PRODUCTION

From Specific Tasks to Turnkey Long-Term Production

Range of Production Services

- High volume, medium and low volume production and fabrication
- Specific process or assembly tasks
- Problem solving - product design and production issues
- Testing, analysis and quality assurance
- Material and subcontractor sourcing, qualifying and supervision
- Design and set up of production line with all tooling
- Production equipment development
- Turnkey product design, prototyping and production
- Turnkey production from drawings and specifications
A UNIQUE COMBINATION OF CAPABILITIES

- Metallurgical expertise for both R&D and production
- Production-oriented for efficiency, low costs and high quality
- Highly efficient use of R&D and prototyping budgets
- Processes, parts, assemblies, complete products
- One-off to volume production
- Advanced testing and analysis equipment
- ISO 9001-2008, plus customer-specific QA standards
- Well qualified materials suppliers & subcontractors

QUALITY ASSURANCE

- ISO 9001-2008 certified
- Extensive in-house capabilities for production, testing and analysis
- Meet many exacting certification requirements, specific to applications or customers:
  - Medical
  - Nuclear
  - Aerospace
  - Defense
  - Electronics
  - Energy

PROCESSES, EQUIPMENT, FACILITIES

- Brazing furnaces for: vacuum, partial pressure, hydrogen and argon
- Systems and furnaces for diffusion bonding and induction brazing
- Thin film coating by electron beam, ion plating, sputtering
- Heat treating – many specialized processes
- GTAW welding and capacitor welding stations
- Cleanrooms, cleaning cells, flow benches
- Metallurgical testing and analysis
- Wet lab, metrology, variety of inspection equipment
- 60,000 sq ft of design, lab, QA and production space
EXPERTISE AND TRACK RECORD

• Reputation as solver of difficult problems and as a long-term, high quality and reliable production supplier
• People – project management specialists; materials scientists; materials, mechanical and electrical engineers; specialized technologists and experienced assembly and test personnel
• Many specialized suppliers and subcontractors
• Track record since 1976 with high customer retention

PRODUCTION FOR DEMANDING SPECIFICATIONS AND MISSION-CRITICAL APPLICATIONS

• Aerojet – reactive metal thermal processing
• Schilling - robotic assemblies for submarines used in offshore oil industry
• NASA – space exploration and lander programs
• Major aerospace contractor – engine fire sensors
• Major medical device corporation – ceramic-to-metal heater assemblies
• Fortune 10 corporation – homeland security assemblies

OVERALL CAPABILITIES OF VPE

• Contract production of critical assemblies
• Contract R&D, prototyping, turnkey product design
• Many joining processes, including precision brazing and diffusion bonding
• Thin film coating, heat treating, comprehensive analysis and testing lab
• ISO 9001-2008 certified manufacturing and processing services