

Fatigue Mechanical Behavior of (PMMA) Poly(methacrylate) Under Shot Peening Treatment

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The mechanical fatigue behavior of (PMMA) poly(methacrylate) under shoot peening was investigated under room temperature and stress ratio $R = -1$ using rotating bending tests. The fatigue life of specimens was increased up to 5 min. Shot peening test (SPT) and then it reduced. Also at the same SPT (5 min) the endurance fatigue limit was raised by 300% compared to the dry fatigue. The hardness and roughness were increased when the SPT increased. The control factor which affects the fatigue life was the roughness after 5 min, shot peening.

Keywords: Shot Peening, Endurance Fatigue Life, Poly(methacrylate) PMMA.