysis.

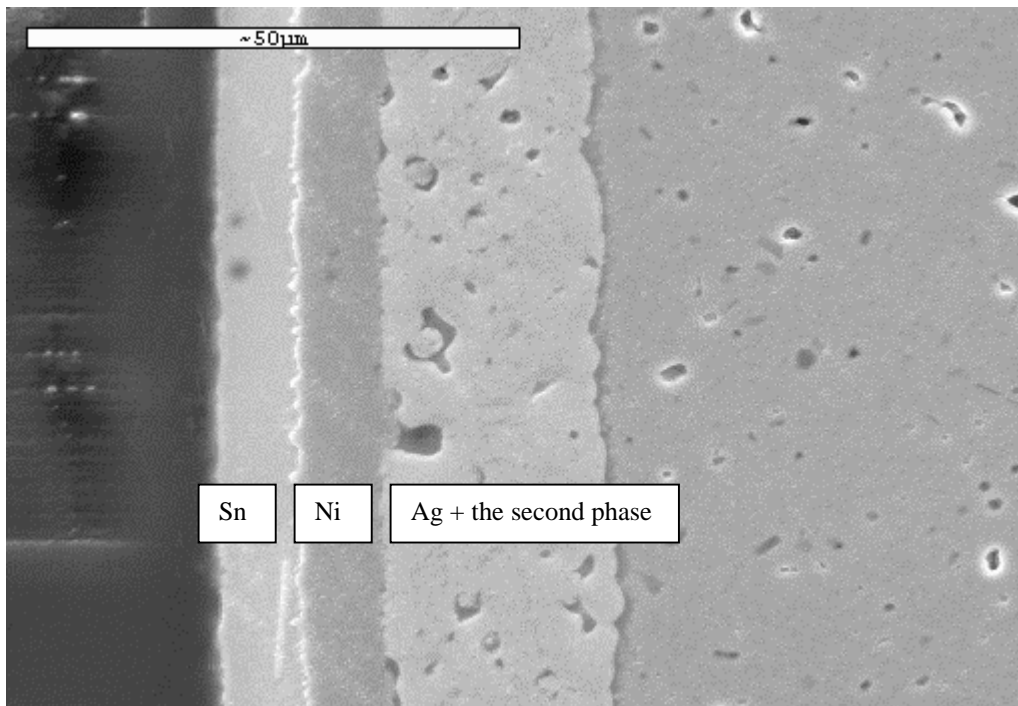
Results:

Three distinctive layers of coatings were observed, as shown below.

The outermost layer is Sn. The thickness is ~6.5 μm .

The diffusion barrier layer is Ni. The thickness is ~ 6.5 μm .

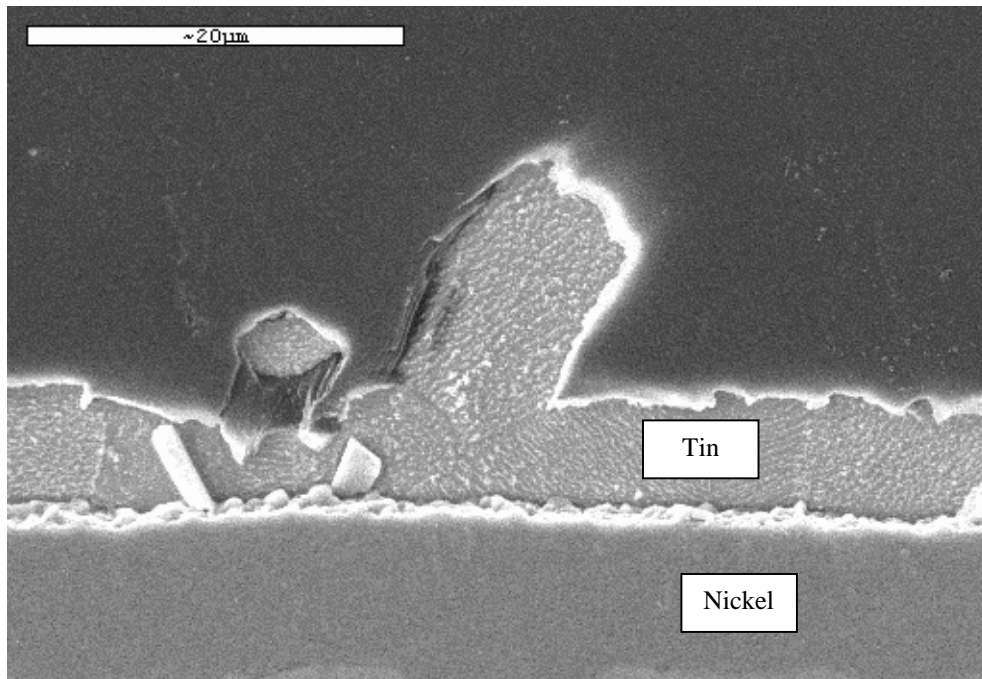
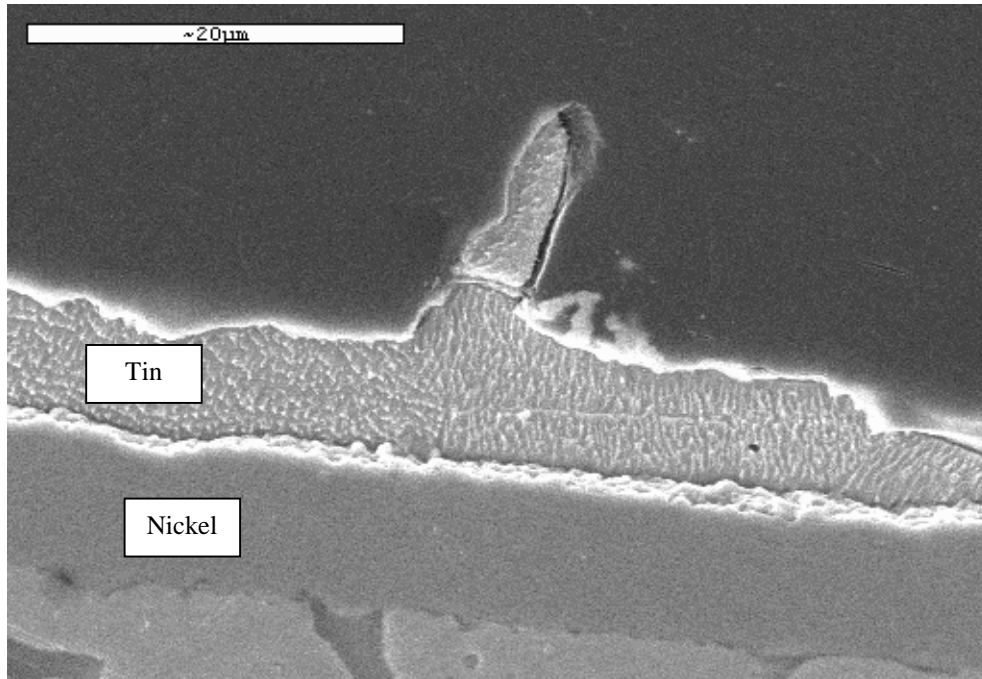
Metalization layer is mainly Ag plus a second phase (PbZnAgSiOx). The thickness is ~17 μm .



cc: 541/D. Kolos

IMTEs used for this analysis: 1334148

"Tin Etch" of the Cross Sectioned Ceramic Capacitor



"Tin Etch" of the Cross Sectioned Ceramic Capacitor

