







2743 words sum up all knowledge of milling cutter, gibberson did not have " good money "aa

## The main demand of material of milling cutter cutting part:

1) Tall hardness and wearability: Below normal temperature, cutting part material must have enough hardness talent to cut work; Have tall wearability, cutting tool just does not wear away, prolong service life. 2) Good heat resistance: Cutting tool can produce much quantity of heat in cutting process, it is especially when cutting rate is higher, temperature will be very high, accordingly, cutting tool material should have good heat resistance, still can maintain taller hardness below high temperature already, have can the function of proceed cutting, this kind has the quality of high temperature hardness, call hot rigid or red rigid again. 3) The tenacity of tall intensity become reconciled: In cutting process, cutting tool should bear very big wallop, so cutting tool material should have higher strength, otherwise easy rupture and damage. Because milling cutter can get concussion and vibration, accordingly, milling cutter material still should have good tenacity, just die not easily blade, disintegrate.

## Milling cutter is commonly used material:

(1) Steel of high speed tool (abbreviation high-speed steel, high speed steel), component is general with special purpose high-speed steel two kinds. It has the following characteristic: The content of tungsten of A, alloying element, chromic, molybdenum, vanadium is higher, quench hardness can amount to HRC62, 70. Below 600°C high temperature, still can maintain taller hardness. Intensity of B, point and tenacity are good, fight Zhen Xingjiang, can use at making the cutting tool with cutting average rate, poorer to steel sex machine tool, use high-speed steel milling cutter, still can successful cutting. C, technical properties is good, forging, it is easier that treatment and blade are ground, still can make the cutting tool with more complex form. D, compare with phase of hard alloy data, still have hardness inferior, red rigid and wearability are poorer wait for defect. (2) Hard alloy: Titanium of tungsten of metallic carbide, carbonization, carbonization and the metallic binder that give priority to with cobalt did not seductively dressed or made up to golden craft is made and be become via pink. Its are main the characteristic is as follows: Can high temperature resistant, be in 800, the cutting property that 1000°C left and right sides still can hold good, can choose when cutting taller than high-speed steel 4, the cutting speed of 8 times. Normal temperature hardness is tall, wearability is good. Bending strength is low, concussion tenacity is poor, what edge grinds not easily is very sharp. Commonly used hard alloy can be 3 kinds big commonly: ? tungsten is cobaltic kind of hard alloy (YG) YG3 of commonly used brand, YG6, YG8, among them the percentage that the number represents to contain cobaltic amount, the quantity that contain cobalt heals much, tenacity has healed, more impulse withstand with vibration, but can reduce hardness and wearability. Accordingly, this alloy applies to cutting cast-iron reach nonferrous metal, the steel that still can use cutting to pound the semifinished product with old sex and classics to quench with stainless steel. ? titanium is cobaltic kind of hard alloy (YT) Commonly used brand has YT5, YT15, YT30, the number represents the percentage of carbonization titanium. After hard alloy contains carbonization titanium, can raise the sticking temperature of steel, reduce grind coefficient, can make hardness and wearability rises somewhat, but reduced bending strength and tenacity, make property becomes fragile, accordingly, this kinds of alloy gets used to cutting steel kind spare parts. ? is general hard alloy Right amount rare metal carbide is joined in two kinds of aforementioned hard alloy, wait like carbonization Tantalum and carbonization niobium, make its grain is refined, raise its normal temperature hardness and high temperature hardness, wearability, stick receive temperature and fight oxidisability, can make the tenacity of alloy increases somewhat, accordingly, cutting tool of this kind of hard alloy has better integrated cutting performance and versatility, its brand has YMA4

