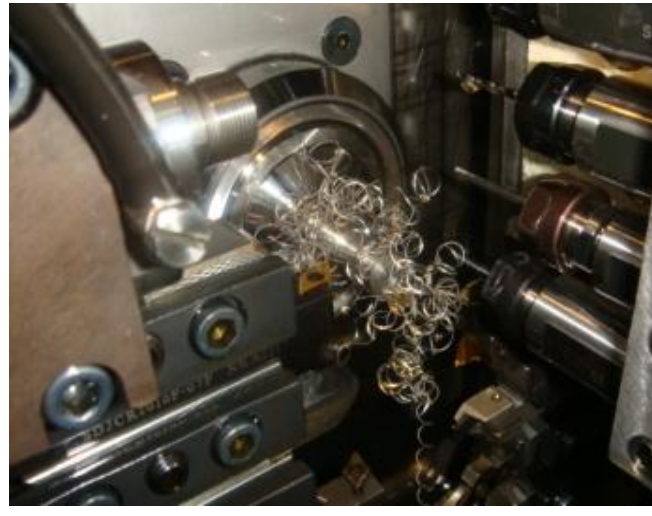


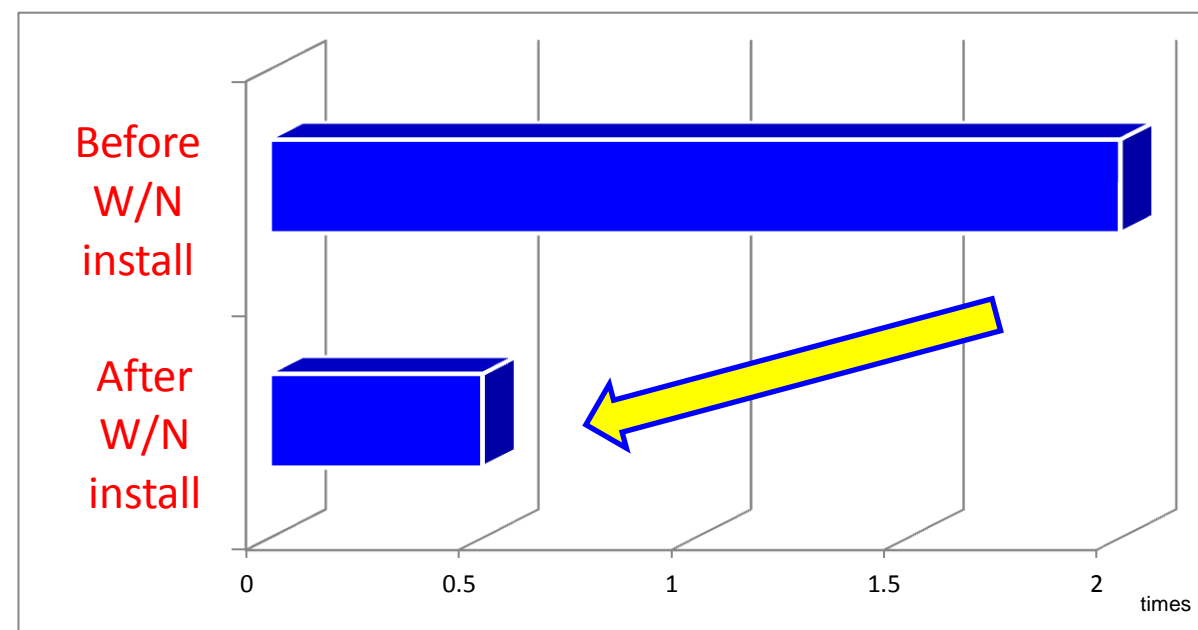
# Benefits of *Wavy Nozzle*®

## 1. Reduction of the machine stop frequency for removing chips.

Cutting product : Shaft , Material : SUS316 : 18 days monitor of machine stop times



OD φ9.5 × 30 L

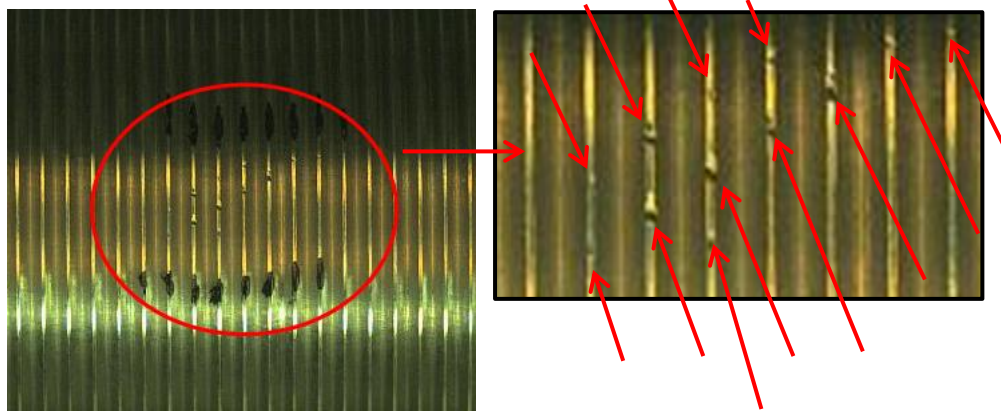


2 times / 1shift (8Hour)  
→ 0.5 times / 1shift

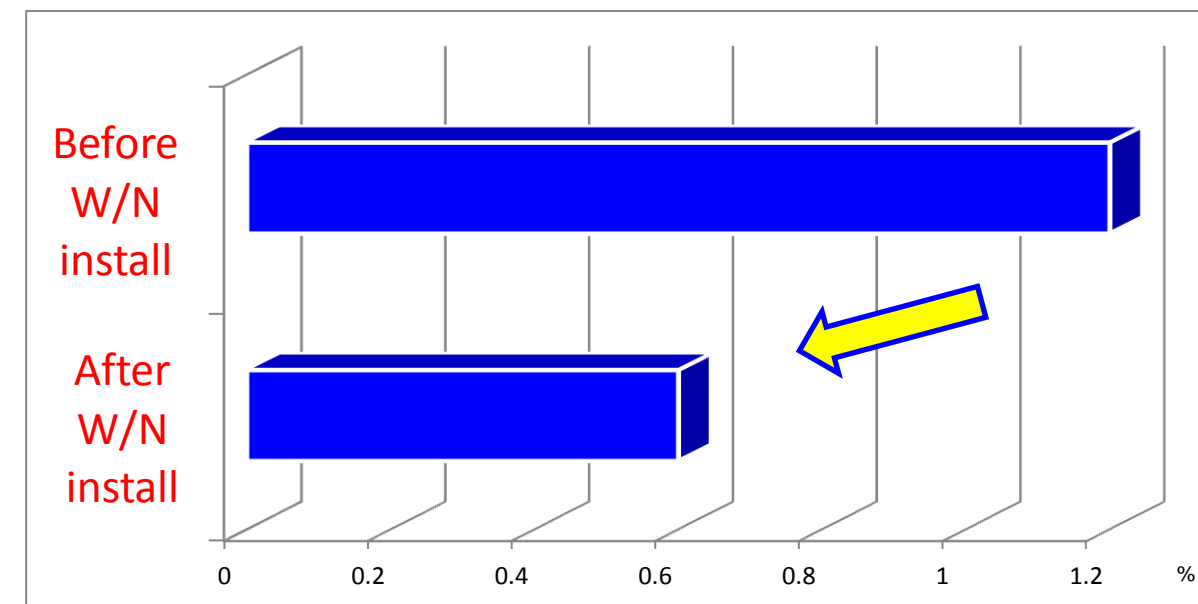
**Reduce to 1/4 times**  
→ **75% Machine stop reduction!**

## 2. Yield improvement in the visual inspection since the scratch of the product is reduced.

Cutting product : Shaft , Material : SUS316 : 6,000 pcs visual inspection data



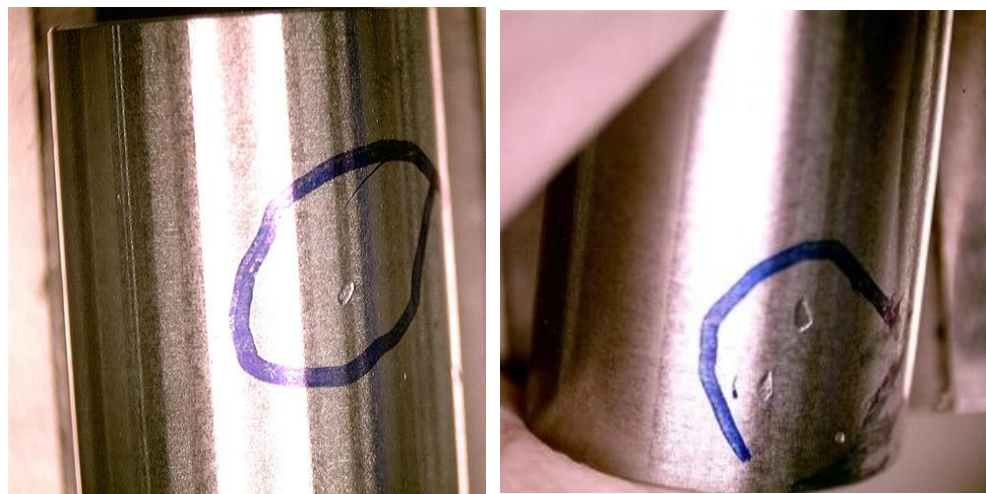
OD φ5.0 × 7.2 L



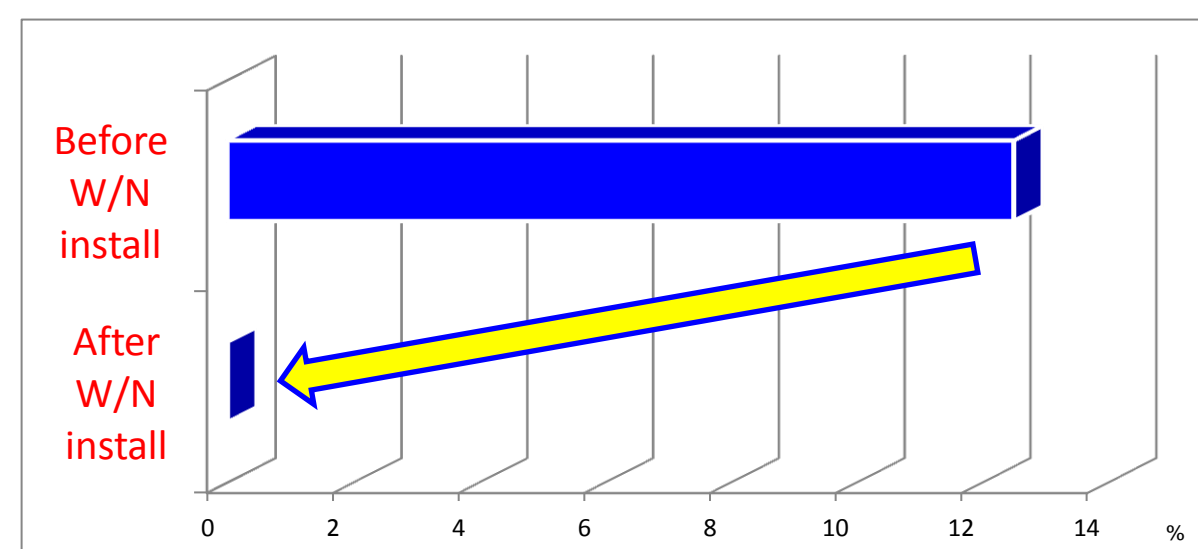
NG rate 1.2%  
→ NG rate 0.6%

**Reduce to 1/2**  
→ **50% Scrap reduction!**

Cutting product : Roller , Material : SUS416 : 3,500 pcs visual inspection data



ID φ4.0 × 12 L

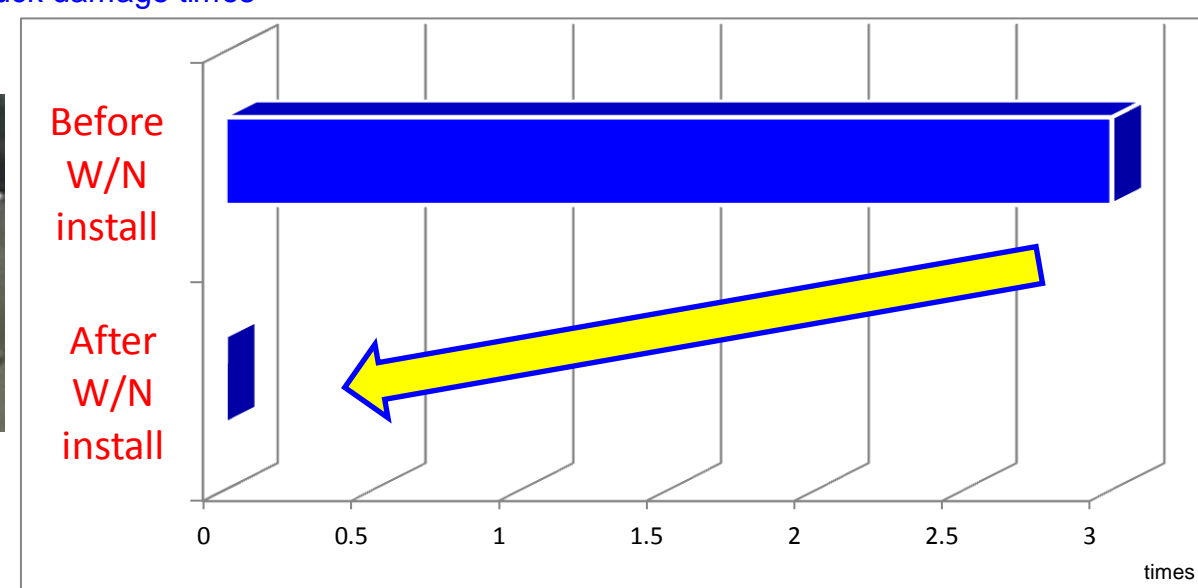
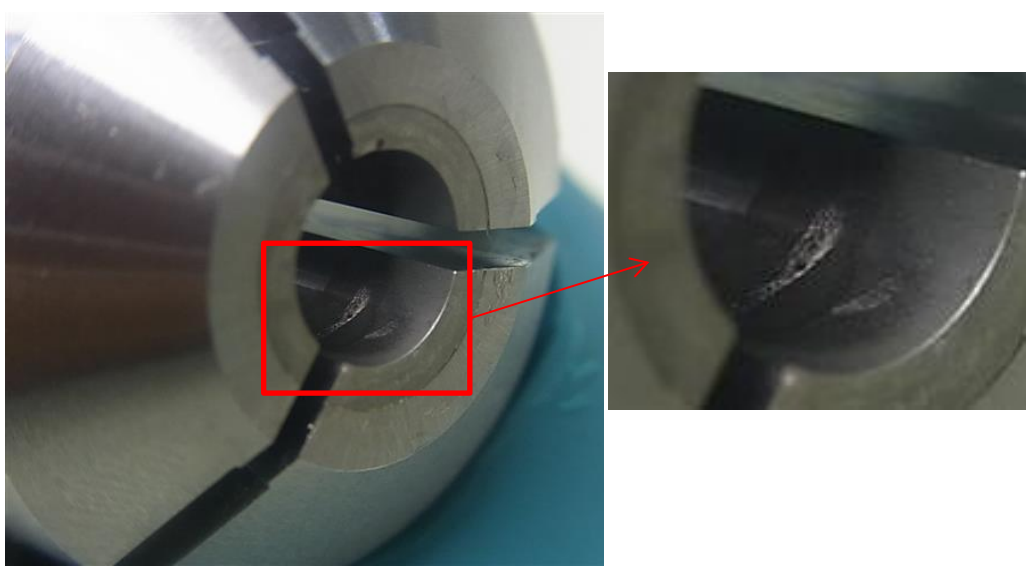


NG rate 12.5%  
→ NG rate 0%

→ **Problem Solved!**

## 3. Elimination of damage to the rear machining chuck by jamming chips.

Cutting product : Screw shaft , Material : SUS316 : Number of chuck damage times



3 times / 6,000 pcs  
→ 0 times / 6,000 pcs

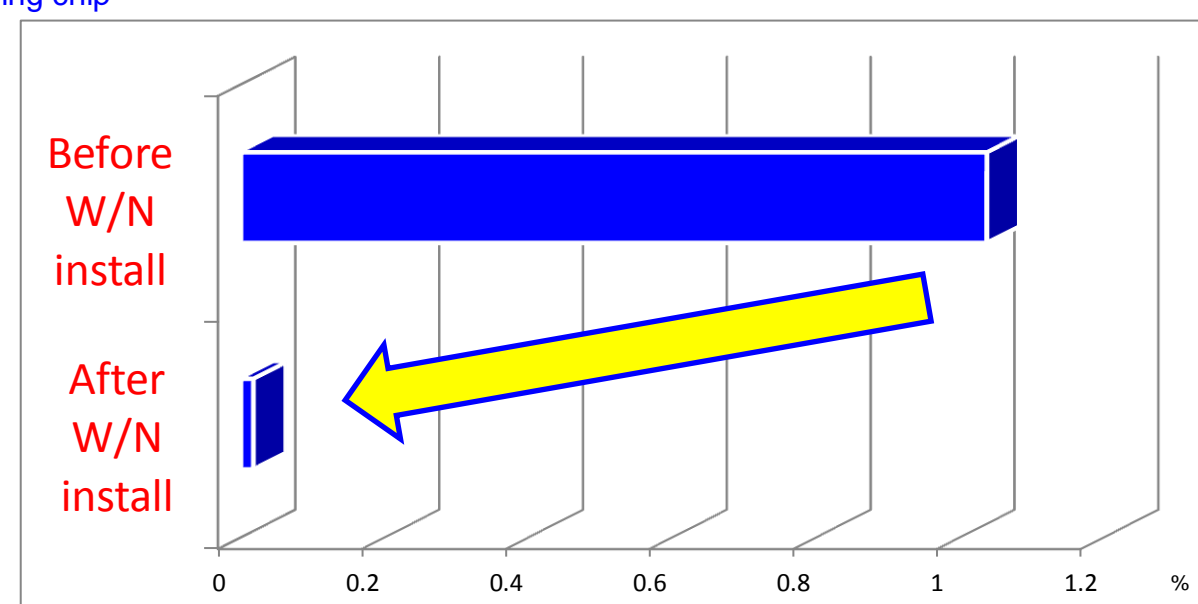
→ **Problem Solved!**

## 4. Reduction of work to remove the chips by hand after the processing .

Cutting product : Sleeve , Material : SUS303 : Remaining rate of ring chip



OD φ6.35 × 10



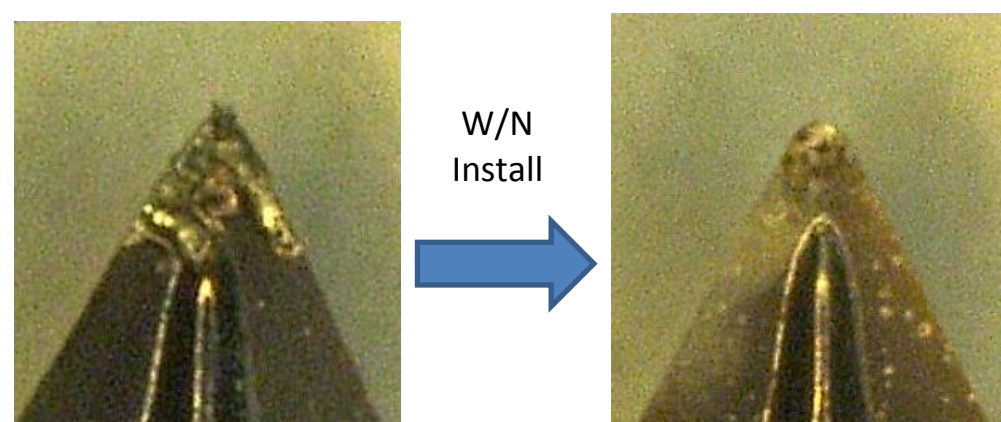
Remaining rate of cutting chips

1.037%  
→ 0.017%

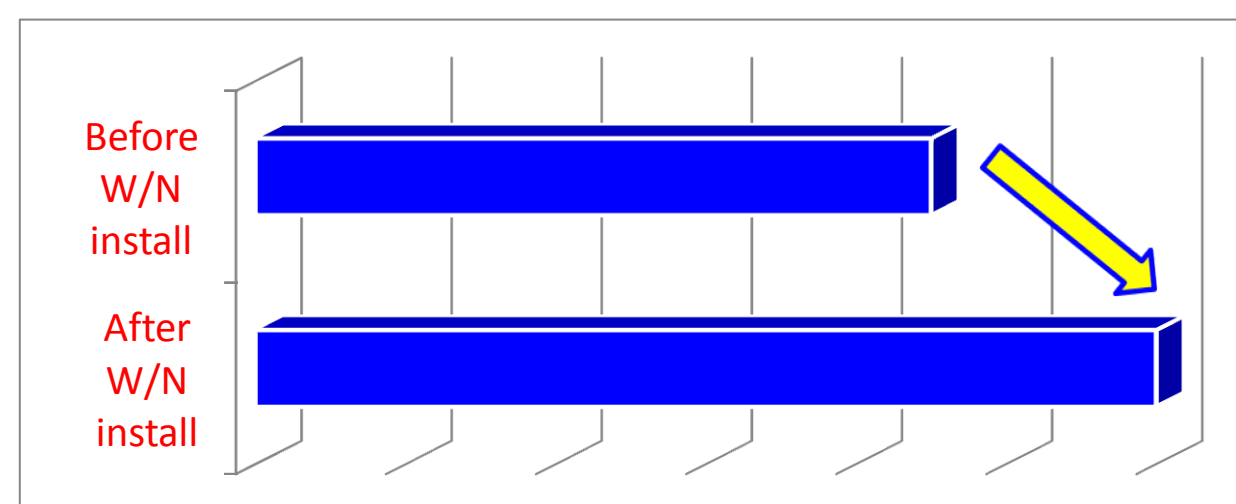
→ **Reduce to 1/60!**

## 5. Improvement of tool life.

Cutting process : Product : Roller , Material : SKH51 : Tool life.



ID φ18.95 × 22 L



→ **Tool Life 33% Improvement!**