

“Fusion Powder” Stretches Life Of Steel Parts

Why do Larry Schmedding’s feed mixer knives last five to seven times longer than factory-installed knives? It’s all in the powder, he says.

“We apply a 3/4-in. wide band of tungsten carbide/borium mix to the flat side edge,” says Schmedding of Agri-Tool & Supply, Inc. “It’s applied with a fusion powder torch. We don’t put anything on the back side because it cuts on an angle and self sharpens.”

Tungsten carbide is next to industrial diamonds in hardness. Adding it to the borium creates a fine particle size for smoother application and less wear or breakage of the tungsten.

Customers tell him one of the big savings is reduced machine down time. They don’t have to take time to replace worn knives, and the mill operates at its peak efficiency, says Schmedding.

Another advantage of his replacement knives is their fit. Blades as narrow as 3/8 in. and 1/2 in. often require a backing plate. The hard edge acts as a large shim and keeps them stiff and in place.

“Our knives don’t need a backing plate because they fit exactly,” says Schmedding.

The special fusion powder process is not limited to feed mixer knives. It can be put on any surface subject to wear including auger flighting, wear plates, sweeps, drill bits and many other surfaces.

“We sell the powder with application specifications to people who have a fusion torch. If they don’t have a torch, we’ll sell them one and the powder,” says Schmedding. “Some folks have the torches, but don’t know how to use them. I can teach them over the phone whether they bought them from me or not. It is part of my service to answer the phone 24/7.”



To make his feed mixer knives last longer, Schmedding uses a fusion powder torch to apply a 3/4-in. wide band of tungsten carbide/borium mix to the flat side edge.

Blade prices range from \$20 to \$96 depending on make, model and steel prices. An entire do-it-yourself package of torch, five pounds of powder and instructions sells for \$850.

Schmedding specializes in farmer friendly welding materials, such as an all-purpose welding rod with 85,000-lb. tensile strength. The electrode can be used in any position, even overhead. He also does a lot of chrome coating of high-wear parts.

“We have approximately 250 different wear resistant castings for use in various agricultural applications,” says Schmedding.

Contact: FARM SHOW Followup, Larry Schmedding, Agri-Tool & Supply, P.O. Box 612, Greenacres, Wash. 99016 (ph 800 321-5460 or 509 928-1872; website: www.perfectpass.biz).

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