



# DIE CASTING MACHINERY

## CURRENT TRENDS

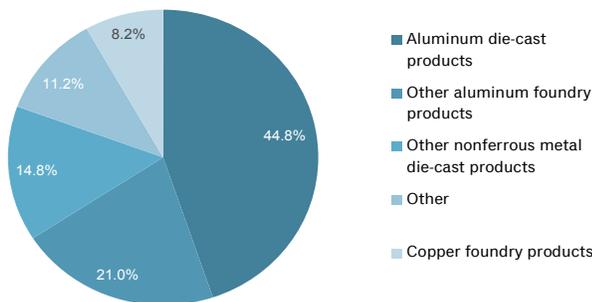
- Used equipment market participants have reported steady buyer inquiries about the availability of production machinery
- The current market is good especially for late model equipment
- Rebuilds have slowed due to a number of factors, one of which is the introduction of Chinese equipment that is making progress into the industry
- Industry revenue for the nonferrous metal foundry products manufacturing industry is forecasted to grow at an annualized rate of 0.3% to \$15.5 billion through 2023, which has slowed as compared to the prior five-year period

## PROJECTED VALUES (12-MONTH OUTLOOK)



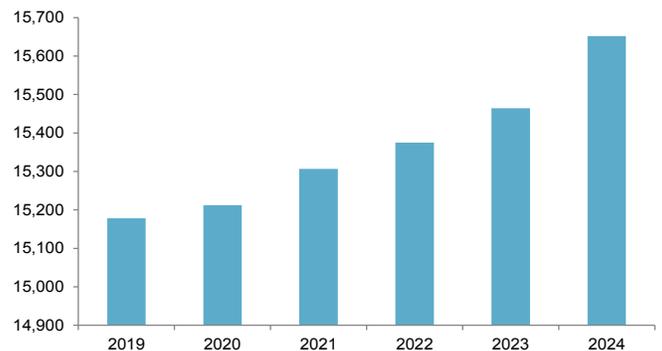
## U.S. NONFERROUS METAL FOUNDRY PRODUCTS MANUFACTURING

INDUSTRY SEGMENTATION (2018)



Source: IBISWorld

REVENUE OUTLOOK (000'S)



Source: IBISWorld

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**METALS PRICING A KEY EXTERNAL DRIVER:** Nonferrous materials such as aluminum, copper, magnesium, titanium, and zinc are the primary materials used in die casting. Of these, aluminum castings make up the majority of sales and have been heavily relied upon for their ability to reduce weight, while maintaining rigidity. This characteristic has closely linked aluminum die castings to the transportation industry, more specifically the automotive industry, which makes up more than 50 percent of the customer base. Lenders should be aware that fluctuations in raw material pricing can impact margins of portfolio companies. In the wake of the March 2018 tariff levied by the Trump administration of 10 percent on all aluminum imports, raw materials pricing has been impacted for manufacturers utilizing aluminum as a primary metal.

While initial exceptions were made for imports from Mexico, Canada, Brazil, the European Union, Australia, South Korea, and Argentina, since then permanent exemption from the aluminum tariffs has been granted only to Argentina and Australia, with annual import limitations not applicable to Australian exports. While the tariffs may provide an economic advantage for domestic production over time, as far as the price of the Aluminum traded on the London Metal Exchange, while the price of aluminum has come down in the past year, the impact of tariffs is more accurately reflected in the added cost U.S. buyers pay to have the metal delivered. Those premiums have increased 26 percent since tariffs were implemented in early March 2018, offsetting the impact of lower global prices based on information recently published by Bloomberg.

Additionally, there is likely to be a concentrated impact on manufacturers in certain states including Texas, California, Illinois, Michigan, Louisiana, Pennsylvania, Ohio, and New York, which import more than \$2 billion annually in steel and aluminum products, accounting for 60 percent of the nation's total according to information from Brookings. Market participants are unsure about how the tariffs may affect the value or demand for used machinery and are taking a wait-and-see approach to assess the impact on the industry.

**CURRENT MARKET FOR DIE CASTING EQUIPMENT IS GOOD:**

Industry participants report that there is currently a healthy balance of supply and demand of die casting equipment in the secondary marketplace. Late model machines are selling well, particularly those with shot end and control advancements. Certain manufacturers, such as BuhlerPrince, are particularly desirable because used machines are not readily available and new machines are subject to long lead times. Older machines and machines in poorer condition are not as marketable. The most

popular size machines are between 400- and 800-ton capacity. Machines with larger than 1,200-ton capacity require a longer market period due to a more limited user base. Lenders should discuss appropriate liquidation timeframes with appraisers for these sizes of machines.

The current market for die cast machines is for late model or new equipment. Most buyers are currently looking for machines that are less than 10 years old. If the equipment is 15 years or older, the machinery is looked at as needing a rebuild. In these cases, users will take into account the cost of rebuild and compare that to the cost of a new machine.

**REBUILDS MAY ADD VALUE:** Because of their significant investment, die casting machines are often rebuilt to prolong life and improve performance. Machines that have undergone significant rebuilds will garner higher values of significance as long as those rebuilds are complete and enhance production levels. Who conducted the rebuild also makes a difference. If the work was completed by the original equipment manufacturer or other reputable firm, such as Die Cast Press Mfg Co. Inc., the value added will be much greater. In comparison, in-house rebuilds are less valuable due to the inability of a buyer to know the "quality" of the rebuild. Control upgrades (such as shot monitoring or machine controls) add value to machines but only a small portion in relation to their costs. While the controls do increase the operability of the older die cast machines, they are still older machines as a core and therefore need to have upgraded controls to continue operation at a competitive level. Appraisers should inquire about these types of improvements to ensure valuations reflect these investments.

It is important to note that, although rebuilds can add significant value to the die cast machines, currently the industry has moved away from performing rebuilds. This is partially due to the introduction of Chinese equipment into the marketplace. As the Chinese equipment gains popularity, users have moved to purchasing new Chinese machines versus rebuilding their older equipment. In certain instances the cost to rebuild an existing machine would approach the cost of a new Chinese machine.

**MELT FURNACES CAN PROVE CHALLENGING TO SELL:** In die casting, molten metal is forced into cavities under high pressure. To liquefy the metal, melt furnaces adjoin die cast machines. While melt furnaces can signify a significant installed cost, recovering that investment in liquidation can be challenging when sold for removal. These furnaces must be dismantled to transport and need refractory brick upon re-installation. This cost to reline a furnace can equal almost half the original cost of the furnace, negatively affecting its salability in a duress sale scenario. Smaller holding and melt furnaces (typically less than 35,000-pound capacities) that can be shipped in one piece may be more salable, while larger-capacity furnaces are usually unsold or are sold for scrap.

**CONSOLIDATION IN INDUSTRY:** The die cast industry has experienced consolidation over the past several years. Industry consolidation is expected to continue as key players continue to diversify and expand their market presence. As these consolidations continue, there is a possibility that the market for die casting equipment could be affected. It is important for lenders to continue to monitor this industry as further consolidations occur.

**The Expert: Scott Breier**



With more than 20 years of experience in the industry, Scott Breier is an expert in the field of machinery and equipment valuation. He is an Accredited Senior Appraiser (ASA) with the American Society of Appraisers in the Machinery & Technical Specialties discipline. During his career, he has managed hundreds of appraisal projects across a wide array of industries. Read his full bio [here](#)



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