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# Defects dispersion studies in composite structures has polymer matrix

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**Abstract :** The performance / weight composite materials with polymer matrix reinforced by fibers makes them a material of choice for structural applications in many fields such as aerospace and civil engineering. Among these materials, the epoxy matrix composites reinforced carbon fibers are often referred to as having the most interesting mechanical properties due to the remarkable properties of the carbon fibers. The epoxy resin is also involved in obtaining these exceptional properties thanks to its ability to impregnate the fibers well, its chemical and electrical resistance and low retraction during polymerization.Analysis of measurement results of the three pointbending on the composite materials epoxy matrix reinforced with different layers of carbon fibers using Weibull statistics allow us to the highlight the probabilistic aspects of the fracture and the dispersion defects in structures.

**Keywords :** composite, fiber, polymer, probability default.