

Effect of the Workpiece Position on the Manufacturing Tolerances

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Abstract : Manufacturing tolerancing is intended to determine the intermediate geometrical and dimensional states of the part during its manufacturing process. These manufacturing dimensions also serve to satisfy not only the functional requirements given in the definition drawing but also the manufacturing constraints, for example geometrical defects of the machine, vibration, and the wear of the cutting tool. The choice of positioning has an important influence on the cost and quality of manufacture. To avoid this problem, a two-step approach have been developed. The first step is dedicated to the determination of the optimum position. As for the second step, a study was carried out for the tightening effect on the tolerance interval.

Keywords : dispersion, tolerance, manufacturing, position

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