For appropriate use of diamond and CBN wheels, when resetting the wheel to the machine immediately after purchase, or when the wheel surface has become deformed, carry out truing and dressing.

### Truing and Dressing Types

#### 1. Steel grinding methods

Mark the wheel outer surface with a magic marker etc., and grind raw material such as S45C normally until the entire surface is in contact (the mark is concealed) and there is no more center runout. Dressing is completed along with truing, allowing the actual work to begin.

- **Rotation speed** should be 1180 m/min, slightly slower than normal.
  - (Reference: normally 1700 – 2000 m/min or so)
- **Feed** should be 30 mm/min (30 millimeters per minute) at an almost stationary speed.

#### 2. Grinding a WA or GC grindstone (for flat grinding surface)

Fix a WA or GC (or C) grindstone in a vise and grind it as with a workpiece.

- **Particle size for the stick-grindstone should be approximately the same as that of the grinding wheel.**

  **(1) Wheel Rotation Speed**
  - 500 – 1000 min⁻¹ or 200 – 500 m/min⁻¹ is optimal, and normal work rotation speed is also possible.

  **(2) Cutting Depth**
  a. For course particle size (coarse grinding) wheel
  - 0.200 – 0.500 mm/pass at #140 – #170
  - 0.050 – 0.200 mm/pass at #200 – #230
  - 0.050 mm/pass or less at #270 – #325
  b. For fine particle size (finish grinding) wheel
  - 0.020 – 0.005 mm/pass at #400
  - 0.005 – 0.002 mm/pass at #600
  - 0.002 mm/pass or less at #800

  **(3) Table motion**
  - Cut and begin forward/back feed only, adjusting feed speed by particle size.
  - The feed speed should be slower for finer particle size.

#### 3. Using Truing and Dressing

Carry out truing (reflection removing, molding) with the dresser as in the above figure. Wheel sharpness suffers when the truing dresser is used, meaning dressing is required. Take care, however, as cutting beyond reasonable limits will lead to damage to the wheel.

#### 4. Using Truing Equipment with Brake

As in the figure, this equipment uses the rotation force of the wheel to rotate the WA or GC grindstone, carrying out truing and dressing through the speed difference between the wheel and the grindstone. Efficient work is possible, but take care as if the grindstone is not properly rotated it may damage the machine.

#### 5. Using Motor-Driven Truing Equipment

This equipment uses motor drive to rotate the WA or GC grindstone, truing and dressing the wheel. It produces the stabilest wheel surface, fast work, and safety.