

This paper uses the cutting forces in a routing process of Aleppo pine wood to estimate the tool wear effect. The aim is to obtain further information about the tool wear effect by monitoring the variation in the cutting forces. A Kistler 9257A 3 axes Dynamometer was positioned under the workpiece to measure the cutting forces at frequencies up to 10,000 Hz. The experiments were carried out on a CNC routing machine RECORD1 of SCM. A carbide tool was used and the cutting parameters were fixed. The cutting speed was approximately 25 m/s. DasyLab software was used to capture the data. The results show a correlation between the tool wear and the computed angle (α), between the tangential and cutting forces. In fact, the variation of (α) is unstable in the running period and stable in the linear wear zone, included in the interval $[-1.11^\circ; -1.10^\circ]$. This study was performed as part of a development program for the Algerian wood industry, hence the selection Aleppo pine wood as the working material