digifast

Fasteners with machine readable information storage (2D, 3D code or hologram)

The vision
An intelligent fastener that provides information about its origin, its manufacturing process and about its use

The solution
Integration of a 2D information storage on the fastener surface

2D Datamatrix code
- High density information in the smallest space
- Redundant information – failure correction

Application of the Datamatrix code
- Thermal: laser
- Mechanical: print, peen, glue tag
- Chemical: etching

Advantages
- Short manufacturing cycles
- No secondary mechanical operation necessary
- No reduction in the mechanical properties of the fastener
- Industrial standard
- Low application costs
- Robust code

The information stored as “Product ID”

“Product ID” Individual identification
- Part no., serial no.
- Material heat no.
- Manufacturer
- Date of manufacture
- Differentiation of identical fasteners
- Copy protected fasteners
- Handling parameters
- Mounting devices
- Mounting location
- Data for assembly operation
- ...

Customer benefit
Tractability, information, security

... in mounting process
- Documentation of each fastener with assembly data
- Traceability down to ...
  - single fastener
  - location and date
- Online recognition of wrong fasteners
- Data for tool program and control on each fastener
- Assembly of different fasteners with a single tool
- Integration of assembly data into production data

... in logistics
- Less effort in case of product recalls
- Automatic information for part logistics, e.g. for kanban inventory control
- Documentation of spare parts
- security against product copies/fakes
- Identification of OEM parts and spares

Applications
Safety critical fasteners in...
- Automotive: cars, trucks
- Aviation: airplanes
- Trains
- Wind turbines
- Chemical industry
- Arms
- Construction: bridges, buildings
- Power plants
- ...

Samples

M4
M5
M6
M6

2D code by laser

Production assembly

2D code reader

Peened 2D code

2D-Datamatrix-Code

Customer benefit

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