



Eastern Sintered Alloys, Inc.
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ESA's Capabilities:

Engineering...

- ∞ Ability to design and develop Powdered Metal (P/M) parts using computer-aided design (cad) system
- ∞ All tooling is designed in-house at ESA
- ∞ Value analysis capability to convert high cost components to p/m (i.e. forging, cold-headed, die-castings, plastics, stampings, screw machine, etc.)
- ∞ In-depth knowledge of P/M materials and their applications
- ∞ Extensive advanced product quality planning (APQP) system for all new parts and tooling

Manufacturing...

- ∞ Documented manufacturing and process control procedures
- ∞ Compatibility with electronic data interchange (EDI) and MRP scheduling
- ∞ Flexible and responsive to production schedules
- ∞ Develop innovative techniques to enhance density, strength, hardness, and/or ductility of P/M parts (i.e. double processing, warm-forming, sintering atmosphere, etc.)
- ∞ Extensive experience in developing and testing proprietary materials
- ∞ Ability to provide stainless-steel parts with high temperature sintering

Quality...

- ∞ Expertise in sampling and documentation procedures or new P/M parts (i.e. PPAP and ISIR submittals)
- ∞ Formal quality system program conforming to ISO9001: 2000.
- ∞ SPC Gauging equipment and related computer software and hardware
- ∞ Universal testers including a computerized Tinius Olse; Rockwell Hardness Testers; density, oil content, and porosity test equipment
- ∞ Computer-assisted coordinated measuring machines (CMM).

Other Services Include . . .

- ∞ Oil Impregnating systems centrifuge equipment
- ∞ Vibratory finishing for deburring
- ∞ Heat treat, steam treat, drilling, tapping, machining, sizing, grinding, plating, special impregnation for sealing/coatings, and assemblies

FACILITIES LISTING MANUFACTURING EQUIPMENT

BLENDING: (2) 500# blenders and (1) 3,000 #blender

MOLDING PRESSES: 75

- (1) 04 ton mechanical
- (1) 05 ton mechanical
- (2) 06 ton mechanical
- (2) 10 ton mechanical
- (1) 12 ton mechanical
- (7) 15 ton mechanical
- (10) 20 ton mechanical
- (1) 25 ton mechanical
- (15) 30 ton mechanical
- (2) 40 ton mechanical
- (13) 60 ton mechanical
- (3) 100 ton mechanical
- (6) 150 ton mechanical
- (10) 200 ton mechanical
- (1) 300 ton mechanical

SINTERING FURNACES: 23

- (2) 12" mesh belt electric furnace
- (1) 18" mesh belt electric furnace
- (10) 20" mesh belt electric furnace
- (4) 24" mesh belt electric furnace
- (1) 12" high-temperature electric furnace (2200 deg. F)
- (5) 20" high-temperature electric furnace (2200 deg. F)
- (2) 1500 cu. ft. endothermic gas generators
- (1) Hydrogen, nitrogen atmosphere system

SIZING PRESSES: 16

- (1) 10 ton mechanical automatic
- (6) 15 ton mechanical automatic
- (2) 30 ton mechanical automatic
- (1) 40 ton mechanical automatic
- (2) 45 ton mechanical automatic
- (4) 60 ton mechanical automatic
- (1) Automatic stamping machine
- (1) Pneumatic automatic sizing machine
- (2) Hydraulic rivet assembly machine
- (1) 3 ton assembly machine

SUPPORT EQUIPMENT:

- (A) Complete oil impregnation systems including centrifuge equipment
- (B) Vibratory finishing equipment deburring
- (C) In-house machine shop for tool maintenance

Eastern Sintered Alloys, Inc. (ESA) was founded by Art Hillebrand and John Sterbank in 1979. ESA's objective is a high-quality producer of powder metal (P/M) parts using the most advanced technology available in both materials and equipment. Our management, with more than 150 years of combined experience in metallurgy, engineering, tool design, and quality is deeply committed to our employees, customers, and the Powder Metal (p/) industry.

Today, our company's 82,000 sq. ft. facility, employing 320 people sits atop of 10 acres of land in the Elk County Industrial Park of St. Mary's, Pennsylvania. We believe our growth and success is a direct result of our daily efforts to earn our customer's trust and business. We are confident that our technical expertise in part and tool design and materials selection coupled with cost effective manufacturing techniques and customer service will clearly demonstrate the merits of P/M and Eastern Sintered Alloys, Inc.

Eastern Sintered Alloys is registered to the ISO 9001:2000 quality system. Our laboratory is registered to the same quality standards, in the field of mechanical testing.

QUALITY CONTROL EQUIPMENT

- Gauging for all dimensions, plus gage calibration system
- Micrometers, calipers, plug gages, etc.
- SPC Computer capability
- Universal testers for strength requirements up to 60,000 lbs.
- Digital Rockwell hardness testers
- Metallurgical equipment including capability for photomicrographs
- Sunnen gauges for I.D. checking plus zero spindle
- Electronic balances for automatic density
- Capability to check density, oil content, porosity and permeability
- Testing for powders-hall flowmeter, apparent density
- Digital control optical comparators
- Special test fixtures to meet customer requirements
- Pressure and leak detection testers
- Helios O.D./I.D. gauging system
- Brown & Sharpe coordinate measuring machine
- Profilometers for surface finish testing

Eastern Sintered Alloys can supply high strength/wear resistant ferrous alloys including stainless steel as well as proprietary materials for individual applications. A full range of bronze and brass materials complements our metallurgical capability.

Secondary treatments include heat-treatment, steam-treatment, drilling, tapping, machining, grinding, plating and special impregnations for sealing and coatings.

Our modern 82,000 sq. ft., manufacturing facility is located on ten acres in the Elk County Industrial Park.

Eastern Sintered Alloys is registered to ISO-9001-2000 quality system. Our laboratory is registered to the same quality standards, in the field of mechanical testing.