

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 designed patterns
 - Silicone-based stamps
 - CAD-aided design for application tools
- Applied patterns used for digital image correlation or marks tracking techniques for strain field measurements

COMPETITIVE ADVANTAGES

- Control pattern design by size, shape, and density
- Pattern with a diameter as small as 180 microns
- Custom-size stamps with non necessarily flat surface with dimensions up to 200 mm x 105 mm
- Easy, safe to apply for reproducible patterns

APPLICATIONS

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

DEVELOPMENT STATUS

TRL 4

- We can make stamps for specific applications
- Apply the pattern on material surface
- Measure the strain field upon mechanical testing

INTELLECTUAL PROPERTY

- Patent filed

INVENTORS & CONTACTS

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LOOKING FOR

- Testers in industrial environment
- Explore other possible application for fine design stamps
- Investors