

**6. Future scope of this study:**

The coating of aluminum alloy can be used for many applications such as marine applications, scratch resistance, fretting resistance and corrosion resistance applications etc. For its applications many tests on coating have to be performed. The coating can be subjected to 3-point bent test to check the bending strength. Similarly, a cladding of carbon fiber can be applied on the coating so that it becomes stiffer as compared to the coating alone. It is expected that the cladding of carbon fiber would increase the tensile strength and stiffness of the coating. The tensile strength of cladded coating can be tested over the universal testing machine. The application of carbon cladding also increases the fatigue strength of the coating. Carbon fiber cladded coating can be used for less weight and high strength applications such as car bonnet, bumper etc. Likewise, the coating can be subjected to fretting wear test to check the fatigue strength of the coating. The effects of the temperature on the wear rate can also be determined. The aluminum alloy coating can be further subjected to scratch test so that it can be used as scratch resistance coating on vehicle bonnet and bumper. Erosion test of the coating can be performed to find erosion properties, for potential marine applications.