

**VERIFICATION OF PERFORMANCE AND COST OF MECHANICAL  
CUTTING PROCESSES**

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## ABSTRACT

Preparation and assembly before welding and fabrication require material sizing and cutting. The actual cost involved in cutting process is frequently misunderstood due to lack of published data that relate the cost and labour factors. This study started off by recognising a number of mechanical cutting methods which are milling, turning, sawing, disc cutting and gap shearing. Before proceeding, the cutting specifications to cut stainless steel, mild steel and aluminium were studied. The time to process a material from a raw material to a finished cut material which consists of the preparation and cutting time were recorded. The electrical and labour cost is to be determined from the time data. For each of the cutting processes, empirical formulae were developed based on the average of actual performance data. With this formula, it is possible to predict accurately the performance of cutting of any area and volume. From this study, it is possible to determine the economics and specification for cutting various type of material.

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