

Technical Information

# How to Choose a Finishing Process to Optimize Surface Condition

### 1. How to choose a finishing process to optimize surface

Our clients, who usually require precision machined parts, often focus not only on the precise shape and dimensions, but also on the surface condition of the parts so that their final products can function properly. For meeting such a requirement, FUTA-Q optimize machining and finishing methods to achieve the surface conditions.

#### 2. Examples of surface finishing for various precision parts





Polishing a surface by spraying abrasive grains on the lapping plate



Spraying alumina or other abrasive media to make a pear-skin



Spraying special abrasive with elasticity to make a mirror surface

Electropolishing



Dissolving metal surfaces to make smooth edges

## 3. Surface conditions in various finishing methods

Finished surfaces, if having the same toughness, demonstrate specific appearances depending on their finished method. The photos below show the SEM images of the surfaces of finished SUS304 plates through various types of surface-finishing methods, including physical finishing such as mirror finishing by blasting or pear-skin finishing, and chemical finishing such as acid cleaning, chemical polishing, or electrolytic polishing.

SUS304 plate	Before finishing	Physical finishing (with blasting)	
		Mirror finishing	Pear-skin finishing
SEM images (x 1000)	Ra(μm) 0.2 10μ Ματαλατά το Ματαία ματά που το	<i>Rά</i> (μm) 0.1 10μ	Ra(μm) 0.4 10μ
SUS30/ plate		Chemical finishing	
SUS304 plate	Acid cleaning	Chemical finishing Chemical polishing	Electrolytic polishing

#### FUTA-Q Co., Ltd.

URL https://futaku.co.jp

[Headquarters] 33-3 Karahashi-keiden-cho, Minami-ku, Kyoto City, Kyoto Pref. 601-8454 Tel: +81-75-661-2931 E-mail futaku-info@futaku.co.jp

[ Tokyo Office ] Mitaka-myojo-palace 3F, 1-1-3,Kamirenjaku Mitaka-shi, Tokyo 181-0012,Japan Tel: +81-422-27-7629