What is occurrence of an angel hair by spray?

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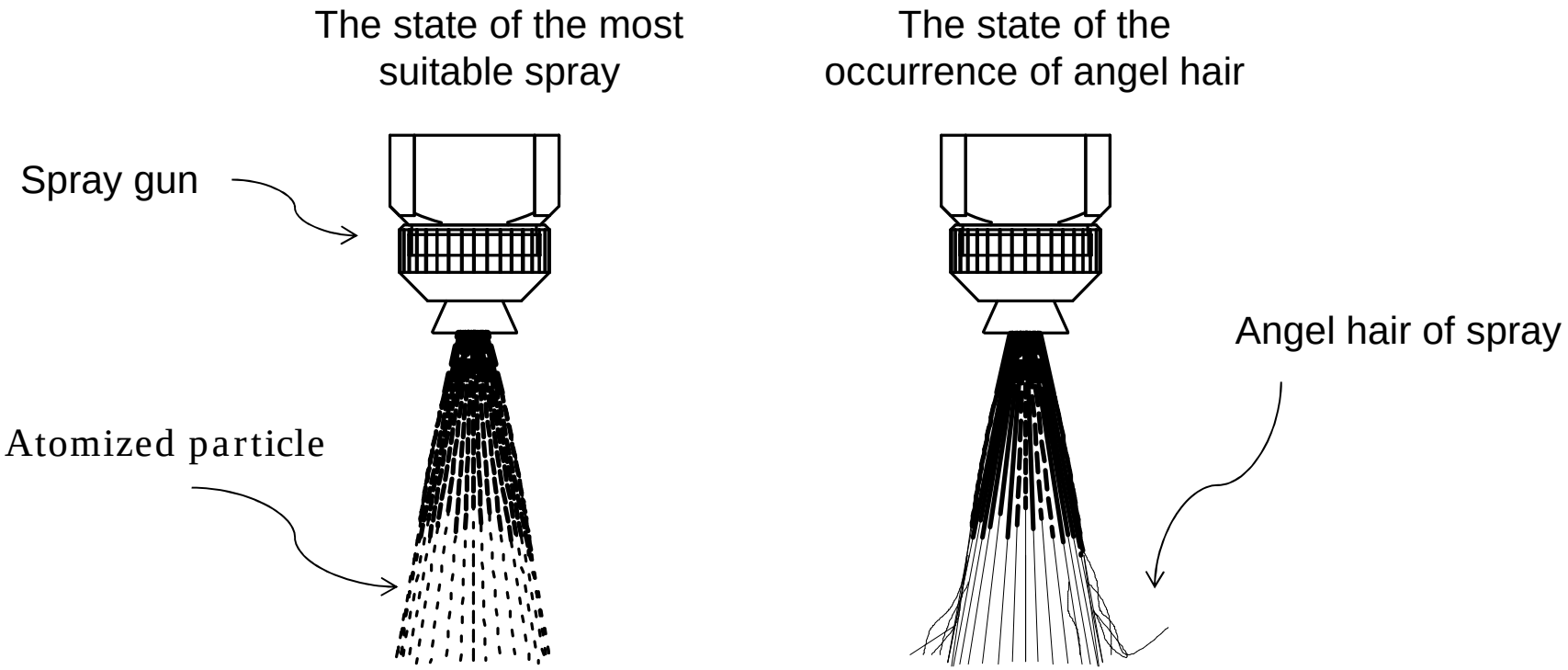
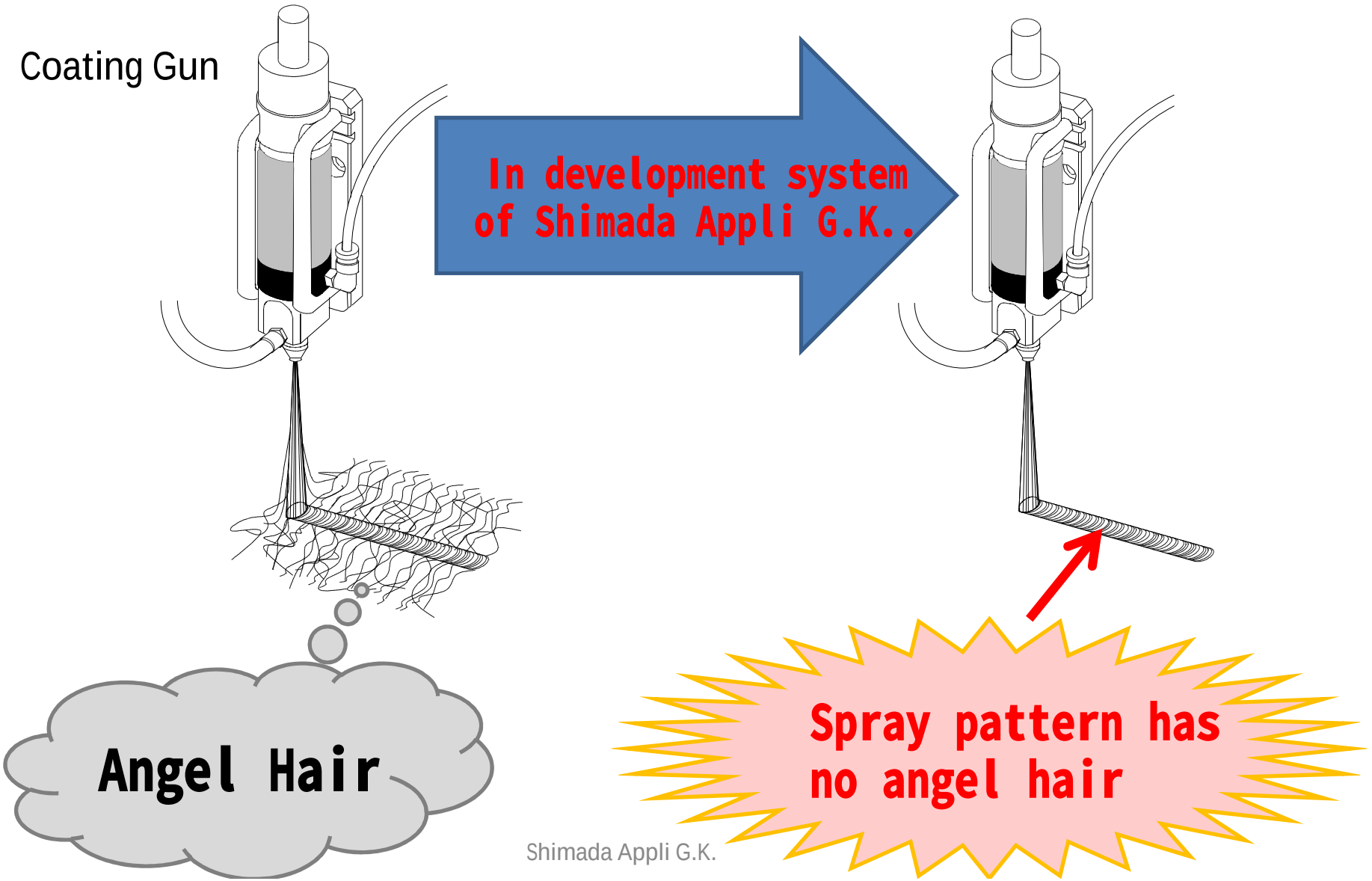
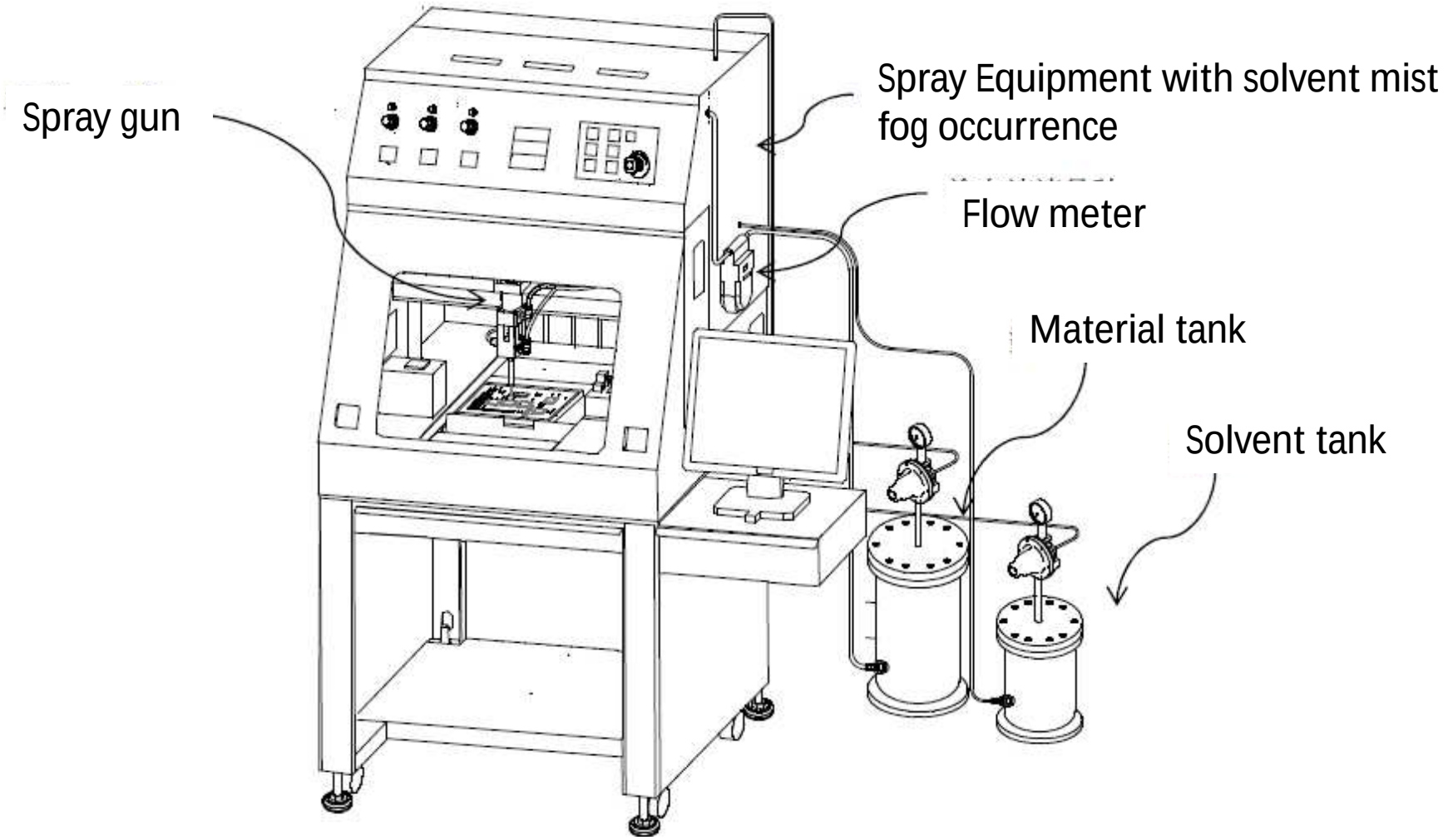


The cause:
The viscosity of the coating materials is too high.

The angel hair prevention measure without lowering the viscosity of the coating material ?

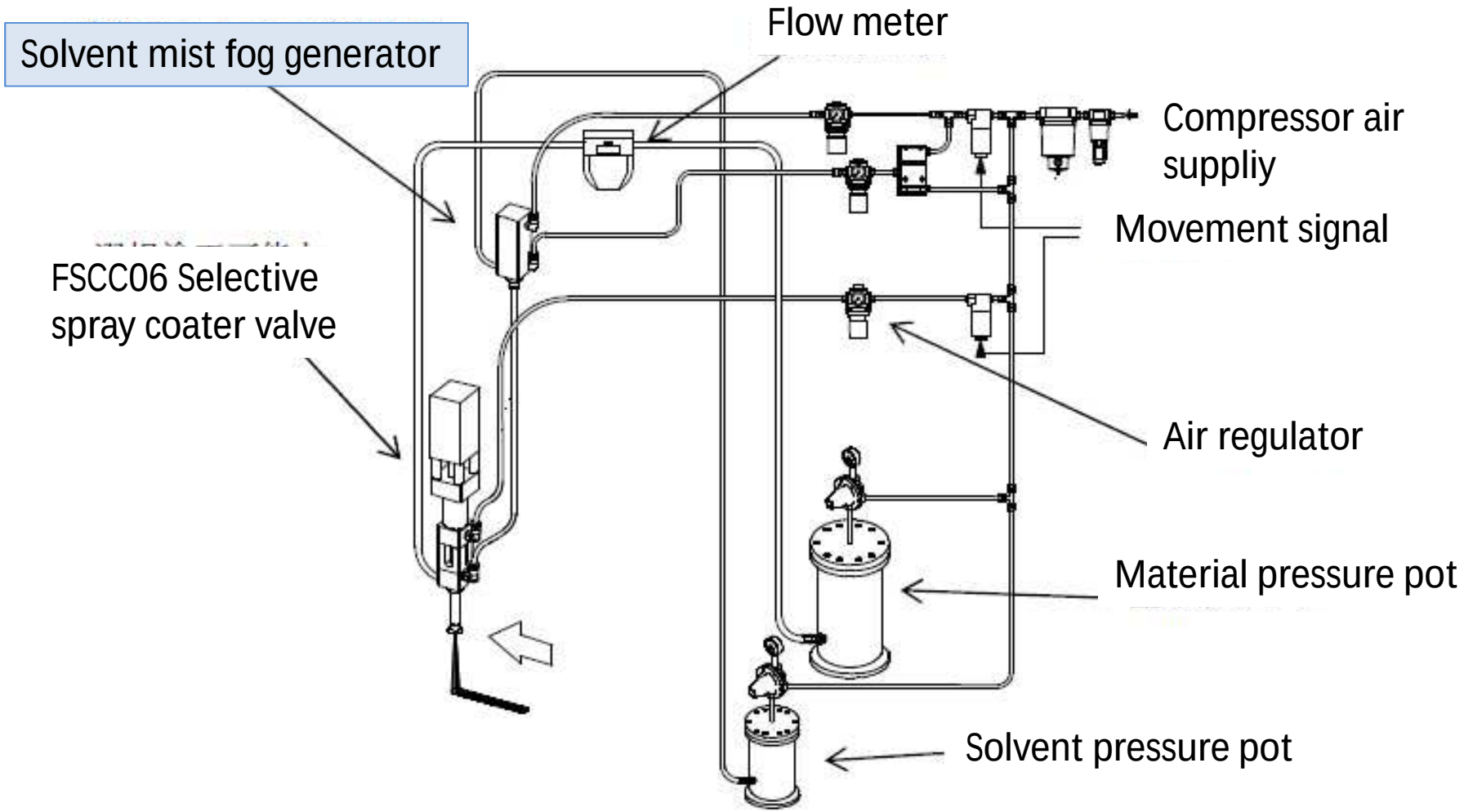


NEW Spray workcell for the spray pattern without angel hair



Patent Pending in Worldwide

NEW Spray system for the spray pattern without angel hair



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Comparison of developed coating system and conventional systems

	Developed system	film coat system	Brushing system	Conventional spray
Viscosity of used liquid material(CPS)	500CPS	> 90(It's used below the 90CPS.) the undiluted solution is impossible.	> 100(It's used below the 100CPS.) the undiluted solution is impossible.	> 50(It's used below the 50CPS.) the undiluted solution is impossible.
Used solvent	**The agent used by mist atomization is 22% to undiluted solution 100%.**	More than 60% is diluted to undiluted solution 100%.	**More than 50% is diluted to undiluted solution 100%.**	**More than 100% is diluted to undiluted solution 100%.**
The viscosity precision for maintenance in pattern width	EX:400CPS±20%	Within ±2%	Within ±20%	Within ±10%
The reach of the pattern width(mm)	1.2~12	5~15	5~8	15~100
Looseness and the closeness of width@10mm width	1~2mm from line edge	1mm from line edge	1~2mm from line edge	✕(too wide)
The condition of the film-forming in the point part of a pin leg @flat surface 30μm	More than 10μm	Less than 2μm	Less than 2μm	Less than 2μm
The condition of the film-forming in the point part of side of a pin leg @flat surface 30μm	More than 5μm	Less than 2μm	Less than 2μm	Less than 2μm
Collection (opening between the pin foot of QFP type and the IC base part)	**It's difficult to collect.**	**It's easy to collect.**	**It's easy to collect.**	**It's easy to collect. It's better than a film coat and a brush.**
Drying time(@30μm in B side)	@25℃32%3.5min,cool air 2~2.4 mm/s speed → less than 1min	More than 10min@25℃32%, More than 5min @ cool air	More than 10min@25℃ 32%, More than 5min @cool air	More than 6min@25℃ 32%, More than 3min @cool air
The way of coating	Coating position is from the top, the bottom and the side,	Coating position is only from top.	Coating position is only from top.	Coating position is from the top.
Transfer Efficiency (%)	More than 95%	More than 95%	60%	Less than 30%
	◎	○	△	△

Coating result by this spray workcell

In case of Back side coating

The strong point when using this equipment, (vs., the ratio to convention mathod)

1 Curing time：　More than 200 % of reduction

2 Solvent amount: More than 60 % of reduction

3 The acute-angled height film thickness: : More than 200 % of improve

30 micron coating on PCB surface