



Reasons of Cracks on Carbide-Tipped Welding Inserts for Wood Working

Woodworking tool manufacturers should face such a situation, there are cracks on carbide-tipped welding inserts. Then, why? Caused by slotted design, brazing process, or the heating process and edge grinding? Some carbide inserts with high hardness and low strength are prone to weld cracking. Enclosed or semi-enclosed trough, it is an important reason for increased welding stress to cause cracks. It is necessary to meet the strength requirements of the weld, then to minimize the weld area and reduce welding stresses.

The fast heating of welding or too fast cooling after welding will cause uneven heat distribution, and produce instantaneous stress-induced cracks. Rapid heating, carbide outer was hit by compressive stress, and the inner tensile stress, when the heating rate exceeds the permitted rate, it may cause visible or invisible cracks. Tensile stress will cause on the outside of carbide during rapid cooling after welding, which leads to the alloy cracks. To avoid putting the workpiece on the wet ground, or on a wet lime tank, it will cause cracks due to the sudden cooling.