

# Technical Information

Vol. 52

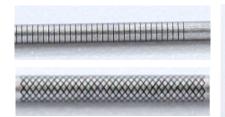
## Fine Processing with Ultrashort Pulse Laser

## 1. Ultrashort pulse laser processing

One of our specialty technologies is processing small-diameter pipes and wires with ultrashort pulse laser such as picosecond or femtosecond lasers to fabricate micro shapes and fine patterns on the pipes/wires while minimizing the thermal effect on the materials. Examples below are fine-processed product samples processed with our ultrashort pulse laser processing machines.

## 2. Product samples

- With fine grooves and half-cutting

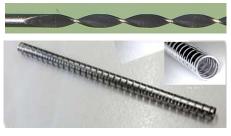




- With fine slits and micro-cutting







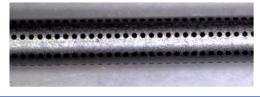


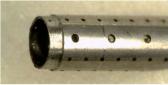


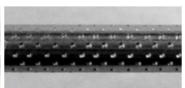




- With fine through-holes, dimples, and a stepped shape







#### 3. Specification of our ultrashort pulse laser processing machine

- Processed materials: stainless steel, titanium alloys, NiTi, polyimide
- Outer diameter of material: 0.2 30 mm
- Maximum length of material: 1.8 m
- Laser processing diameter or groove width: 0.02 mm
- Laser processing depth: 0.01 0.5 mm



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