

SprayVision s.r.o. supplies an application solution to the Fremach Morava s.r.o. manufacturing plant in Kroměříž

Automatic flat-bed spray coating line

CASE STUDY Fremach

SprayVision worked with Fremach personnel to determine the optimum operating parameters, better quality control and more stable process.



COMPANY PROFILE

Fremach Morava, s.r.o. is a member of the international Fremach Group with headquarters in Belgium. It is one of the major European manufacturers of high added-value parts for automotive industry, consumer electronics, personal communication and industrial markets.

The company Fremach Morava, s.r.o. began its operation in Czech Republic in 2001 and from that time the company has been gradually increasing its business activities. Plastic products with high added value, their surface finish, completion of subsystems and systems with plastic, metal and control-electronic parts' combination are the company's strategy.

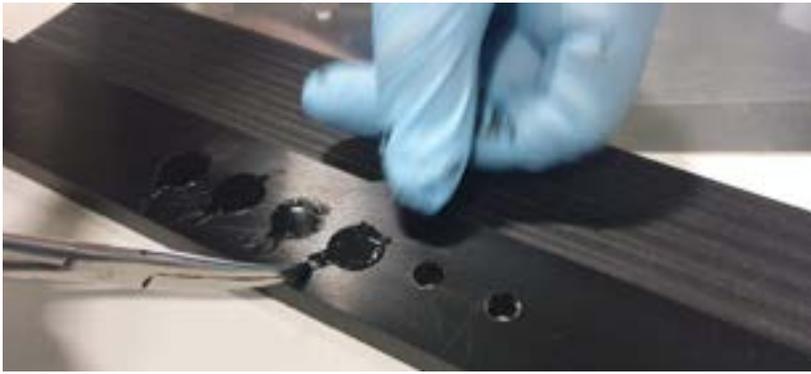
LINE SETUP

- Venjakob Flat-bed
- 8x DeVilbiss AG-360
- AirCap TE20
- Nozzle 1.0mm

SprayCapture Ellipse

Installation outside of EX zone
Maximum size of captured pattern 420x 300 mm
Mainly for spray guns with elliptical shape of cone





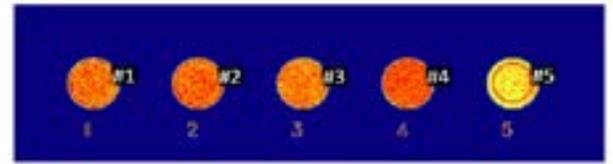
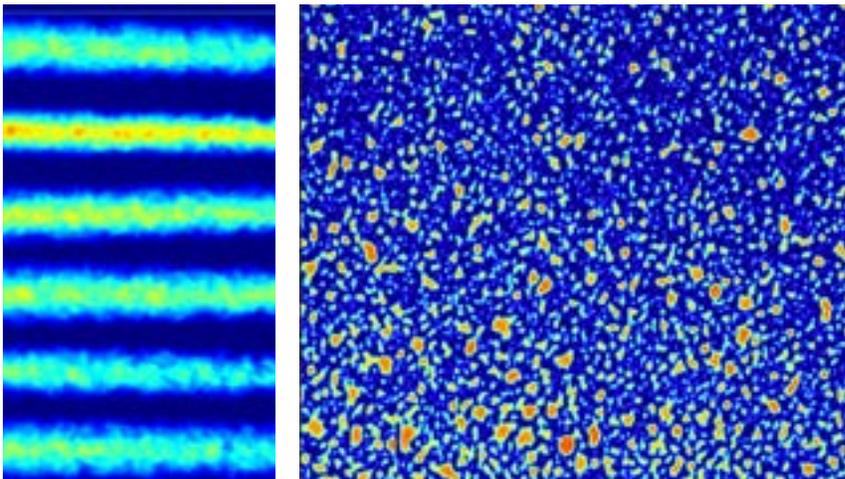
Thickness measurement can be performed on a wet stage of painted material, it is not necessary to harden the layer as it was in previously used method of ferromagnetic measurement. It allows to start another project and its initial quality improves in significantly lower time.

- Possibility to measure thickness of parts during wet stage without needing to place them in the oven.
- Accuracy up to 7% in comparison with microscope measurement.
- Result in couple of minutes after spraying.

**There is an only possible way
to control the process with
eight simultaneously spraying applicators.
CHECK THEM ALL - IN DETAIL**



Determining what outcome each applicator specifically gives, such as size of pattern, volume and detection of possible defects, helped to achieve stable production with less paint material usage.



id	X [mm]	Y [mm]	Max [µm]	Min [µm]	Avg [µm]
1	8	8	26.75	13.37	20.29
2	10	8	25.98	13.73	20.72
3	20	8	24.65	13.25	19.48
4	40	8	24.65	16.93	21.38
5	51	8	19.99	11.53	15.69



**-3 hours per week
while starting production**

Thanks to the possibility of wet stage thickness measurement, it was possible to speed up the entire production start-up.



**up to -10%
material usage**

After optimization of output of each applicator the flow of material was reduced achieving the same volume of material transferred.



**Process
under control**

Unification of applicator output
Checking the status of AirCaps
Predictive maintenance



Flash off analysis

Analysis of flash off, its speed and behavior. Adjustment of the recipe on the current material according to the technology used.