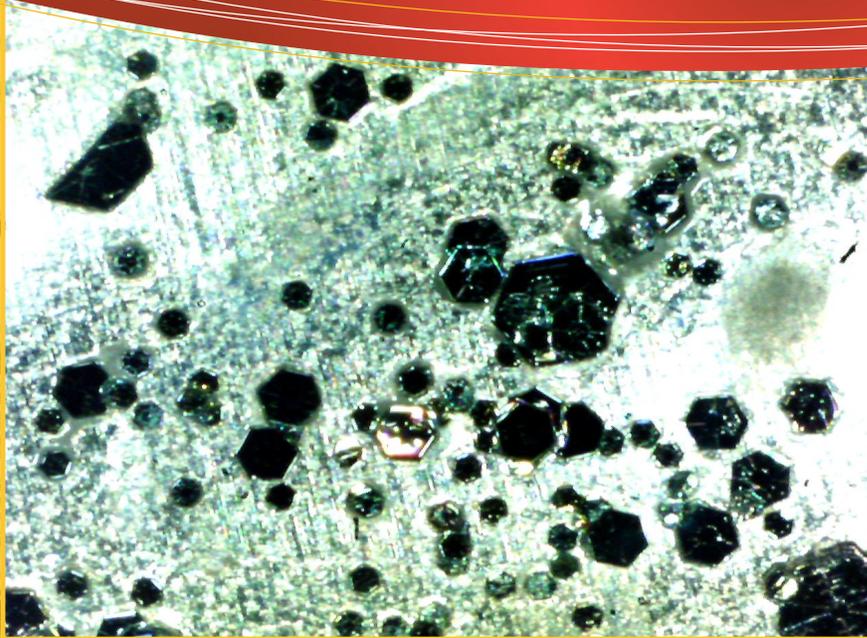




Micromachine Artifact Tag and Seal



TECHNOLOGY SUMMARY

With counterfeit goods and company theft becoming a widespread problem, the importance of protecting valuable product is vital to the security of a company or country. Sandia National Laboratories has created an anti-counterfeit unique identifying tag and seal that will prevent the possibility of counterfeit or the removal, replacement, or relocation of a product or object.

Complex silicon-based micromachine artifacts are embedded in a custom formulated clear acrylic polymer blend and UV cured. The artifacts are placed upon a surface or joint to be marked or sealed. The pattern is recognized by a Sandia developed image analysis system that will establish a unique identifier that cannot be counterfeit.

The tag includes a silicon frame with alignment marks integral to it, surrounding and covered by the cured resin such that attempts to cut the seal in half by sophisticated methods will fail, since the silicon frame will break and not be repairable.

BENEFITS

Field applied anti-counterfeit mark and seal

Removal, replacement, relocation, and duplication tracking

Extremely high verification confidence

Suitable for mass production

Enables high volume, automated scanning

INTELLECTUAL PROPERTY

Patent Pending on SD# 11173

POTENTIAL MARKET APPLICATIONS

Aircraft and aerospace

Computing

Electronics

Microelectronics

Nuclear Power

Public Safety

International Safeguards

TECHNOLOGY READINESS LEVEL

Sandia estimates this technology at approximately TRL 4, due to key elements being demonstrated in laboratory environments.

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