ABSTRACT

~~A combined type computer numerical control processing machine, comprising at least one cutting tool head, a laser cladding tool head, a laser surface heat treatment tool head and a computer numerical control unit, and all the tool heads can be alternately arranged on a tool chuck of the processing machine. A user can complete the cutting and laser cladding and/or laser surface heat treatment of a workpiece at a time by using a single tool machine, and the workpiece does not need to be moved in different machine tools, thereby simplifying processing steps, and shortening the processing time. Also provided is a processing method using the combined type computer numerical control processing machine.~~A hybrid computer numerical control (CNC) machining center and a machining method thereof are provided. The hybrid CNC machining center has at least a cutting tool head, a laser cladding tool head, a laser surface heat treatment tool head, and a computer numerical control unit. The cutting tool head, the laser cladding tool head, and the laser surface heat treatment tool head are alternately installed in a tool holder of the hybrid CNC machining center. Users can accomplish cutting, laser cladding, and laser surface heat treatment operations for a work-piece just in one single machine, so that the work-piece is unnecessary to be moved between different machines. Therefore, the steps and the process time of the machining operations are substantially simplified.

[Figure 1.]