ReliaCoat Technologies, LLC
Reliable Coatings by Design

MISSION

- Advanced Tools & Technologies for Enhancing Thermal Spray Processes & Coating Reliability
- Holistic Approach to Thermal Spray Process Optimization and Coating Design
- Coating Design with Relevant Property Criteria for Advanced Thermal Spray Coatings

PRODUCTS

- In-situ Coating Property (ICP) Sensor
- PlumeOpt Injection Optimization Sensor
- In-situ Coating Thickness (IST) Sensor
- Ex-situ Coating Property (ECP) Sensor
- Command Center (Robot Integration)
- Flash Infrared Thermography (NDE)

SERVICES / R&D SOLUTIONS

- Thermal Spray Process Optimization
- Thermal Spray Coating Stress Evolution Analysis
- Evaluation of Coating Nonlinear Elasticity
- Nondestructive Evaluation (NDE) & Coating Defect Detection
- Advanced Microstructure Analysis & Correlation
- Thermo-mechanical Analysis of Sprayed Coatings

https://www.reliacoat.com
rct@reliacoat.com

10 Technology Drive, Unit
East Setauket, NY 11733-4063, USA
1-631-739-8814
In-situ Coating Property (ICP) Sensor
Real Time Measurement of Design Relevant Coating Properties

Applicable to various thermal spray processes including: APS, HVOF (both gas and liquid fuel), HVAF, Wire-Arc Spray, Flame Spray, Cold Spray, Detonation Spray, Suspension Plasma Spray, and Solution Precursor Spray

PlumeOpt Optimal Particle Injection

- Optimize particle injection in less than 5 minutes
- Improve deposition efficiency (>10%)
- Detect powder feed fluctuations
- Detect powder flow instability
- Reduce variability in coating properties

IST Sensor
- Measure coating thickness during deposition to track thickness evolution
- Capable of measuring both ceramic and metallic coating thicknesses

ECP Sensor
- Thermal cycling up to 900°C
- Precision high temperature thermo-elastic property analysis
- Graphical representation of nonlinear analysis in relation to process & material properties

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