

It's not what you look at that matters,
it's what you see!



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COMPANY FOCUS - pattern analysis and evaluation thickness measurement



Introduced on PaintExpo 2018

- Evaluation of existing process
- Suggestion of appropriate solution
- Technical presentation
- Installation and start up
- Training



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CAPTURING UNIT



SprayCapture A3

Installation outside of EX zone
Maximum size of captured pattern A3,
420 x 297 mm
Mainly for spray guns with elliptical shape of cone



SprayCapture A2

Installation outside of EX zone
Maximum size of captured pattern A2,
420 x 594 mm
Mainly for rotary bells patterns



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PATTERN ANALYSIS AND EVALUATION



1. Captured pattern

Input received from SprayCapture

2. Evaluation with basic size

Dimensions of pattern

Calculation of applied volume

Evaluation of transfer efficiency

Distribution of paint

Cross section in x and y axis

After calibration shows real thickness

3. 3D model of pattern

Better understanding of effective part

Visualization of paint distribution with z value

Useful for further analysis

4. Pattern comparison

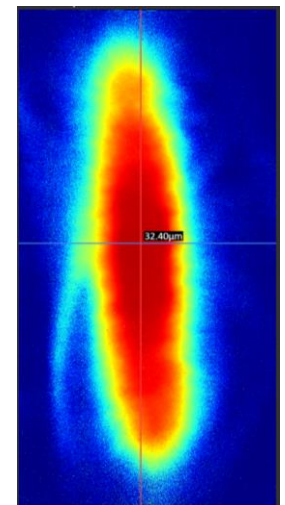
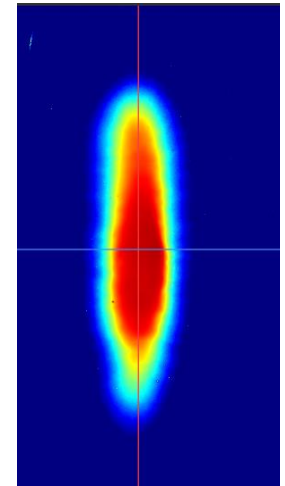
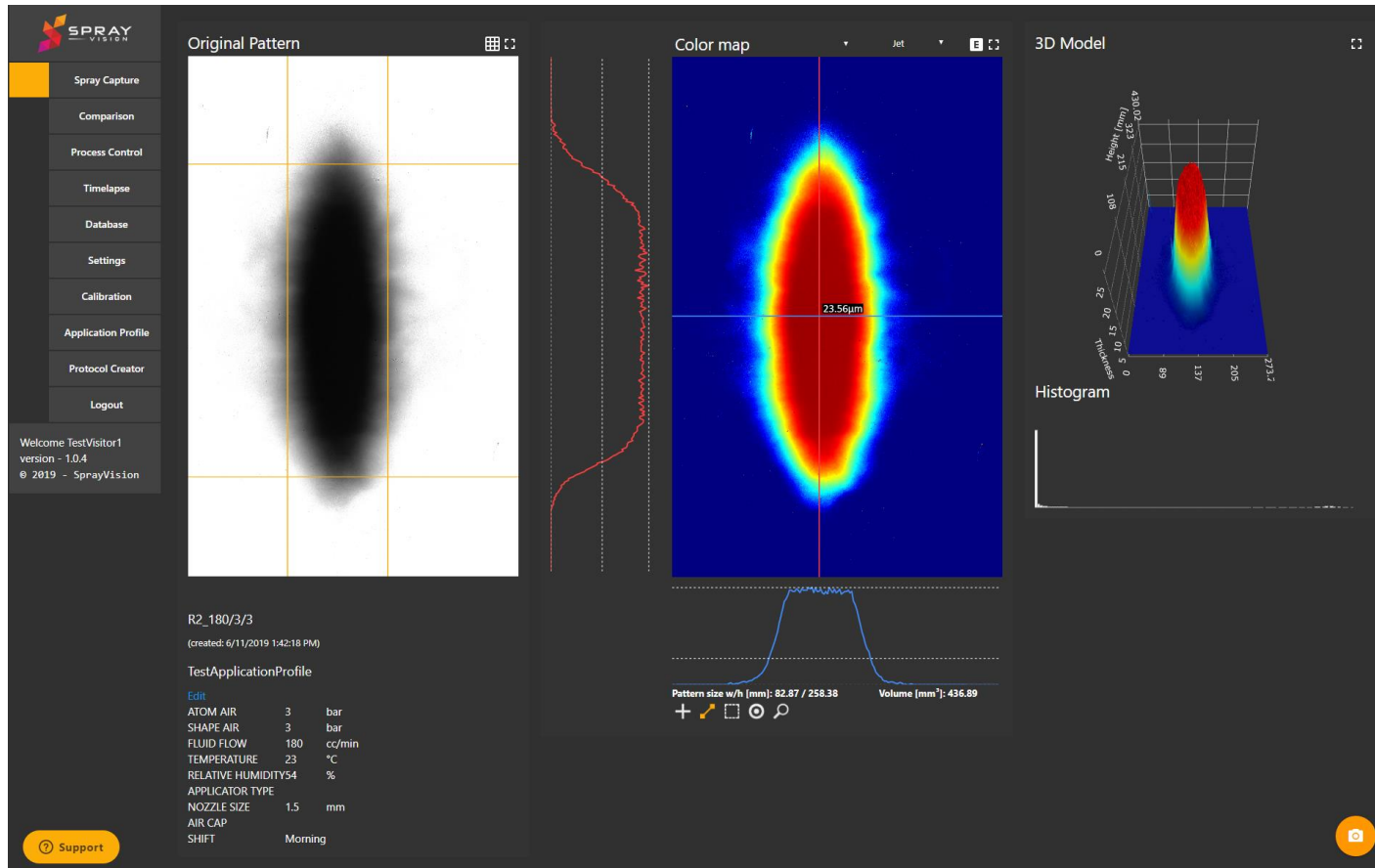
Comparison of patterns and its volume

Identification of pattern with higher transfer efficiency

5. Application presets

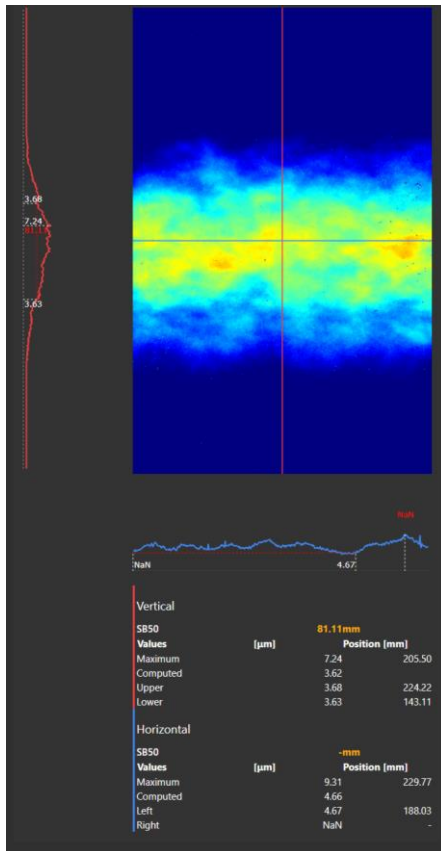
Shows spraying parameters set for shown pattern

SPRAY CAPTURE – basic evaluation



PATTERN ANALYSIS AND EVALUATION – dynamic patterns

180ml/min, 3 bar atom, 3bar shape



SB50 METRIC

81.11 mm

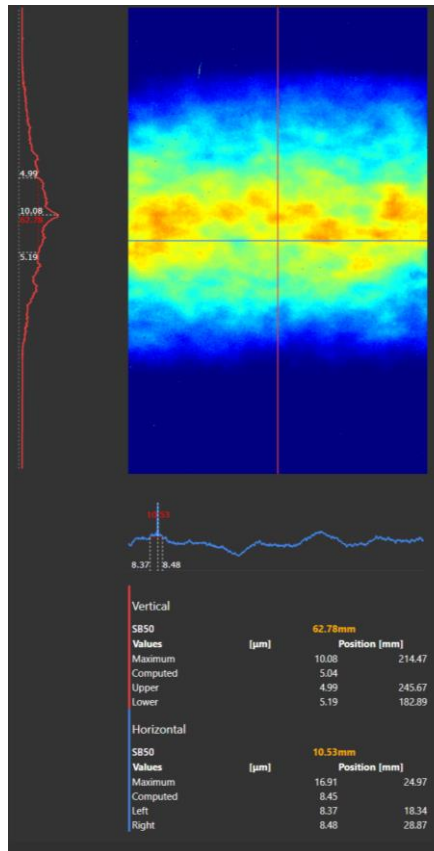
Transferred volume

206.95 mm³

Max thickness

7.24μm

220ml/min, 3 bar atom, 3bar shape



SB50 METRIC

62.78 mm

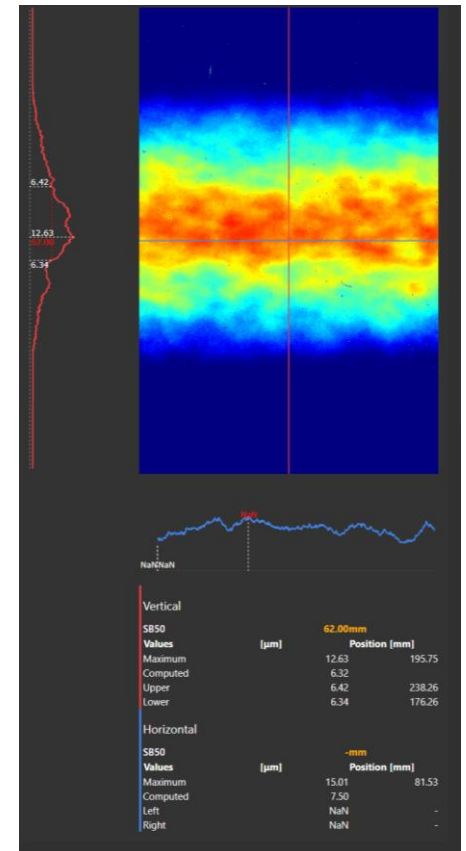
Transferred volume

274.42 mm³

Max thickness

10.08μm

220ml/min, 3 bar atom, 2,5bar shape



SB50 METRIC

62.00 mm

Transferred volume

323.39 mm³

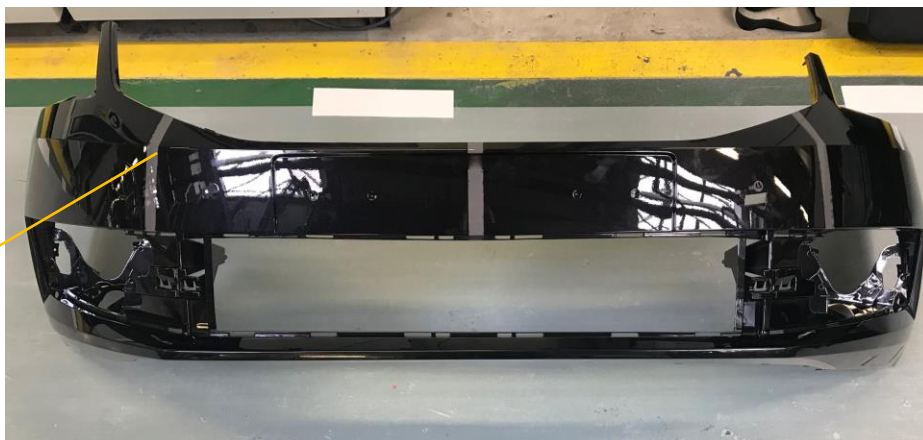
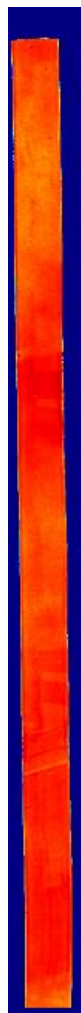
Max thickness

12.63μm

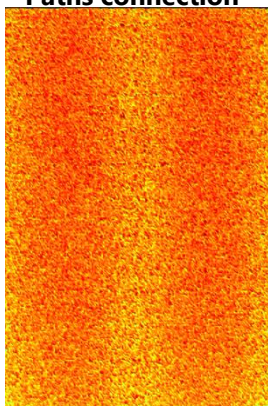


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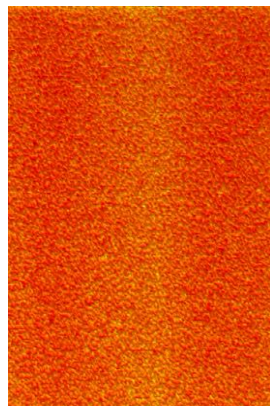
PATTERN ANALYSIS AND EVALUATION – paths connection



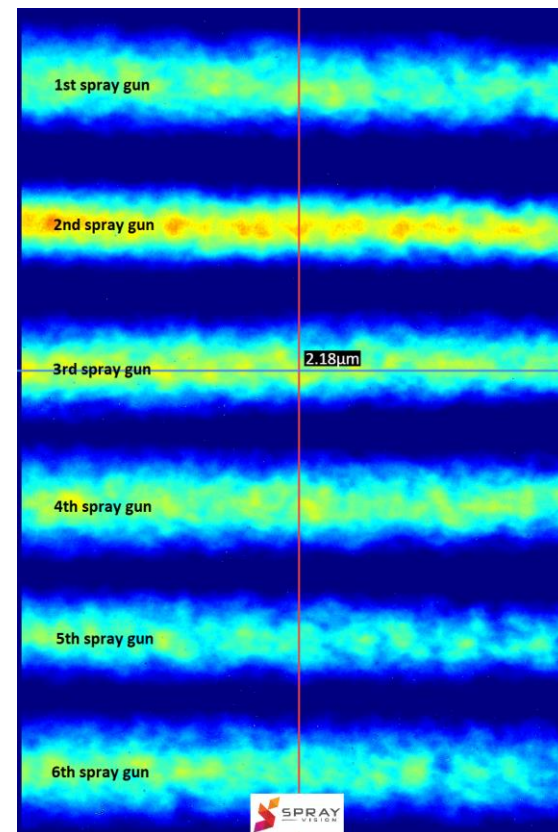
Paths connection



Shape Air 2 bar



Shape Air 2,5 bar



PATTERN COMPARISON WITH OVERLAPING

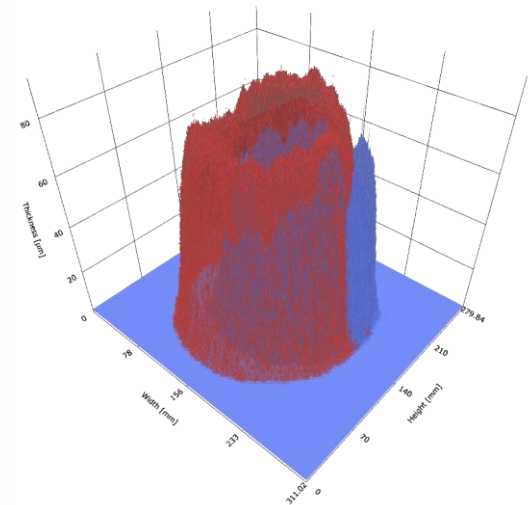


Pattern comparison

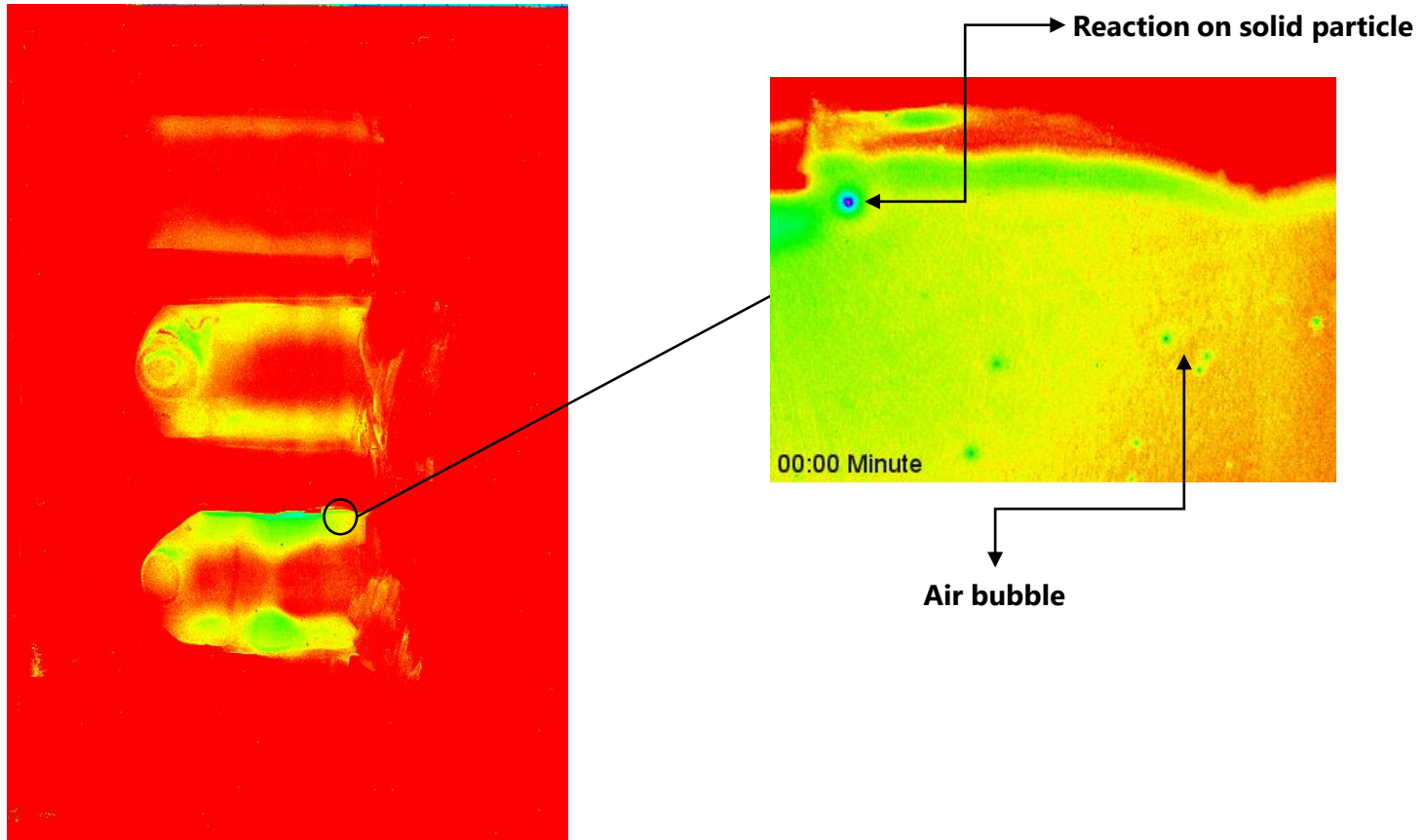
Comparison of patterns and its volume

Identification of pattern with higher transfer efficiency

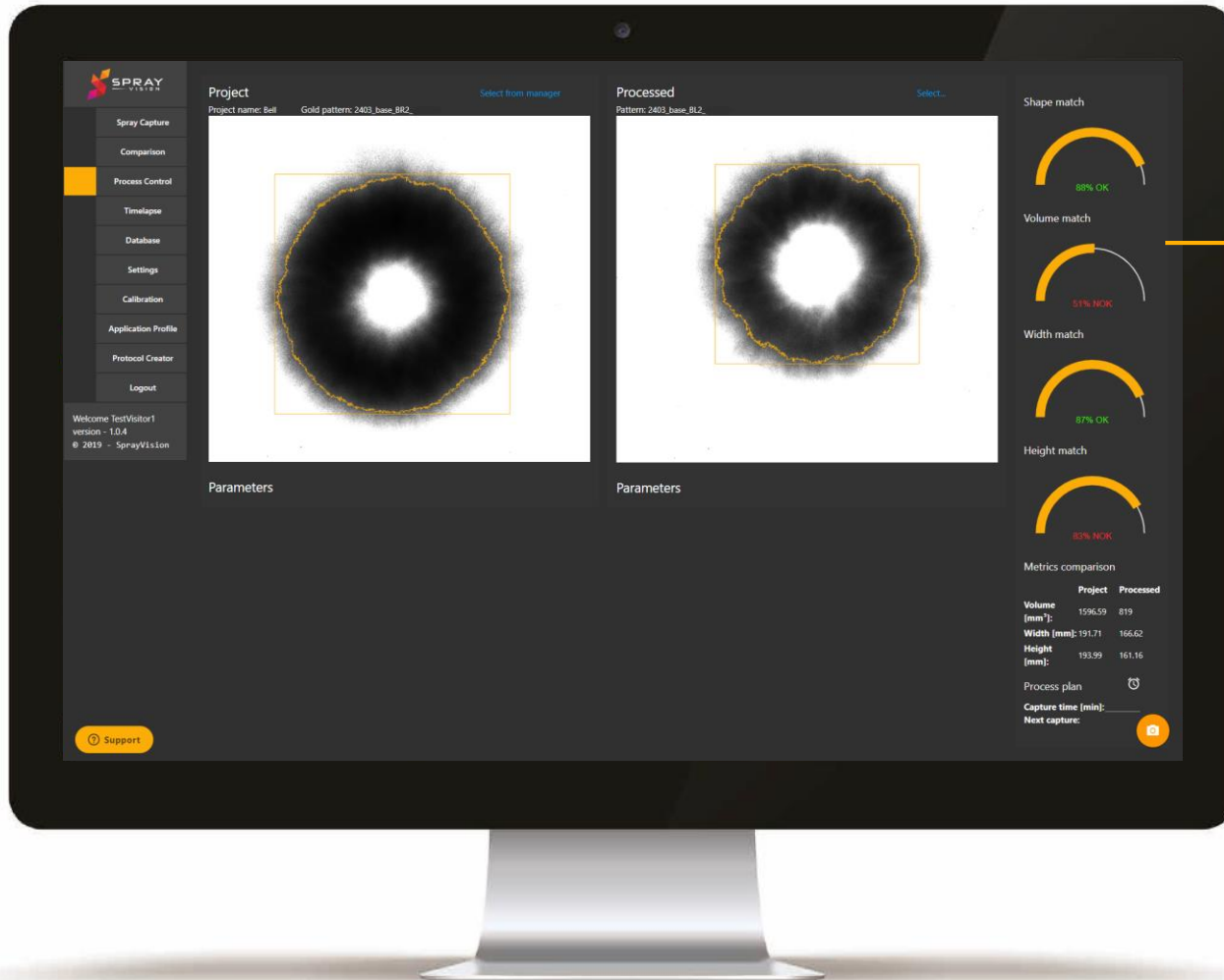
Overlapping comparison



PATTERN ANALYSIS AND EVALUATION – flash off



PROCESS CONTROL



Process control

- comparison of production pattern with standard
- fully automatic comparison and output for operator
- independent comparison of size, shape and volume
- identification of defect with warning option

SMALL POINT MEASUREMENT



#0	at [80mm, 345mm]			Move	Remove
	Max: 13.08μm	Min: 11.5μm	Avg: 12.2μm		
#1	at [103mm, 344mm]			Move	Remove
	Max: 12.42μm	Min: 11.69μm	Avg: 12.11μm		
#2	at [130mm, 349mm]			Move	Remove
	Max: 12.21μm	Min: 10.83μm	Avg: 11.85μm		
#3	at [75mm, 275mm]			Move	Remove
	Max: 13.19μm	Min: 11.5μm	Avg: 12.23μm		
#4	at [101mm, 274mm]			Move	Remove
	Max: 12.53μm	Min: 11.9μm	Avg: 12.23μm		

1. place it on the positions you want to measure
2. paint part
3. take off in flash off zone
4. measure with SprayCapture

No need to get dry for measurement



Capton foils for thickness measurement



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TAPE FOR COMPLEX SHAPE MEASUREMENT



Complex shape

1. place it on the positions you want to measure
2. paint part
3. take off in flash off zone
4. Insert in SprayCapture
5. see immediately if the thickness is proper

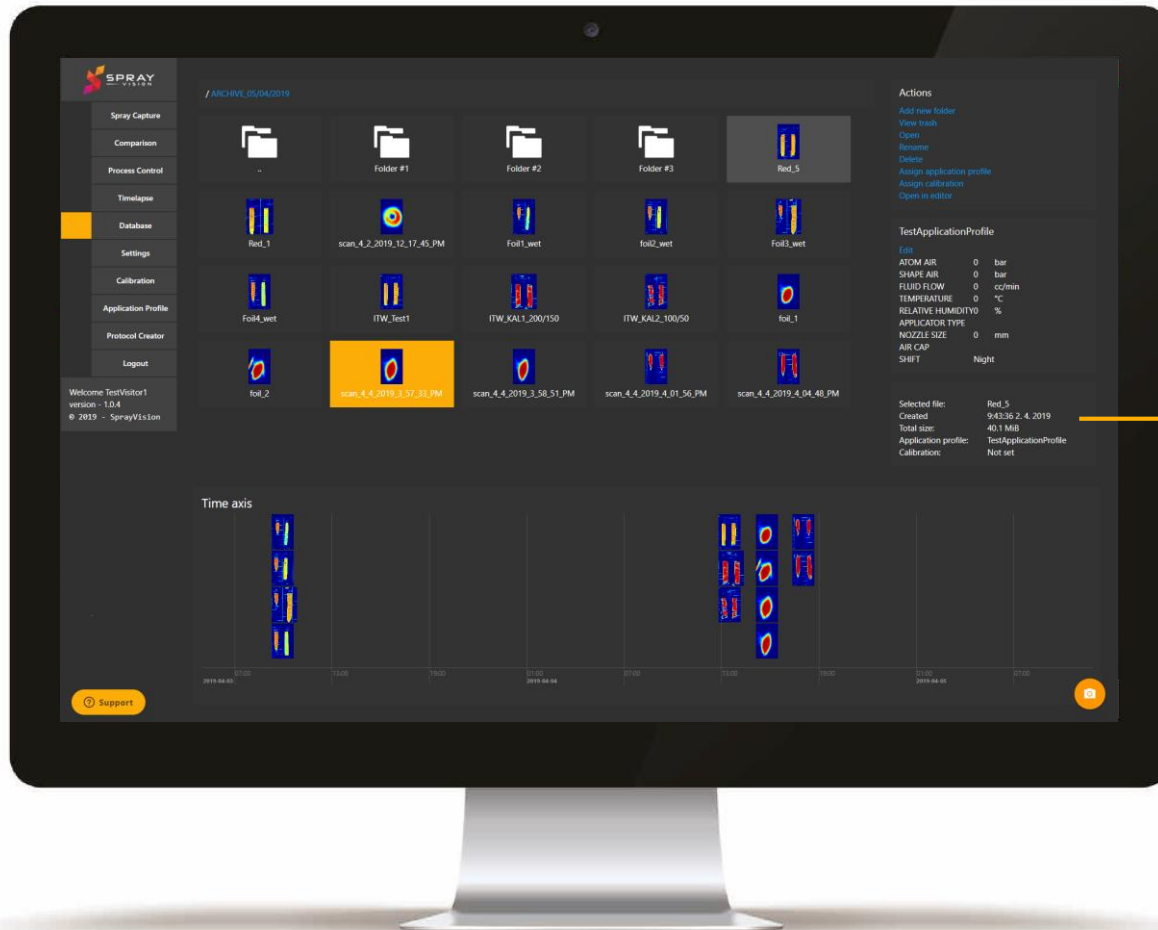
- no need to get dry for measurement
- measure complex shapes
- you can use same part again

Capton foils for thickness measurement



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DATABASE OF CAPTURED PATTERNS WITH PARAMETERS



Database

- create your own database
- archive patterns and parameters for all projects
- share know-how with other plants in the group
- find the most proper parameters for almost the same project and you can use it for the new project

Actions

[Add new folder](#)
[View trash](#)
[Open](#)
[Rename](#)
[Delete](#)
[Assign application profile](#)
[Assign calibration](#)
[Open in editor](#)

Application Parameters

Edit

ATOM AIR	3	bar
SHAPE AIR	3	bar
FLUID FLOW	180	cc/min
TEMPERATURE	23	°C
AIR CAP	3	
SHIFT	Morning	

Selected file:	R2_180/3/3
Created	11:42:18 11. 6. 2019
Total size:	41.0 MiB
Application profile:	Application Parameters
Calibration:	RED COLOR



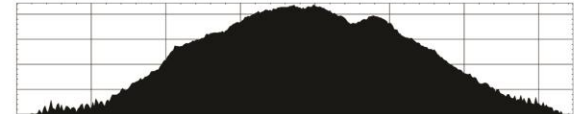
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OFFLINE PROGRAMING

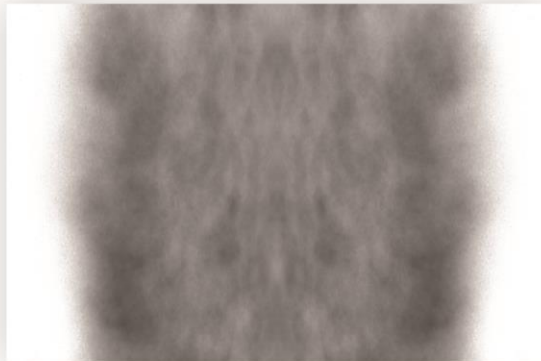


Static Pattern

From static pattern is possible to obtain size, paint distribution, detail of atomization and transfer efficiency.

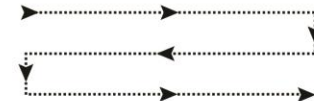


=> SPRAY PROGRAM



Dynamic Pattern

Dynamic pattern provides us information about proper velocity of movement.
Possible calibration on real thickness values.





<https://www.youtube.com/watch?v=8M0YI0C5dYY&t=>



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