

COMPUTERIZED TOOL PATH GENERATION

An automated computer-implemented method for generating commands for controlling a computer numerically controlled milling machine to fabricate a machined object from a workpiece, the machined object being configured to facilitate subsequent finishing into a finished object, the method including defining a surface of the finished object, defining an offset surface defining an inner limiting surface of the machined object, defining a scallop surface defining an outer limiting surface of the machined object and calculating a tool path for the milling machine which produces multiple step-up cuts in the workpiece resulting in the machined object, wherein surfaces of the machined object all lie between the inner limiting surface and the outer limiting surface and the number of step-up cuts in the workpiece and the areas cut in each of the step-up cuts are selected to generally minimize the amount of workpiece material that is removed from the workpiece.

(Fig. 5)