



Beaver Valley Alloy

Quality Castings Since 1919



MARKETS WE SERVE

With a century worth of foundry operations and metallurgical knowledge under our belt, BVA has developed an extremely diverse list of customers and end markets over its long history. While we serve these markets on an almost continual basis, we are always seeking to expand our stable of end markets and applications and constantly look forward to meeting new, challenging steel and iron casting needs in the future.



Mining & Minerals Processing

- Wear Parts & Abrasion Resistance
- General Purpose & Replacement Parts
- Fluid Transport & Corrosive Processes
- Crusher Market – Hammers & Caps



Primary Metals & Metals Processing

- Steel Mills & Steel Processing
- Nonferrous Metal Processing
- High Temperature & Corrosive Environments



Transportation Markets

- Railroad & Light Rail/Transit
- Inland Marine & Maritime
- Dredging Equipment & Cutters



Specialized Industrial Equipment Markets

- Bearings & Motion Control
- Machine Tool & Extrusion Equipment
- Pumps, Valves & Compressor Housings



Infrastructure

- Energy & Power Generation
- Water/Flow Control & Processing

QUALITY ASSURANCE

BVA is committed to continuously monitoring our craftsmanship and ensuring that our castings meet all customer specifications and requirements. Interaction with customers at the outset of a project – as well as accurate and consistent testing throughout the manufacturing process are critical factors for ensuring good quality and lasting customer satisfaction.

Quality Assurance Testing Methods

BVA's quality assurance efforts are multi-faceted and continuous, involving the monitoring of a number of different parameters. Based on customer requirements, an assortment of quality assurance testing is regularly performed by the company, including:

- Metallurgy & Chemical Composition (Spectrographic Analysis)
- Sand Quality & Performance
- Visual Inspection & Surface Finish
- Mechanical Properties & Testing (Charpy Impact, Brinell Hardness, Tensile)
- Non-Destructive Testing (Radiographic Testing, Ultrasonic Testing, Magnetic Particle, Dye Penetrant)



PRODUCTS & METALLURGY

Chemistries & Materials

BVA produces steel and iron castings in an extremely wide assortment of specific alloys and grades. On a daily basis, we work closely with customers to match chemistries and metallurgy to specific projects and applications.

- Carbon Steels
- Alloy Steels
- Hadfield Austenitic Manganese Steels
- Proprietary & Special Alloys
- Stainless Steels
- Corrosion Resistant Stainless Steels
- Heat Resistant Stainless Steels
- Irons
- Grey Irons
- Alloy Irons
- Ductile Irons
- Abrasion Resistant white Irons

Market Specialty Alloy Expertise

Due to our deep experience in our targeted end markets, BVA has metallurgical expertise in a variety of alloys used in specific markets and applications.

- Mining & Crusher Markets – Hadfield Austenitic Manganese Steel (ASTM A128), Ni-Hard and High Chrome White Irons (ASTM A532)
- Metals & Metals Processing Markets – Carbon and Alloy Steels 1026, 4340, 8630, A27, A148
- Inland Marine & Dredging – Carbon and Low Alloy Steels 1028, 4340, 8630, A27, A148
- Bearings & Motion Control – Carbon Steels A27 and A148
- Extrusion & Specialized Industrial Equipment – Stainless, Carbon and Alloy Steels CF-8, CF-8M, 1026, 8630, Ni-hard, HC250
- Infrastructure - Water/Flow Control Applications – Stainless and Alloy Steels CF-8, CF-8M, CF-3M, Ni-resist, Cast Irons



MANUFACTURING CAPABILITIES

BVA possesses diverse and flexible manufacturing capabilities, as well as deep institutional knowledge and expertise in the production of challenging steel and iron castings. The company's manufacturing complex is situated on an approximate 5.0 acre footprint, and includes 36,000 sq ft of foundry and production space, with an additional 40,000 sq ft of pattern storage in adjacent buildings.

- Castings ranging in weight from 1 to 5,000 lbs
- Dimensional footprint from a few inches to more than 12 ft
- Automated and floor molding options and capabilities
- High volume, serial production, as well as ultra low-volume applications
- Relatively small minimum heats (generally 1,000 lbs, minimum.)

Patterns & Pattern Repair

BVA works with a full range of pattern equipment, including mounted cope and drag boards, as well as loose patterns. The company works with customers that supply their own pattern equipment, as well as those that request BVA to procure pattern equipment on their behalf.

All new patterns are built via outside contractors, with exacting precision and to precise specifications. BVA generally undertakes minor pattern repairs within our plant.



Molding & Core-Making Capabilities

BVA's molding and core-making operations are flexible and responsive, utilizing 100% no-bake, air-set processes. Molding is undertaken through two primary processes – An automated line and floor molding for larger dimension/weight projects.

Mold Line

- Automated mold line and rollover draw
- Largest flask 44" x 48", target casting weight of 1,000 lbs
- Standard flaskless 40" x 40", typical target casting weight under 500 lbs

Floor Molding

- Up to 5,000 lbs casting weight
- Large flask 120" x 120"
- Long flask 36" x 240"
- Flask 24" x 24" up to 10' x 10'



Sand Mixers & Lifting Capabilities

BVA utilizes five (5) sand mixers in its molding and core-making operations. A total of sixteen (16) overhead cranes are available to support the company's molding, core-making, melt and finishing operations.

Sand Mixers

- One 600 lbs/minute mixer
- Four 300 lbs/minute mixer

Crane Capabilities

- Three hot metal cranes – Lift capacity ranging from 4,000 lbs to 10,000 lbs
- Thirteen cranes - Lift capacity ranging from 1,800 lbs to 10,000 lbs

The company utilizes a thermal sand reclamation system, which allows for the recovery and reuse of approximately 95% of the sand used in foundry operations. In addition to cost benefits, thermal reclamation reconditions the sand, improving quality characteristics and reducing sand-related casting defects.



Melt & Heat Treating Capabilities

BVA's melt operations consist of four (4) coreless induction furnaces, offering maximum flexibility for tackling challenging steel and iron alloys.

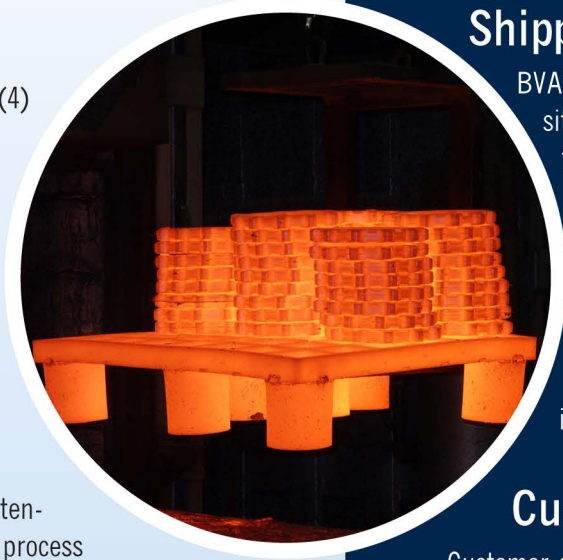
Melt Capability

- Four Coreless Induction Furnaces
- One 5,000 lbs capacity
- Two 2,500 lbs capacity
- One 1,500 lbs capacity

BVA's heat treating capabilities are extensive and entirely automated, ensuring process consistency. Specific heat treatments are established in conjunction with customer requirements, and can include annealing, normalizing, water quenching and tempering. In cases where BVA is not in a position to provide heat treatment internally, reliable third party vendors within the region are available.

Automated Heat Treat Capability – Quench & Temper

- Three Heat Treating Furnaces
- One Furnace - 5'6" x 11' x 6'h
- Two Furnaces - 4'6" x 10' x 4'6"h



• 106" Diameter Water Quench Tank

Shipping & Logistics

BVA's location in Monaca, Pennsylvania, is perfectly situated for easy access to interstate highways, facilitating delivery of castings of any size and weight range across the Midwest, the Eastern Seaboard and the entire nation. Easily accessible interstate highways include I-79, I-376, I-70, I-76 (PA Turnpike) and I-80. Each of these trucking routes can be accessed in less than one hour from our manufacturing complex in western Pennsylvania.

Customer Service & Support

Customer service is an essential component of our everyday operations at BVA. We work very hard to differentiate ourselves from our competitors with our commitment to delivering the highest possible quality castings on time, every time. We make it a point to work proactively and in collaborative partnership with our customers to understand and meet their needs, prevent problems and exceed expectations. We pride ourselves on our straightforward and open lines of communication with our customers, and commit to always provide you honest guidance regarding deadlines, deliveries and any other feedback that is required.



HISTORY



BVA is a third generation, family-owned and operated business. Established in 1919 as the First World War came to a close, BVA experienced growth and development during the post-war recovery and throughout the “Roaring Twenties”. The declaration of World War II resulted in BVA branching into new foundry work, including die pots required in the manufacture of artillery shells. With the end of the war, BVA transitioned to a job shop, with the region’s steel mills and coal mines as its primary customers. This deep heritage in metals and mining remains with our company to this day.

Following an extended period of steady operations during the 1950s and 1960s, the foundry underwent an extensive transformation during the 1970s. Significant changes included the conversion to “No Bake” sand systems and addition of new furnaces, among other investments. Modernization continued during the 1980s and 1990s, with the installation of additional furnace capacity and a thermal sand reclamation system. In the 21st century, BVA continues to invest and adapt to an increasingly global competitive landscape, building upon the 100 years of accumulated know-how and foundry expertise to assist customers in solving even their most demanding casting-related challenges.



CONTACT Us

If you have any questions regarding BVA or our capabilities, or need a quotation, please feel free to contact us:

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