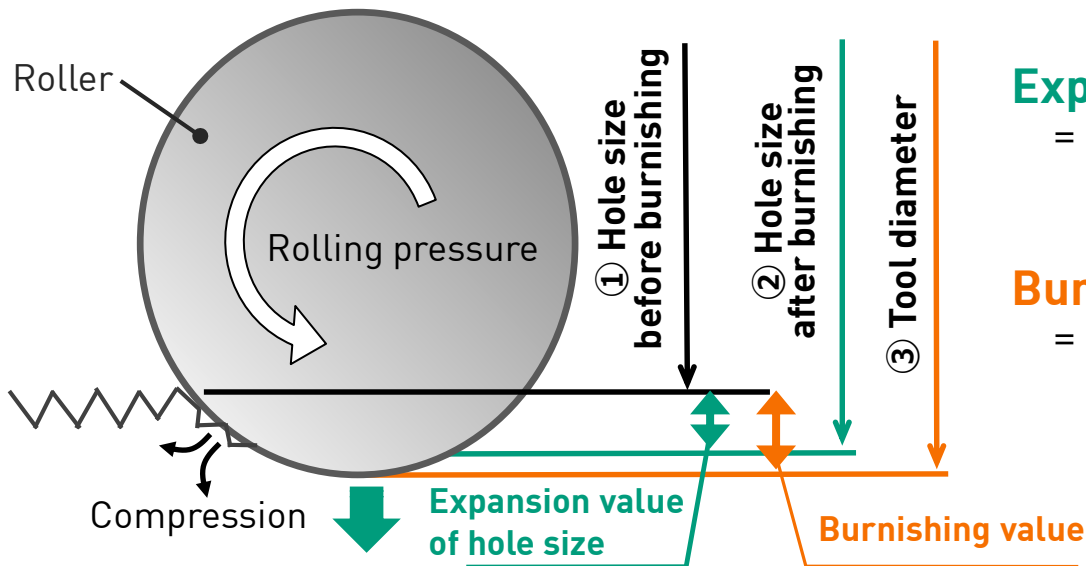


Mechanism: Sizing of ID

Machined peaks and valley are compressed evenly to increase hole size without stock removal.



Expansion value of hole size

$$= [\text{② Hole size after burnishing}] - [\text{① Hole size before burnishing}]$$

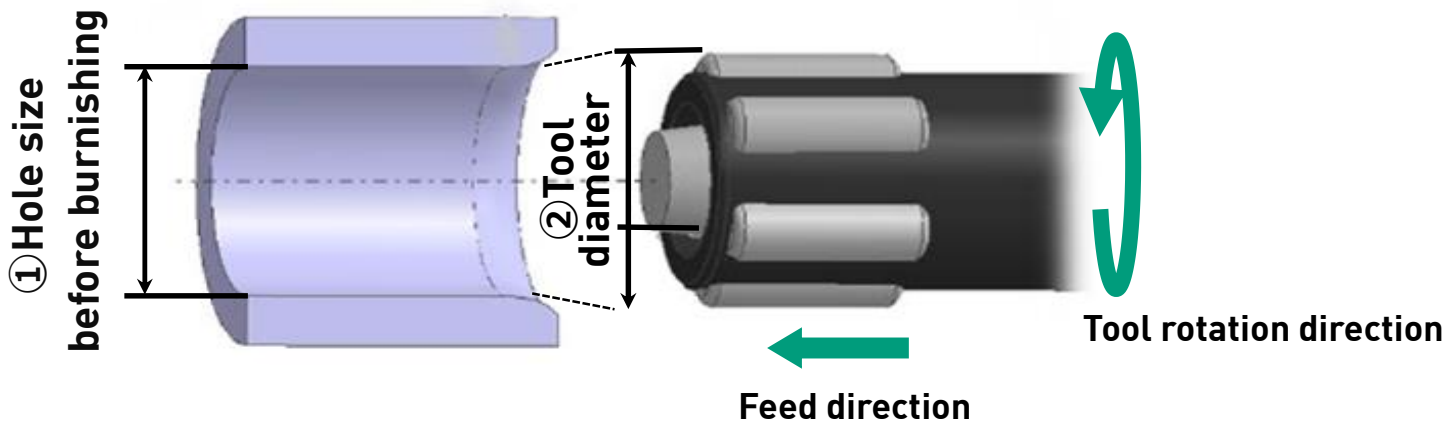
Burnishing value

$$= [\text{③ Tool diameter}] - [\text{① Hole size before burnishing}]$$

Tool diameter and burnishing value

Set tool diameter dozen of μm larger (Burnishing value) than hole size before burnishing.

Burnishing value = [②Tool diameter] - [①Hole size before burnishing]



Sizing example: Hole expansion

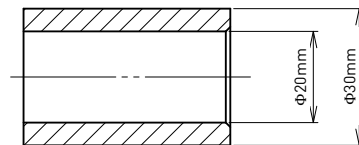
Workpiece

Material: S45C

Burnishing conditions

Tool diameter: SH2000

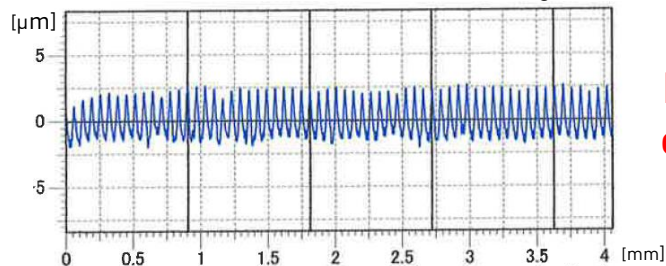
Burnishing value: 40 μm



[Before]

Vertical mag: x2,000

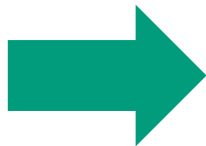
Horizontal mag: x20



Roughness: Rz 4.532 μm

Hole size : $\Phi 20.013\text{ mm}$

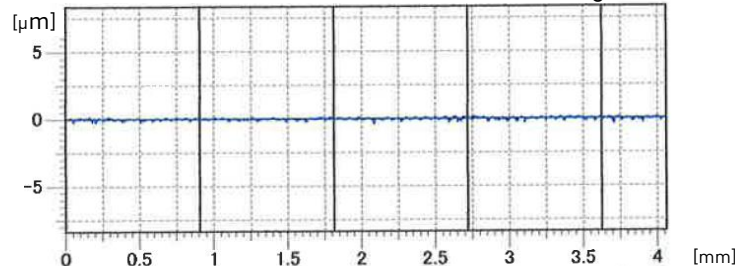
**Expansion value
of hole size 4 μm**



[After]

Vertical mag: x2,000

Horizontal mag: x20



Roughness: Rz 0.463 μm

Hole size : $\Phi 20.017\text{ mm}$