Title:	**Effects Of The Thickness Of Block Cutting Machine Gang Saw On Waste Percentages And Productivity**

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Abstract:

This paper aims at studying the stone waste percentages generated from cutting stone blocks into slabs using stone block cutting machine (Gang Saw). This type of stone waste is in the form of powder (fine stone particles) mixed with cooling water and converted to mud or slurry.

Practical data for the Input (stone blocks) and the output (stone slabs) for this machine was collected from different stone companies in Palestine as random sample. Statistical analysis was carried out for these data related to the thickness of stone slabs. The practical results were investigated, calculated and compared with the ideal values, (ideal values were calculated theoretically for one cubic meter of stone block with dimensions of one meter length, one meter width, and one meter height).

This study shows that, there is inverse relation between the cutting thickness of the gang saw (which equals the thickness of produced stone slabs) and the volume waste percentages and productivity (area of stone slabs produced in square meters per one cubic meter of stone block). Also, the volume waste percentages fluctuate around the ideal values which are 26% for 2cm, 19% for 3cm and 22% for the mixed 2&3cm thicknesses.

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