

ABSTRACT

The development of electric vehicles is increasingly rapid as the increase in pollution caused by conventional vehicles triggers various industries and MSMEs to compete to develop or expand the electric vehicle sector. Especially now that electric vehicles with various unique designs have emerged that attract the world's attention. Various types of electric vehicles with small sizes and unique designs have been developed not only for the purpose of use but also for fans of cluster hobby vehicles. In correlation with this phenomenon, industries and MSMEs are indirectly required to use materials that can keep up with design developments but also have strong durability and do not reduce selling value in the market. PT Konderatu Artistika is one of the manufacturers developing electric vehicles by releasing the KERUGG Rawit series. The unique design that tends to be complicated, especially on the handlebars, which is classified as small motor, requires material characteristics with flexibility and high strength levels. Researchers see the superior potential of using Fiber Reinforced Polymer (FRP) composite materials as a solution to the problems experienced in the design of the Rawit handlebars considering that composite materials have been widely used by various large automotive industries around the world as materials for their various products. Fiber Reinforced Polymer (FRP) has very high flexibility properties, a strong level of resistance, and anti-rust so Fiber Reinforced Polymer (FRP) material is considered applicable in the design of Rawit motorcycle handlebars. The author uses the research and development method, data collection techniques through observation and literature review. The the analysis, found that Fiber Reinforced Polymer (FRP) can be applied in the design of Rawit motorcycle handlebars.

Keywords: *Electric Vehicle, Fiber Reinforced Polymer, Handlebar*