General Guidelines For Grinding With Diamond Or CBN Wheels

1. Select the wheel that has the proper characteristics for the particular job being done. No single wheel should be used with the intention of being an all-purpose wheel. Consult the Weinig Tooling and Supplies catalog for recommendations.

2. Flood coolant extends wheel life and improves finish quality if applied to the point of cut properly. Look for the stream coming through the cut.

3. Maintain manufacturer's speed recommendation for maximum efficiency. Wheels that are run at a lower speed act softer, cut slow, and wear away rapidly. Wheels that are run at a higher speed act harder, usually glaze, and sometimes cause knife burn and premature wheel wear. The initial recommended wheel speed for Weinig profile grinders is 3000 RPM, with speed deviations to be made from that point according to operator technique and the material being cut.

4. Light pressure on the workpiece produces better and faster results. Recommended initial removal rate per pass: Roughing wheels 0.001-0.002" (0.025-0.051mm); Finishing wheels: 0.00025" (0.005mm).

5. Adjustment of the traverse rate should be faster for roughing, slower for finishing.

6. A wheel whose pores become loaded with the metal being ground must be cleaned by periodically holding a cleaning stick against the face of the running wheel.

COMMON PROBLEMS AND SOLUTIONS

1. WHEEL WILL NOT CUT: Clean with cleaning stick, then increase the amount of work presented to the wheel by increasing the infeed and/or traverse rate.

2. BURN OR CHATTER: Clean with cleaning stick, then increase the traverse rate. This will result in longer wheel life, less loading or glazing, and a freer cutting wheel.

3. POOR FINISH: If the wheel is loaded or glazed, apply the same principle as for burn or chatter. If the wheel is not loaded or glazed, then decrease the infeed and/or traverse rate. NOTE: A slightly loaded wheel will provide the best finish.

4. SHORT WHEEL LIFE: Decrease the infeed and/or traverse rate. Excessive pressure or traverse rate will cause the wheel to break down too rapidly.

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