

THE PROBLEM ADRESSED

Pattern application by stamps on material surfaces for strain measurements by image analysis for mechanical testing

- Speckles made with spray paint are user dependent, difficult to control and to reproduce
- Control the pattern according to the test and structure
- The team has an expertise in characterizing and modeling the mechanical behavior of materials

TECHNOLOGY

- Soft material stamps with controlled designed patterns
- User-centered designed applicator
- To apply patterns on material surfaces for digital image correlation or marks tracking techniques for strain field measurements

COMPETITIVE ADVANTAGES

- Control pattern design in size, shape, and density
- Pattern reproducibility
- Pattern diameter as small as 180 microns
- Fully customizable stamps size up to 120 mm x 60 mm
- Ergonomically designed, user-friendly applicator
- Easy, fast and safe to apply

APPLICATIONS

- Strain field measurements due to mechanical, thermal, physical... loadings
- Material characterization
- Detect and follow cracks
- Structural health surveillance

DEVELOPMENT STATUS

TRL 8/9

- We propose ready-to-use kits containing an applicator, stamps and inker
- Tested on several material surfaces at room temperature
- Measure the strain field upon mechanical testing

INTELLECTUAL PROPERTY

- Patent #FR3161589

INVENTORS & CONTACTS

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PUBLICATIONS

J. Diani, G. Geraud, A. Coq, V. Kuzyara. *Stamps for pattern applications for DIC or markers tracking. Experimental Techniques* (2026)

LOOKING FOR

- Explore other possible application for fine design stamps
- Manufacturers
- Investors