

## **ABSTRACT**

*The increasing defense tension in the world has triggered every country, including Indonesia, to improve its security quality and technology. One of them is the development of an electric-powered UGV or Unmanned Ground Vehicle. UGV is an unmanned ground vehicle that serves to carry various types of supplies. UGVs are generally powered by electricity and have an iron body for good durability. The use of iron material on the whole body can increase the weight of the vehicle so that the carrying capacity is reduced. Heavy loads can also harm components such as electric motors. From these problems, it is found the potential for the development of electric UGV bodies using lightweight composite materials with good durability. Composite material is a combination of two or more different types of materials. This material has many advantages when compared to iron, one of which is lighter but has a high level of strength and stiffness. With these advantages, the use of this material is expected to increase the capability of the UGV. This design aims to reduce the weight of the vehicle without reducing the durability of the body.*

**Keywords :** *Electric UGV, Composite Material, Fiber Reinforced Polymers*