FUTA-Q Imagination & Innovation

Technical Information

Vol. 57

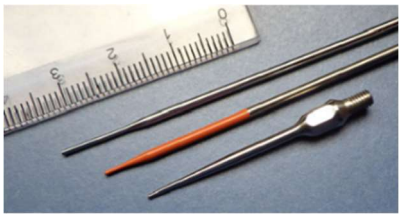
The Drawing and Inner-surface Polishing Process of a Nozzle

FUTA-Q has developed the various processing technologies for making nozzle products suitable for our clients' requirement. Among those technologies, this issue introduces the drawing process and the inner surface polishing process for the drawn area of a nozzle.

1. The processing technologies for nozzles

The processing technologies for making nozzles consists of following technologies.

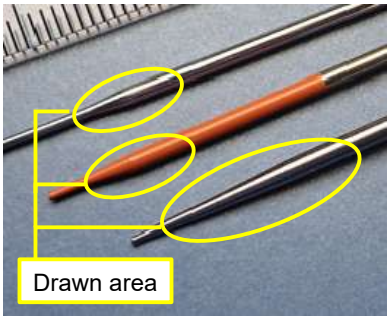
- Pipe making technology of small diameter pipe according to the application
- Pipe drawing technology according to the requested shape
- Polishing and grinding technologies to make the surface smooth
- Joining technology to combine multiple parts
- Tip forming technology for making the tip shape required
- Coating technology to add functionality to the product surface



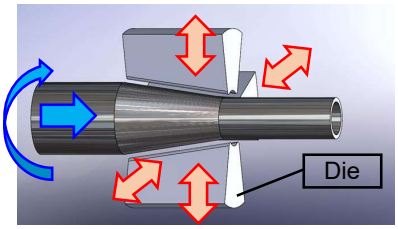
For satisfying the client's requirement, several technologies above are to be combined.

2. Drawing technology for pipe products

The most optimum method, whether for swaging (cold forging) or drawing (pultrusion), shall be selected depending on the material and product shape.

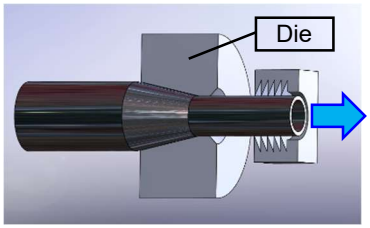


[Swaging]



The pipe is struck and drawn through angled die.

[Drawing]

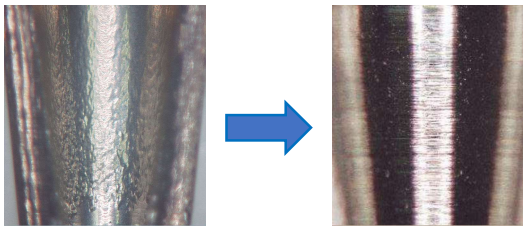


The pipe is drawn by passed through a die.

3. Inner surface polishing for the drawn area

The inner surface of the drawn nozzle may develop wrinkles on due to the stresses received during drawn.

FUTA-Q's self-developed inner surface polishing technology can remove those wrinkles from the inner surface of the drawn nozzle by making it mirror finishing (Ra 0.08).



Before polished　　After polished

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