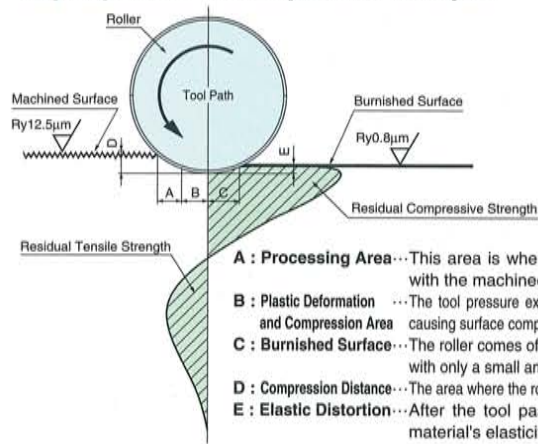


## How it Works

The roller burnishing process creates a "mirror" finish in a single pass by plastic deformation and compressing the high points of a given surface. This process is similar to compressing asphalt in the construction industry.

This plastic deformation is limited to the surface of a feature. This in turn creates more precise finishing, higher productivity rates and an increase in tensile strength and surface hardness.

## [Synopsis of the Superroll Principle]

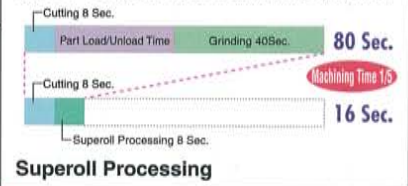


## Processing Effects

### Cycle Time Reduction

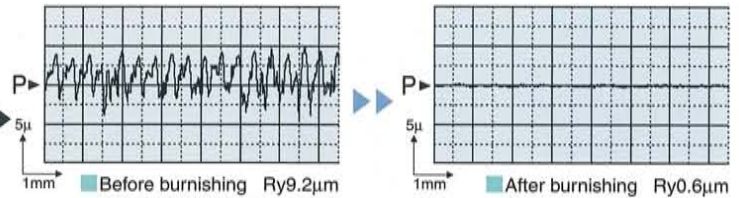
Cycle times can be reduced by 1/5-1/20 of the time of a grinding operation. The work piece can be finished in a single operation on a CNC lathe or CNC machining center.

### Typical Comparison to a Grinding Operation



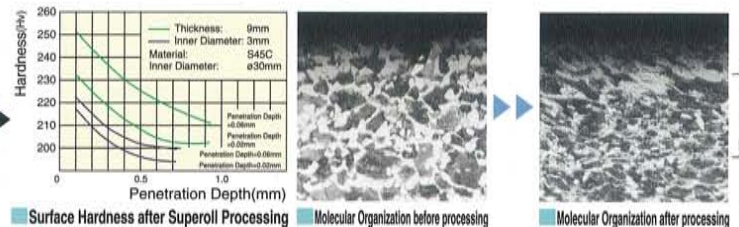
### High-Speed Burnishing

Superroll provides Ry.004"~.032"µinch [Ry0.1-0.8µm] surface finish in one pass. This process is ideal for mating or seal surfaces.



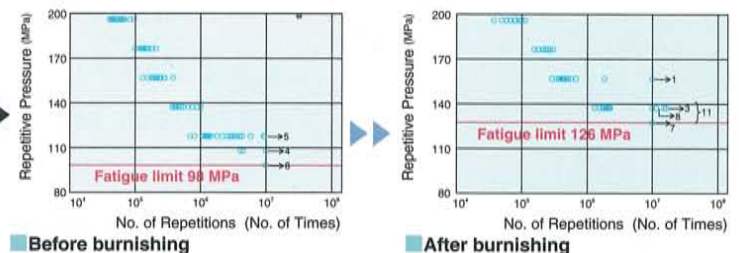
### Improves the Abrasion Resistance of a Surface.

The molecular organization is so dense after the burnishing process that it actually increases the surface hardness, which in turn improves abrasion resistance.



### Increased Tensile Strength

Residual compressive stress is produced during the burnishing process increasing the surface tensile strength by more than 30%. Improved tensile strength affords design engineers the flexibility to design lightweight components.



### No Sludge Produced

Since the burnishing operation produces no sludge or by-products, no special waste treatment procedures are required.

