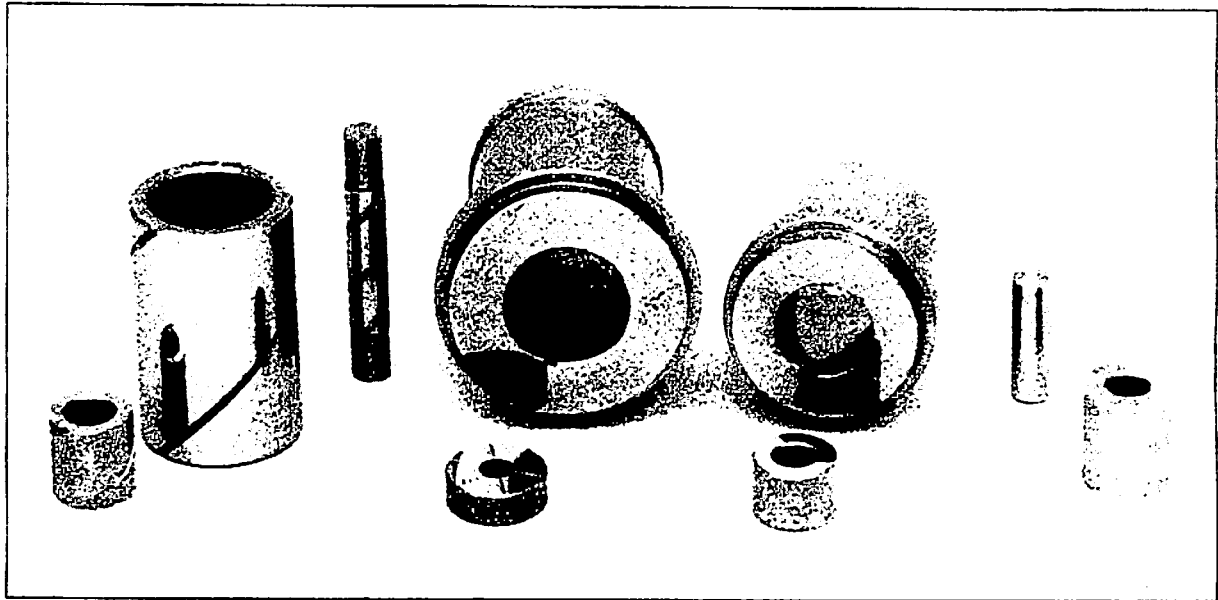


**IF YOU NEED CARBIDE BUSHINGS AND SHAFTS ...
FOR FLOW METERS AND OTHER ROTATING-DEVICE APPLICATIONS ...**



We produce them – to your prints and specifications.

Bushings, shafts, shaft sleeves, thrust plates or retaining washers, and other precision details required for rotating members whose bearing surfaces must resist corrosive chemicals and wear. We produce carbide shafts, straight and stepped, internal shaft sleeves, spherical and other configuration bushings with internal or external straight or spiral oil grooves, solid thrust washers, and other wear parts required for flow meters and similar rotational mechanisms.

Size or Precision Requirements – No Problem

We regularly produce parts with diameters from .005" - ID or OD - to 6" with tolerances on size, roundness, straightness, concentricity to .000010" and finishes to 1 microinch RMS.

In-process inspection procedures on the production floor assure that each operation is performed to specified tolerances while the systematic calibration of "working masters" in our quality control laboratory guarantees their integrity.

Product Complexity – No Problem

Our manufacturing facility includes drilling, milling, turning; centerless, OD, ID, and surface grinding; honing and lapping; brazing; and electrical discharge machining (EDM). We have produced parts which required brazed, cemented, press-fit and solid carbide

configurations. Precision parts involving carbide brazed to steel is a common problem which is accommodated by Great Lakes' production facility.

Quantity Requirements – No Problem

We are automated to handle both high and low volume work for maximum efficiency. Automatic feeding mechanisms for high volume, manual loading for prototype and short lot quantities. We regularly produce in lot sizes of 1 to 50 and up - to millions of parts. Standard in-house automation modules improve turn-around and eliminate the need to assign amortization costs to the product.

Delivery Turn-Around

We stock raw carbide in standard sizes to cover our production range. This allows us to respond quickly to meet the emergency needs of our customers. Where customers can establish annual requirements, we develop cooperative schedules which allow us to plan our workload and to produce the parts in the most efficient quantities. This assures these customers of deliveries which fit their requirements at prices which are the most economical.

If you need carbide bushings, shafts or associated components, let us show you what we can do.

ABOUT GREAT LAKES-EGLINTON

We manufacture products for use in quality control, production tooling, and produce components to customer print for use in their manufactured products. Some examples are as follows:

Quality Control

- Cylindrical plug and ring gages - to .005" diameter
- Progressive plug and ring gages - 2, 3, 4 or more steps
- Master setting disks

Tooling

- Punches and dies - to .004" diameter
- Drill bushings
- Circuit board drill bushings
- Special carbide tooling for forming, sealing, and other manufacturing functions - for batteries, metal cans, etc.
- Compacting tooling - for Uranium pellets for nuclear power fuel rods, powdered metals, ceramic materials, and for pharmaceutical use (i.e. circular pills).
- Carbide rod and tubing - to .004" diameter - for EDM electrodes and other applications.

Components for Manufactured Products

- Special carbide rotary wear parts - bearing surfaces (bushings and shafts) for parts which must rotate over a long period of time with accuracy. Sizes .005" in diameter and up.
- Special carbide print wires and guides for high speed matrix printers. Each dot in the matrix is printed by a carbide wire; hardness is required to prevent wear on the printing end and to accommodate the sliding action of guides along its length. Diameters .005" and up.
- Special carbide linear-motion round ways - for high speed computer disk readers and other applications.
- Special carbide linear-motion flat ways or guides.
- Carbide and carbide-with-diamond-insert support and guidance pads - ground and lapped to customer specifications for flatness, finish, and parallelism.
- Carbide buttons - for staking anvils, micrometer tips, and contact points for electronic gaging.
- Carbide needles - for drawing or scribing compasses for layout work, electronic inspection devices, and other applications where a precisely round point is required, concentric to the needle body, and resistant to wear.
- Carbide tool blanks - precision ground for end mills, drills, burrs, reamers.

- Carbide rod and tubing - precision ground to standard and special diameters, lengths, and tolerances.

Small Parts - One of Our Specialties

Great Lakes-Eglinton developed the carbide tooling to compact ferrite memory cores from powder for the first generation of digital computers. The tooling consisted of a tubular punch, mating die, and core rod. The tubular punches ranged from .007" to .036" ID, with wall thicknesses to .0015" and included brazed, cemented, press-fit and solid carbide types. OD and ID tolerances were held within 25 millionths inch. The core rods were constructed of carbide brazed into steel bodies - with pin diameters as small as .005" held to tolerances of 10 millionths.

The Company was also on the cutting edge of the development of tooling for the 2nd generation of computer memory cores produced from ferrite tape, and the 3rd generation, involving punches and dies to .004" in diameter, to produce memories in multi-layer ceramic chips. Tooling for the latter two are presently in production.

Quality Control

In-process inspection procedures assure that each operation is performed to specified tolerances. Statistical Process Control (SPC) is fully implemented for internal control and to meet customer requirements. The systematic calibration of "working masters" in our quality control laboratory guarantees their integrity. GLE'S quality control laboratory, equipped with modern precision dimensional measuring instrumentation, is located in a controlled environment. All operating personnel are skilled metrologists, and all inspection equipment and master blocks have precision traceable to the National Bureau of Standards.

Experience

Great Lakes-Eglinton combines over 50 years experience and skill in grinding and lapping tungsten carbide, ceramic and other hard metals with one of the most modern, completely equipped facilities in the nation. This exceptional combination enables Great Lakes-Eglinton to serve almost every segment of the metalworking industry with distinction and pride.

Our highly skilled staff has an average length of service of 15 years and is comprised of people from neighboring small communities. The level of skills is comparable to that available in large metropolitan areas, but the stability and small-town pride in craftsmanship make a difference which can be seen in the products and service.

Great Lakes-Eglinton - a unique facility with a capability for precision work in carbide and other hard materials which is unusual.



Division of Core Industries Inc

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