

1942

Thermal Expansion of Single Crystals of Zinc

William P. Staker

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ANODE EFFECT IN A COMMERCIAL RADIO TUBE

A. OWENS

The anode effect has been studied on the grid and found to be in agreement with results previously published. Attention was then shifted to the plate where the anode effect was studied at larger current densities. It is to be noted that the building up of the effect can more easily be observed on the plate and the decay more easily observed on the grid.

SOME EFFECTS ASSOCIATED WITH NEGATIVE CORONA ONSET

L. E. PINNEY

Using concentric cylinder electrodes, observations were made on negative corona in hydrogen, argon, and nitrogen at pressures between 1 and 10 cm. of mercury. Positive ions produced by X-rays passing through argon in the corona chamber produced no measurable secondary effects at potentials below onset. Currents maintained by photo emission from the cathode became unstable at a potential near but definitely below onset.

IOWA STATE COLLEGE,
AMES, IOWA

THERMAL EXPANSION OF SINGLE CRYSTALS OF ZINC

WILLIAM P. STAKER

The thermal expansions of sixteen zinc single crystals have been measured in the temperature range 20°-100° C. The expansion coefficient is constant and obeys the Voigt symmetry relation.

PLASTICITY OF ZINC SINGLE CRYSTALS

E. P. T. TYNDALL

Some observations are presented of the plastic flow of zinc at very small stresses, just beyond the elastic limit.