

## ***Abstract***

*The flexural strength comparasion of epoxy matrix composite with diferent reinforcement . Composite is a combination of two or more materials that have good physical properties and good mechanical properties. Reinforcement materials commonly used in polymer composites are fibers and strips material, bamboo fiber, carbon, PALF and malva fiber are used as reinforcement materials and epoxy resin polymer used as matrix. The research phase began with finding the journal which explain about flexural strength in a composite that using epoxy resin as matrix. The composite manufacturing process uses the hand lay-up method. The flexural strengths data will be compare and analized. The mechanical properties tested used flexural test with ISO 14125:1998 Fibre-reinforced plastic composites – Determination of flexural properties and ASTM D790/D790M-17 “Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials”. The strongest reinforcement is carbon with 475,27 MPa, second is malva’s fiber 214,00 MPa, third is PALF 103,25 Mpa, the last one is bamboo 80,30 Mpa.*

***Keyword:*** *Bamboo, carbon, PALF, malva fiber, epoxy resin, flexural strength*