

Dot Stability Index Of FAG Flex³ PRO Software

by Lukas Pescoller, 13.04.2010

Dot Stability Index calculation

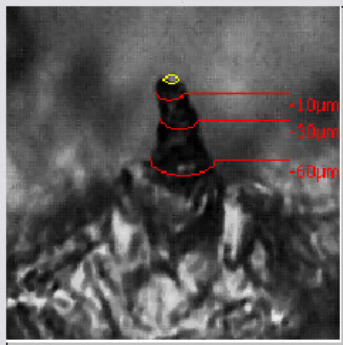
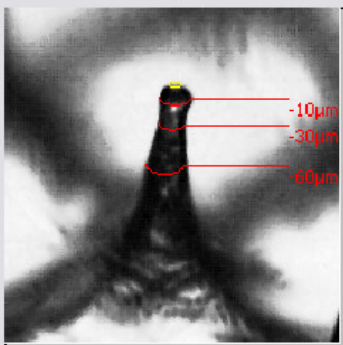
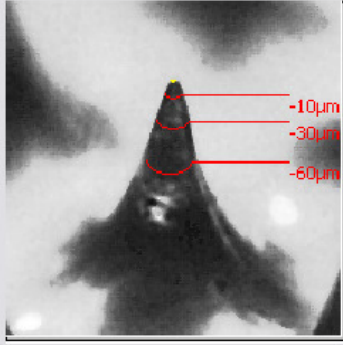
In order to offer an easy to understand function in checking the minimum dot, there has been defined the Dot Stability Index. The dot stability index shows the probability that the dot itself will be stable enough to print a proper dot during the run of the job. The Index is classified in



This dot will not print for a long time

it is not very probable that this dot will be good enough to print during the entire run of the job.

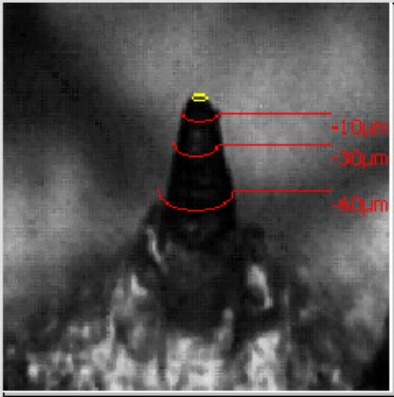
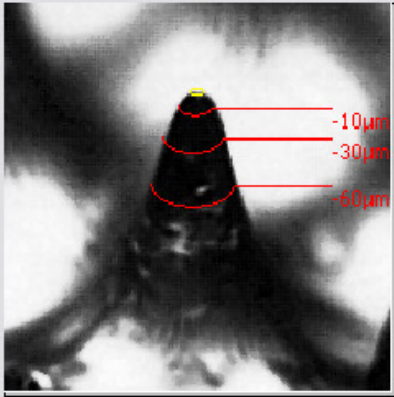
- ☐ Dot stability = -1 if the dot is not vertical but slanting to one side
- ☐ Dot stability = -1 if the dot gets smaller inside the relief
- ☐ Dot stability between 1 and 9 : Dot shape is regular but probably to steep

Plate Type Standard Plates Stability Index  -1 Diameter-10µm 19.7µm Diameter-30µm 25.1µm Diameter-60µm 42.6µm 	Plate Type Standard Plates Stability Index  -1 Diameter-10µm 20.8µm Diameter-30µm 16.4µm Diameter-60µm 25.1µm 	Plate Type Standard Plates Stability Index  8 Diameter-10µm 10.9µm Diameter-30µm 20.8µm Diameter-60µm 31.7µm 
Slanting dot example	-30 µm diameter is smaller than -10 µm diameter	



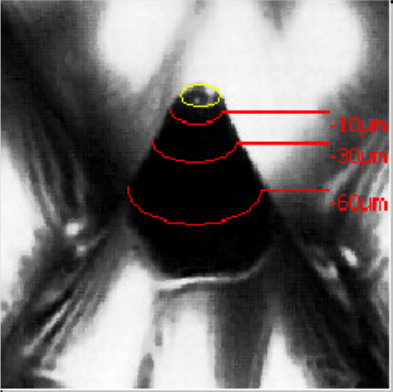
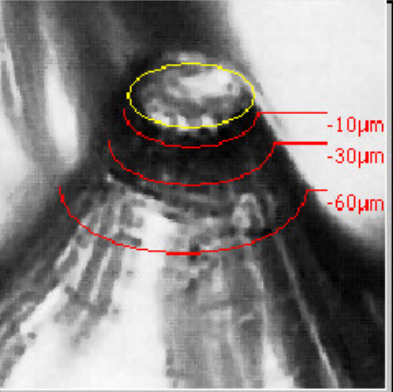
It depends on other criteria's, if this dot will print stable.

It can not be determined for sure, if this dot will print for the entire run of the job. It can depend on plate material, printing substrate, pressures, etc. A closer look at these dots is recommended

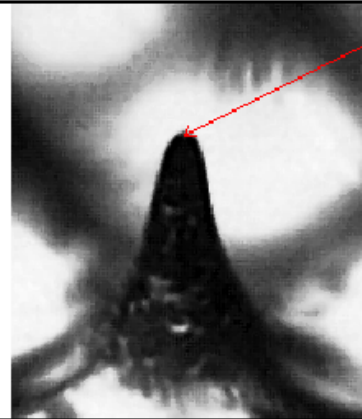
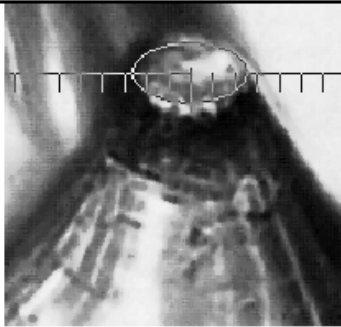
Stability Index  12 <table> <tr> <td>Diameter-10µm</td> <td>21.9µm</td> </tr> <tr> <td>Diameter-30µm</td> <td>27.3µm</td> </tr> <tr> <td>Diameter-60µm</td> <td>43.7µm</td> </tr> </table> 	Diameter-10µm	21.9µm	Diameter-30µm	27.3µm	Diameter-60µm	43.7µm	Stability Index  16 <table> <tr> <td>Diameter-10µm</td> <td>20.8µm</td> </tr> <tr> <td>Diameter-30µm</td> <td>33.9µm</td> </tr> <tr> <td>Diameter-60µm</td> <td>48.1µm</td> </tr> </table> 	Diameter-10µm	20.8µm	Diameter-30µm	33.9µm	Diameter-60µm	48.1µm
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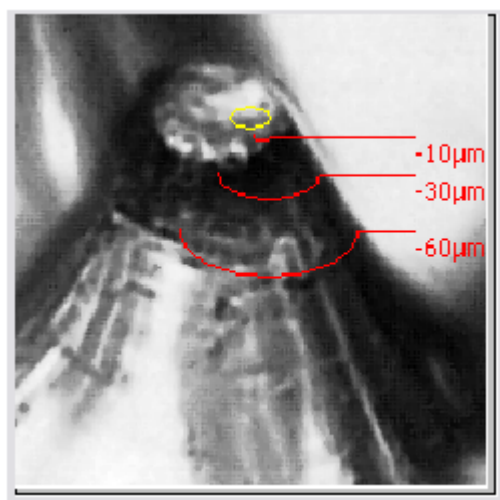
It is quite probable that this dot will print reliably

Plate Type Standard Plates Stability Index  40 Diameter-10µm 30.6µm Diameter-30µm 47.0µm Diameter-60µm 76.5µm 	Plate Type Standard Plates Stability Index  115 Diameter-10µm 76.6µm Diameter-30µm 94.0µm Diameter-60µm 141.0µm 
A green flag tells you that it is quite probable, that the dot will print reliable	In this case a visual only check will tell you immediately, that the dot is solid enough to print reliable

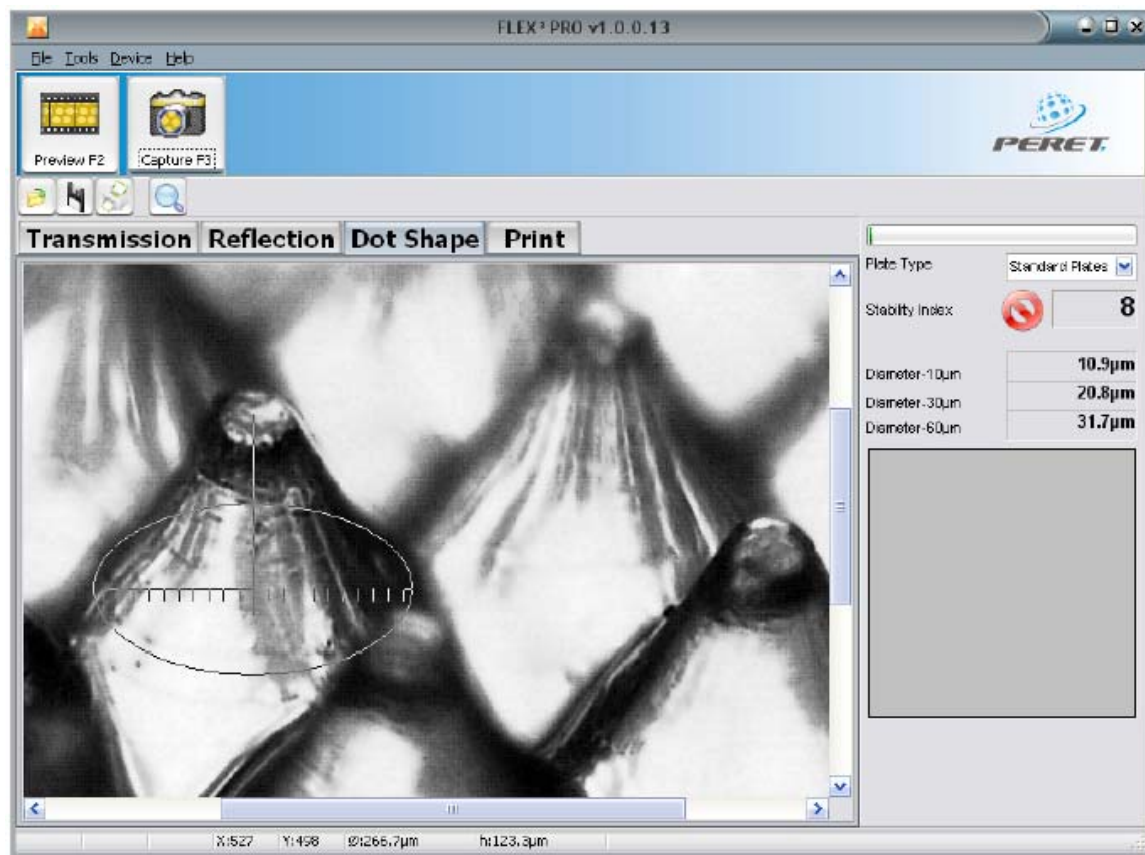
How the analysis is started

	
On small dots, if no real surface is visible, a click inside the black area just below the top of the dot will start the analyses of the selected dot.	If the dot surface is available, move the mouse pointer into the middle of the dot surface and press the left mouse button. Keep the left mouse button depressed while dragging the mouse up and down, left and right until the ellipse does surround the dot surface. Release the mouse button to execute the measurement calculation

If you pick the wrong position or the dot is not a minimum dot any more, than the displayed result will be invalid. You can see this by checking the red arcs showing the measurement position on various relief depths.



This example shows, that the red arcs are not surrounding the dot. Therefore the measurement result data is invalid.



Pressing the left mouse button down and moving the mouse will show a horizontal ruler and an ellipse. In the status line on bottom there will be displayed the diameter of the ellipse and the height <h:> of the vertical line. The diameter of the ellipse shows the distances in a top view corrected by the image projection (surface distance). The height is the vertical distance on the plate, corrected by the image projection. Above Image therefore displays, that the base diameter of the dot at the touching level between the dots is 266,µm while the dots are touching each other on a relief depth of 123 ,µm.