

## عنوان مقاله:

Influence of silver on the anodic corrosion and gas evolution of Pb-Sb-As-Se alloys as positive grids in sulfuric acid solution

## محل انتشار:

دهمین کنگره ملی مهندسی شیمی ایران (سال: 1384)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Tizpar - Corresponding Author: R&D of Niru Battery Manufacturing Co. Tehran, Iran

Ghasemi - R&D of Niru Battery Manufacturing Co. Tehran, Iran

## خلاصه مقاله:

The influence of silver addition in the range of 0.01-0.09wt% on the anodic corrosion and gas evolution of Pb-Sb-As-Se alloy in 1.28 sp.gr. H<sub>2</sub>SO<sub>4</sub> solution at 25°C was studied using linear sweep voltammetry, cyclic voltammetry, weight loss measurements and scanning electron microscopy. The results drawn from different techniques are comparable. The effect of different concentration of silver on the corrosion behavior of Pb-Sb-As-Se was investigated. The experimental results show that the silver added to Pb-Sb-As-Se alloy inhibits the growth of anodic corrosion layer. A decrease in the oxygen evolution overpotential and an increase in the hydrogen evolution overpotential with the addition of Ag were also observed during the experiments. Cyclic voltammetric measurements provided information on the effect of Ag on the oxidation of PbSO<sub>4</sub> to PbO<sub>2</sub>.

## کلمات کلیدی:

corrosion; lead alloy; silver; lead acid battery

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/23574>

