MATERIA NOVA

ION BEAM IMPLANTATION

Atomic Engineering for smart surfaces

PRINCIPLE & BENEFITS

PROCESS

- 3D multi-process / 5-axis collaborative
- Controlled and local depth range
- Any substrate (metal, ceramic, polymer, glass...)
- Any shape & size - powders - small to big parts
- No adherence issues
- Environment friendly process

BENEFITS

- Surface texture stay
- Precise modification and action
- Unequivocal correlation between ion implantation conditions and surface properties
- Reliability, modification control and repeatability
- Value-added products with optimal mechanical, tribological properties

FACILITIES

SEVERAL LAB-SCALE ION IMPLANTERS

- Ion energies (up to 60 keV with Hydrogen & 30 keV with Nitrogen)
- Ion flux (from 10¹³ to higher ones) and fluences (up to 10¹⁸ ions/cm²) for short processing times including beam scanning capacities
- Substrate angle of incidence control - Implanting time (ion - depth - penetration)

1 SEMI-INDUSTRIAL ION IMPLANTER

- Wafer / sheet size implantation
- For samples up to 0.6 x 0.4 m² with a motorized 3D carriage

BUSINESS FIELDS

Automotive

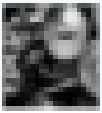
- Molds
- Gears
- Bearings
- Transmissions
- Camshafts and valvetrains

Luxury

- Watches
- Jewelry

Tools

- Machining
- Molds



Medical

- Implants
- Packaging

Aeronautics

- Turbines
- Springs

Consumer Goods

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