

The Mechanical Properties of Platinum-Iridium Alloy Coating

簡錫新, 馬廣仁, 郭建煌

Mechanical Engineering

Engineering

hhchien@chu.edu.tw

Abstract

Glass molding process provides a great potential for the production of precise glass optical components at low cost. The platinum-iridium (Pt-Ir) alloys are widely used as the protective coatings to extend the service life of the mold in glass molding process. This study concentrated on the microstructure and mechanical properties of sputtered Pt-Ir alloy films. The obvious grain growth was observed in the Pt-Ir alloy films at sputtering temperature of 700°C. The hardness and elastic modulus of Pt-Ir alloy film decreased with the increase in Pt content.

Keyword : Glass Molding, Platinum, Iridium, X-ray Diffraction