

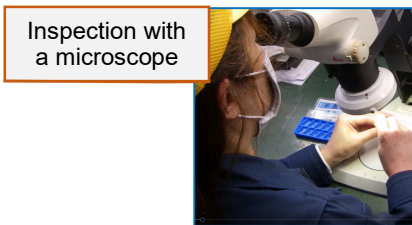
Finishing Process, and Lancet Shaping by Femtosecond Laser

1. Finishing process in Yagi Factory

As the final step of manufacturing, the finishing process determines the product quality. In FUTA-Q, detailed burring is conducted by hand using a Leica microscope of which totally 8 are installed. Manual machining tools and automatic polishing machines for volume production are also installed in this section.

For polishing a micro part, selecting a polishing agent is critical to make a smooth surface. Furthermore, daily improvement of members' skill and knowledge is inevitable, because this process is mainly conducted by hand.

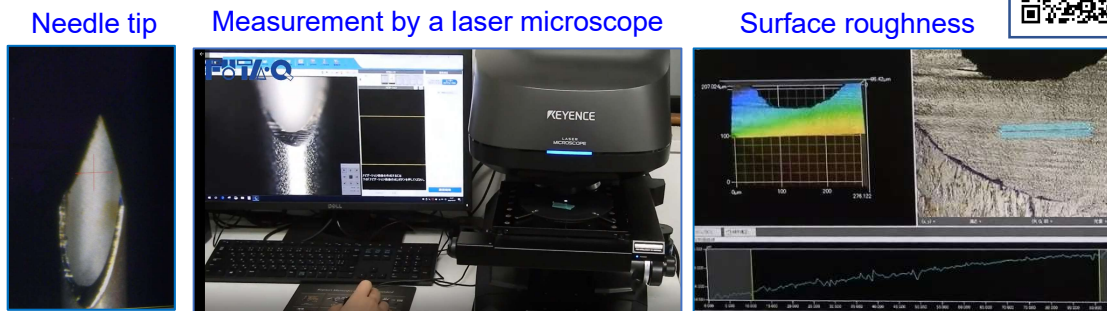
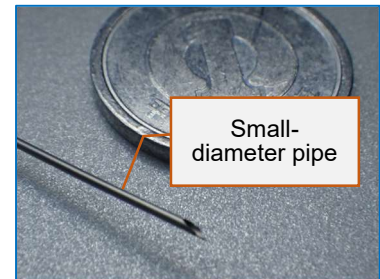
As introduced in the Technical Information Vol.15, FUTA-Q is equipped with many processing machines such as machining centers and CNC lathes as well as detailed handwork processes to meet various clients' requirements.



2. Lancet shaping by femtosecond laser

Our femtosecond laser machine, featuring the capability of processing on a small-diameter pipe, can immediately start processing after consuming a drawing, for example, of a needle tip. Giving less thermal effect and no burr to a material, this laser machine is suitable for **making micro slits on a small-diameter pipe**. After processing, we always observe a processed product enlarged by a microscope and measure the surface roughness to optimize the processing parameters.

The YouTube video clip shows the process in which a lancet cutting is made at a needle tip.



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