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WEIBULL ANALYSIS OF THE BEHAVIOR ON TENSILE STRENGTH OF EUCALYPTUS FIBERS

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The lignocellulosic fibers represent economical, technical and environmental advantages regarding alternative materials as composites reinforcement compared to synthetic ones, such as the glass fiber. The natural fiber used in this present work is the eucalyptus fiber, which is largely cultivated in Brazilian territory. This work aims to make an statistical characterization of the distribution of the eucalyptus fibers diameter. For this, the Weibull methodology was performed. The diameter was obtained by profile projector measurements, while tensile tests were conducted on each fiber to obtain mechanical strength. The results interpreted by Weibull statistical showed a correlation between the resistances of the fiber to its diameter.