



Test DB coating to save cleaning on printing machine.

Test May 2014 :

1/ Configuration:

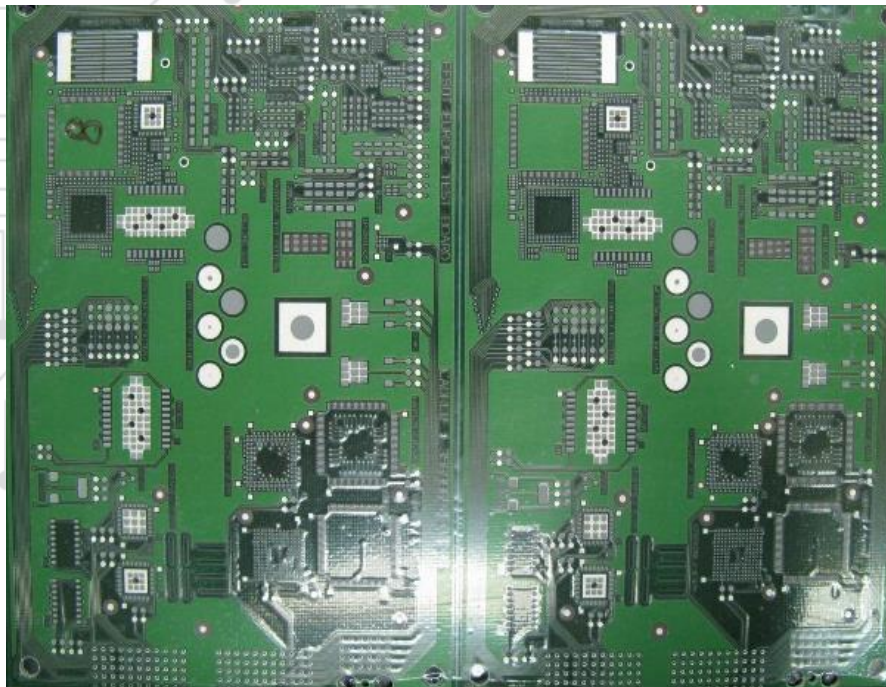
Test has been done with:

Machine DEK Horizon

Solder past lead free class 3

Stencil stainless steel Phd laser cut thickness 125um

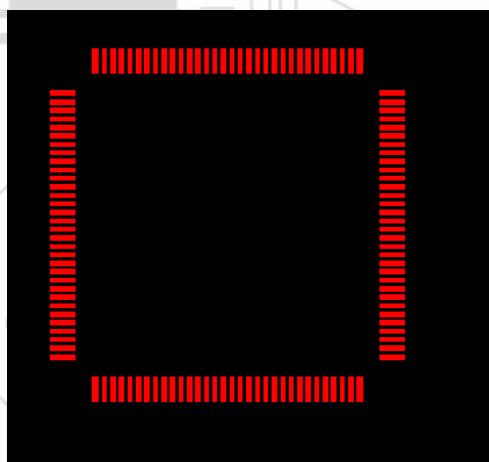
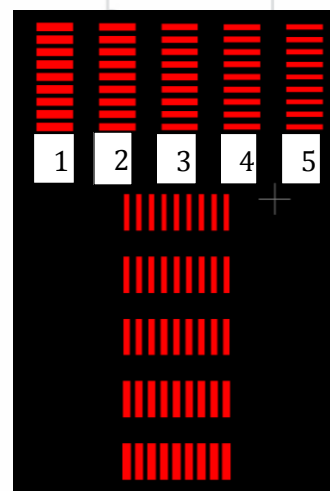
Pcb test with different apertures,



After some print we choose to focus our measure on a specific part of PCB: Same image: 1 times horizontal and 1 time vertical

Type of shape number 1

	Pitch (mm)	Apertures width (mm)	Apertures length(mm)
1	0.4	0.25	1.15
2	0.4	0.22	1.15
3	0.4	0.19	1.15
4	0.4	0.17	1.15
5	0.4	0.15	1.15



Type of shape number 2

Pitch 0.4 Pad at 1.15 x 0.190mm

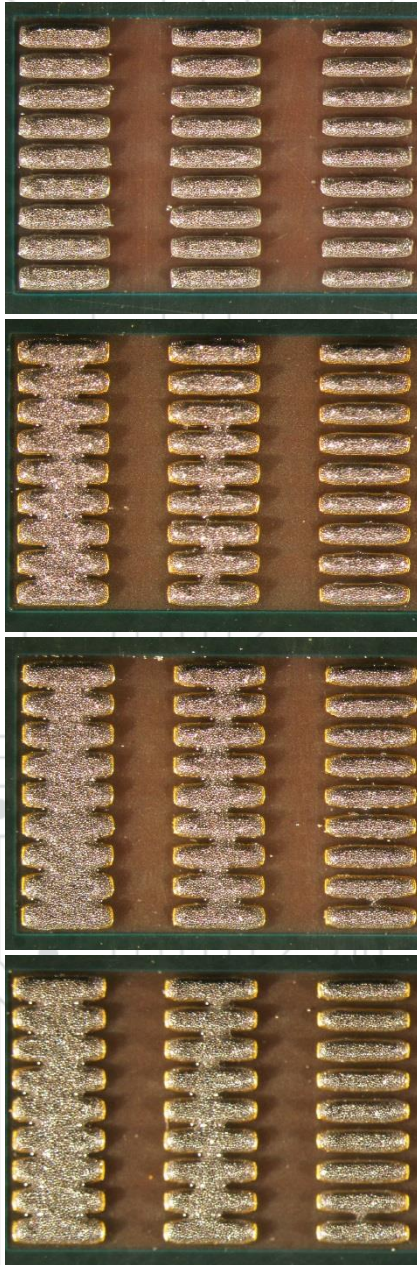
2 / Printing results

Printing result (each line is a different print without cleaning: line 1 = print 1, line 2 = print 2...)

Standard Laser Cut Stencil

Stencil with coating NanoProtekV2

Stencil with DB Products LSE

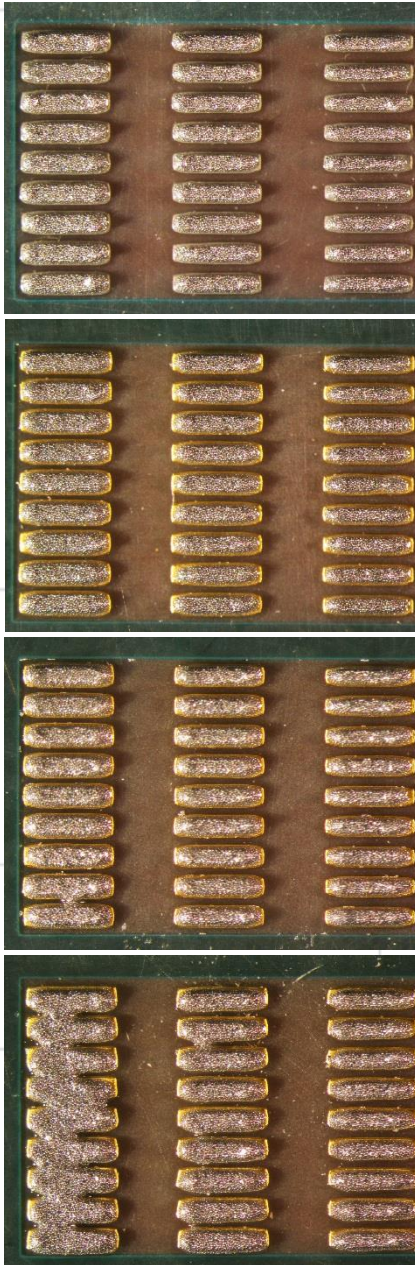


1

2

3

5



1

2

3

5



In print number 2, the stencil without coating print some solder paste with bridge.

In print number 3, the stencil with Nano protek V2 print some solder paste with bridge

In print 5 we stop to print with stencil without Nano Protek and with Nano Protek V2. It make no sens.

We continue to print with DB Products coating with good result until 8 prints .

8

At least, the stencil with our coating start do print with bridge at the print 9 without cleaning.

9

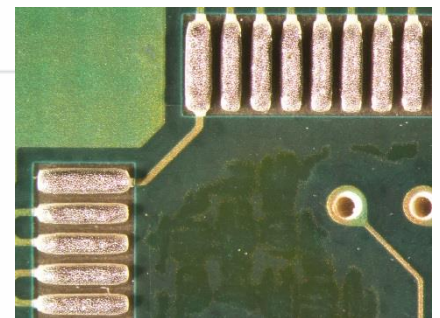
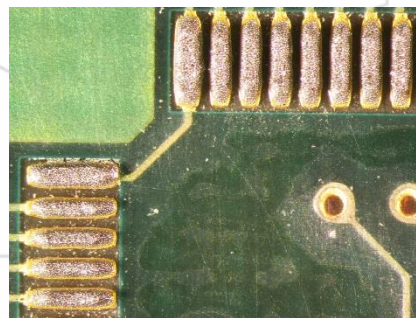
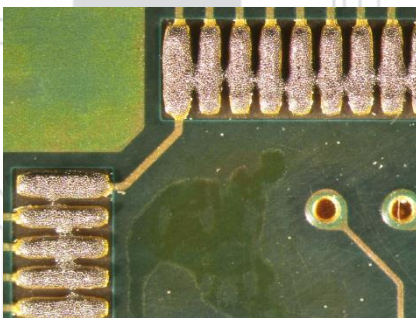


We have the same result on the QFP fine pitch after 9 print:

Stencil untreated: Bridge an all connections

Stencil with NanoProtek V2: no bridge at this time, but we can see a lot of ball around the pad of the pcb.

Stencil with DB Products Coating: PCB is clean. No ball around the pads.



3 / Conclusion

As a conclusion, we can see that Nano Protek V2 allow a best result regarding print without cleaning, but our coating is quite different: On critical pads, Nano Protek V2 allow us to print correctly 2 PCB instead of 1 before cleaning and DB Products coating allow us to print 8 PCB instead of 1 before cleaning...