

CARBIDE END MILL AND CUTTING METHOD USING THE END MILL

ABSTRACT

Provided is a long life carbide end mill which can perform stable cutting in high-efficiency machining such as die machining and parts machining, which can be manufactured easily at low cost and can be re-ground, which can disperse cutting resistance sufficiently to thereby suppress chattering vibration, and which enables setting of a permissible rotational speed to a high speed. A cutting method using such an end mill is also provided. When a certain wavy or nicked peripheral cutting edge is considered a reference peripheral cutting edge with reference phases in a pitch of the reference peripheral cutting edge, wherein the distance of each reference phase is an amount corresponding to a value obtained by dividing the pitch of the nicks or waveform of each peripheral cutting edge by the number of the cutting edges; and the phase of at least one of the remaining peripheral cutting edges is deviated in the direction of the tool axis from the corresponding reference phase by an amount corresponding to 5% or less (excluding 0%) of the pitch. The cutting method comprises the step of successively performing at least two types of cutting operations selected from longitudinal-feed cutting, lateral-feed cutting, and oblique cutting.

[Fig. 4]