



CAPABILITIES, SERVICES AND TECHNOLOGIES

MANUFACTURING PROCESS

ADDITIVE MANUFACTURING & 3D PRINTING

- Binder jetting
- Digital light processing
- Directed energy deposition
- Material extrusion
- Material jetting
- Powder bed fusion
- Raw materials
- Sheet lamination
- Stereo lithography

BONDING & JOINING

- Adhesives and sealants
- Arc welding
- Brazing
- Electron beam welding
- Friction welding
- Laser welding
- Mechanical fasteners
- Polymer welding
- Resistance braze spot welding
- Single sided spot welding
- Soldering

LASER TECHNOLOGIES

- Design for laser cladding
- Design for laser soldering
- Laser ablation
- Laser cutting
- Laser hardening
- Laser marking
- Laser metal welding

NON-TRADITIONAL MATERIAL REMOVAL

- Abrasive flow finishing
- Abrasive jet machining
- Electric discharge machining
- Electro-chemical process
- Electron beam machining
- Electro-physical process
- Ion beam machining
- Laser assisted machining
- Laser beam machining
- Magnetic abrasive finishing
- Ultrasonic machining
- Water jet machining
- Nano technology

ROBOTICS

ROBOTICS, MECHATRONICS & AUTOMATION

- Artificial Intelligence
- Communication systems
- Control systems
- Cost oriented automation systems
- Embedded systems
- Human-machine systems
- Robot software
- Robots (manufacturing, calibration, programming)
- Sensors and actuators
- Cobotics
- Assembly peri-robotics
- Field robotics
- Laser cutting robotics
- Machine tool robots
- Machining robots

- Networks & gateways
- Smart manufacturing
- Smart warehouses

CYBER SECURITY

- Cloud access and protection
- Container security
- Deception
- Endpoint detection and response
- Hardware authentication
- Managed detection and response
- Micro segmentation
- Network traffic analysis
- Remote browser
- Software-defined perimeters

SOFTWARE

- Reusable, upgradeable software
- Software development
- Software engineering
- Software quality and product insurance
- Software tools

VIRTUAL MANUFACTURING

- 3D testing
- Control-centered VM
- Design-centered VM
- Product testing and optimization
- Production-centered VM

ENGINEERING & OTHER SERVICES

ENGINEERING & DESIGN CENTERS

- Design
- Electronic
- Geometry

- Laser peening
- Laser plastics welding
- Laser surface texturing
- Laser-assisted forming

MACHINING AND FORMING

- Abrasive machining
- Ceramic processing
- Composites processing
- High speed machining
- Hydro forming
- Incremental forming
- Internet-based machining
- Metal casting
- Micro forming
- Micro machining
- Plastics processing
- Powder metallurgy

MICRO AND NANO FABRICATION

- Chemical micro-machining
- Electro-chemical micro-machining
- Hybrid micro-machining
- Mechanical micro-machining
- Thermal micro-machining

SURFACE TREATMENT

- Resign / R&D / Prototype
- Raw Material
- Equipment

SUSTAINABLE AND GREEN MANUFACTURING

- Carbon emissions reduction technologies
- Energy efficiency and conservation technologies
- Waste reduction technologies
- Water conservation and quality technologies

MACHINERY, TEST & CONTROL

MACHINE TOOLS

- 3D printers
- Advanced CNC centers
- Broaching machines
- Lathes
- Planers
- Shapers
- Turning, drilling, grinding and milling machines

THERMAL CONTROL

- Elimination of thermal waste
- Thermal control components
- Thermal control systems -incl. Software
- Thermal electric cooling

TESTS, INSPECTION & MEASURES

- Non-destructive testing
- Test benches
- Virtual testing and simulation

COMPUTER-AIDED MANUFACTURING

COMPUTER TOOLS AND SYSTEMS

- Applications development
- Applications engineering
- Applications quality and product insurance
- Computer-aided design (CAD)
- Computer-aided process planning (CAPP)
- Computerized maintenance management systems
- Computerized process simulation
- Direct digital manufacturing
- Internet of things

- Instrumentation, experiments
- Interior/exterior noise reduction
- Mechanical
- Modeling, calculation
- Optimization
- Visualization

TECHNICAL SERVICES

- Certification
- Consulting, auditing
- Industrial design
- Information
- Laboratories
- Maintenance
- Packaging
- Products handling
- Products insurance
- Quality
- R&D centers
- Safety, accident prevention, Industrial hygiene
- Technology watch
- Training
- Transport, logistics

SMART FACTORY

- Framework / structural works
- Automatic Control
- Infrastructure
- Glass / solar / window solutions
- OTHER (If not listed):

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