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The Effects of Spiral Grain on some Mechanical Properties of Calabrian Pine (Pinus Brutia Ten.) Wood.

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Abstract: The effects of spiral grain on some mechanical properties of Calabrian pine wood were studied. For this purpose, 17 sample trees were taken from Çakirlar region, Antalya district. The experimental trees were classifed into five groups according to the values of spiral grain angles as follows: 0- 5 % , 5-10 % , 10-15 %, 15-20 %, and > 20 %. No difference was found in bending strength and modulus of elasticity, up to 10 and 15 % spiral grain degrees, respectively. A spiral grain of 20 % or higher can be permitted in compression stresses. If wood has a spiral grain, a tangential shearing test should be used, and if it has a diagonal grain, a radial shearing test should be used. In impact bending, up to 10% spiral grain can be permitted. It was found that the hardness values were also affected by spiral grain.

Key Words: Spiral grain, Pinus brutia, Mechanical properties.

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