

ABSTRACT

The effects of high energy protons irradiation on strain gauge were investigated in this study. The strain gauge was bombarded by 2.830 MeV of hydrogen ions for 1, 2, 5, 10 and 50 minutes. Results for electrical and physical properties of irradiation strain gauges compared to unirradiated one are presented through different graphs. In this research, it is demonstrated that the behavior of resistance changes linearly for unirradiated strain gauge and changes from linear to constant for irradiated strain gauge. The initial resistance of irradiated strain gauge is also changed as compared to unirradiated strain gauge. The constant behavior of strain gauge is apparent for irradiation time (1 minute to 10 minutes) but this behavior disappeared when strain gauge is irradiated for 50 minutes. It was also observed that after 50 minutes of irradiation, a physical spot also appeared representing the damage caused by the high energy protons.