

Abstract

In this research, pulsed Nd:YAG laser with wavelength of 532nm and pulse duration of 100ns at different energies (700, 800, 900 and 1000 mJ) and spot size of 1.5 mm was used to treat surfaces of different aluminum alloys. These alloys are [Al-Cu-Mg], [Al-Mg-Mn] and [Al-Zn-Mg] and [Al-Si-Mg]. The effects of laser energy on the microhardness and tensile measurements of the used aluminum alloys were studied.