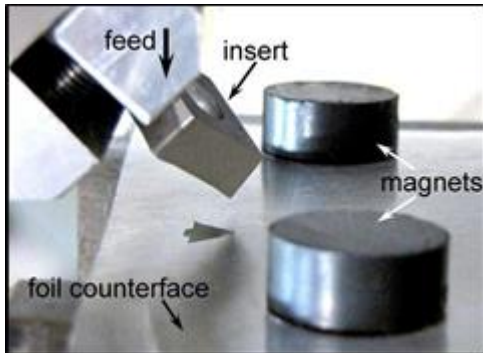


Electro-erosion Edge Honing of Cutting Tools



Close-up of tool honing set-up.

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Test data is available

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Abstract

Edge honing is a critical element in the manufacture and performance of cutting tools. An edge hone imparts strength to the cutting edge thereby reducing the incidence of edge chipping, and improves tool life and part surface quality.

At the present time, edge hones are predominantly generated using mechanical abrasive brushes. This innovative technology, however, employs electro-erosion to create of a hone radius on the edges of cutting tools for conventional metal cutting operations. The process is non-contact, precise, and independent of material hardness.

The technology is especially beneficial in the edge preparation of cutting tools made from ultra hard materials such as polycrystalline diamond (PCD).

Applications

- Tool Manufacturing
- Manufacturing maintenance

Advantages

- Provide improved tool life
- Decreased tool breakage
- Improved surface quality
- Cost savings and enhanced productivity
- Enables honing of harder tooling materials like PCD
- s gas exchange by imitating the placental function in order to prevent damage to the premature lung
- Passive - Pumped by the baby's own heart and exchanges oxygen with the ambient environment