Abstract

The inward dimple, outward dimple and triangular vortex generator have been investigated on NACA 4415 airfoil with Reynolds number 50 000, and 100 000 correspond with velocity 5.6m/s, and 11.2m/s. The location of surface modification was set at 50% chord length. The dimple shape was semi-sphere with radius 2.5mm, height (inward dimple) and depth (outward dimple) 5mm, and 5mm distance between each dimple. The result shows that the inward dimple is sufficient in reducing drag forces and better in aerodynamic efficiency compared to outward dimple and triangular vortex generator. © 2020 SERSC.