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Industrial Castings

US Industry Study with Forecasts for **2011 & 2016**

Study #2214 | July 2007 | \$4400 | 170 pages

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The brightest prospects for castings in the US through 2011 will be in some of the smaller castings markets, including aerospace applications, and electrical and electronic equipment.

US industrial castings demand to reach \$35 billion in 2011

US demand for industrial castings is projected to increase 1.1 percent annually to \$35 billion in 2011. Growth in recent years resulted from rapidly rising prices for the metals used in castings. However, prices are expected to moderate through 2011, so that demand for castings will decelerate from the earlier pace.

The brightest prospects for castings will be in some of the smaller castings markets, including aerospace applications, and electrical and electronic equipment. Advances in aerospace equipment applications will be spurred by robust growth in spending on military aircraft and missiles, as well as on commercial aircraft. Ongoing technological advances in computers and wireless devices will support castings demand in medical electronics, mobile telephones, video games, medical instruments and electronic packaging.

Shipments of industrial castings are expected to rise 1.1 percent per annum in value through 2011, mirroring demand, as trade is expected to continue to play a minimal role in the castings market. Castings shipments in tonnage terms are forecast to rise less than one percent annually over that period, which represents a rebound from the declines that occurred from 2001 to 2006.

US Industrial Castings Demand (\$32.9 billion, 2006)



Nonferrous castings to be fastest growing type

Shipments of nonferrous castings are expected to accelerate in volume terms from the 2001-2006 period, increasing 3.1 percent per annum through 2011. Magnesium-based castings are expected to see the fastest growth, as they are the lightest-weight with the highest strength-to-weight ratio. Strong growth in the aerospace industry will spur demand for magnesium die castings, as use of these components provides greater fuel efficiency, overall noise reduction and less vibration when compared to other materials. Nonferrous castings will also experience notable gains in motor

vehicle applications, where magnesium components are typically lighter and therefore are able to improve a vehicle's fuel economy while increasing safety and handling.

Ferrous castings are expected to continue to lose share to nonferrous, both in value and tonnage. For example, in automotive applications, most types of ferrous castings are being replaced by nonferrous castings as manufacturers seek to reduce vehicle weight and increase fuel efficiency. Aluminum and magnesium have become increasingly common in the production of automotive components due to their light-weight qualities.

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Sample Text, Table & Chart

NONFERROUS CASTINGS

Zinc -- Shipments of zinc-based die castings are projected to increase 1.5 percent annually through 2011 to \$1.5 billion in 2011. Gains will be supported by the automotive castings within the automotive industry due to the high strength-to-weight ratio in comparison to aluminum. Magnesium will be supported, on the other hand, by the aerospace industry with ductility typically characterized by zinc. Zinc is considered the easiest metal to cast and has a low melting point. Castings can be easily machine painted or powder coated. Common applications include the automotive industry, hardware, plumbing fixtures, automotive product lighting, hand and power tools, and sporting goods.

Magnesium -- Shipments of magnesium-based die castings are projected to increase 7.8 percent annually through 2011 to \$1.5 billion, the fastest growth within the die casting category. Gains are supported by the continual increase in the use of these castings in the automotive industry due to their lightweight characteristics and strength-to-weight ratio. Vehicles containing magnesium-based components are typically lighter and therefore are able to provide improved fuel economy, increased safety and handling, lower emissions, and increased recyclability.

Magnesium-based castings will also benefit from their increased use within the aerospace industry. Lightweight magnesium components provide greater fuel efficiency, overall noise reduction, less vibration and lower levels of pollution when compared to other materials. Due to the sophisticated needs of the aerospace market, the cost-per-ton is the highest in this market.

Magnesium-based castings are also used to produce power tools, particularly chainsaws. Reducing the overall weight of the chainsaw provides improved operator safety and handling. These castings are

TABLE IV-1

FERROUS CASTINGS SUPPLY & DEMAND (million dollars)

Item	1996	2001	2006	2011	2016
Durable Goods Shipments (bil 2000\$)	1000	1000	1000	1000	1000
\$ ferrous castings/000\$ shpt					
Ferrous Castings Demand (mil 2000\$)					
deflator (2000=100)					
Ferrous Castings Demand					
- net imports					
Ferrous Castings Shipments					
Ductile Iron					
Gray Iron					
Steel Investment					
Malleable Iron					
Other					
\$/ton					
Ferrous Castings Shpts (000 tons)	15000	15000	12000	12000	12000

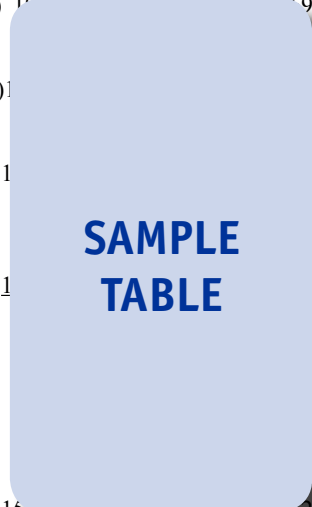
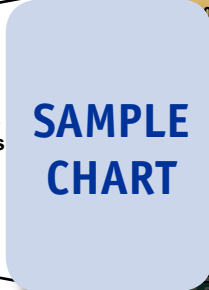
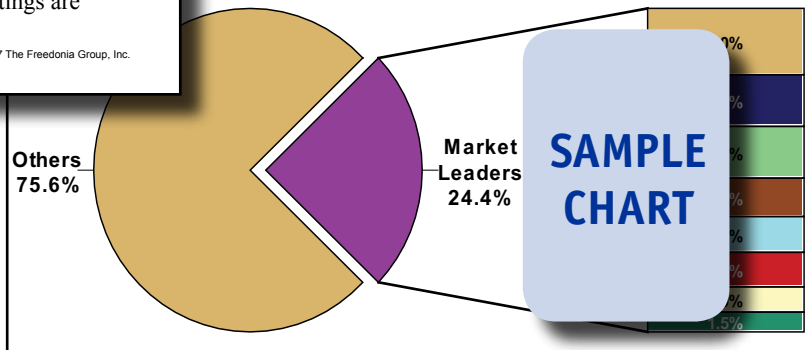
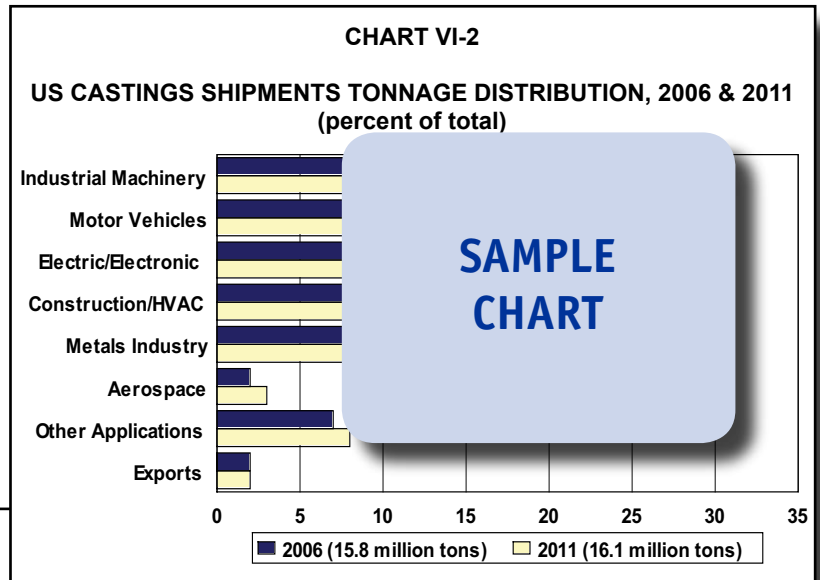


CHART VII-1

FERROUS CASTINGS MARKET SHARE BY COMPANY, 2006 (\$32.9 billion)



Sample Profile, Table & Forecast



COMPANY PROFILES

Ligon Industries LLC
 1927 First Avenue North
 Birmingham, AL 35203
 205-322-3302
<http://www.ligonindustries.com>

Annual Sales: \$
 Employment: 2

Key Products:

Ligon Industries LLC is a company that specializes in specialty independent businesses who manufacturing, vacuum (V)-process casting.

The Company participates in the industrial casting market through its V-process aluminum foundries, which include the operations of Harmony Castings, TPi-Arcade and Premier Aluminum. Ligon's V-process aluminum foundries produce various aluminum castings that are manufactured using a vacuum-process molding technology. The foundries also offer post-casting operations such as machining and painting.

Harmony Castings and TPi-Arcade's operations include aluminum vacuum-process manufacturing; computer numerical control machining, finishing and subassembly; and computer-aided design/computer-aided manufacturing systems to receive, integrate and generate numerically controlled programs for patterns and component machining. The businesses operate at facilities totaling 117,000-square-feet in Harmony, Pennsylvania and Arcade, New York. The businesses manufacture products and provide services to medical, instrumentation, electronics, computer and telecommunication industries. According to Ligon, the

"In volume terms, shipments of industrial castings are expected to accelerate from the 2001-2006 period, rising less than one percent annually to 16.1 million tons in 2011. Ferrous castings will continue to decline in tonnage terms, though less extensively than in the 2001-2006 period, while nonferrous castings will see notable accelerations. Ferrous castings accounted for almost 80 percent of shipments on a tonnage basis in 2006, yet only 55 percent in value terms. Nonferrous metals are much more expensive overall than ferrous metals, despite the fact that steel investment (a ferrous metal) is the most expensive type of casting."

--Section III, pg. 31

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OTHER STUDIES

Bearings

Ball, roller and plain bearing demand in the US will reach \$10.4 billion in 2011. Growth will be driven by largely favorable market conditions and by a shift toward more expensive, better performing products. Unmounted plain bearings will grow the fastest while aerospace, automotive and engine/turbine manufacturing will lead gains by market. This study analyzes the US bearing industry, with forecasts for 2011 and 2016 presented by product and market. It also details company market share and profiles major players.
 #2207 07/2007..... \$4500

Industrial Valves

US industrial valve demand will top \$16 billion in 2011, driven by the construction and public utilities markets. Imports will approach 60% of demand. Key export markets include Canada, Mexico, Western Europe, and the Asia/Pacific and Africa/Mideast regions. Steel and alloys will remain the dominant valve material. This study analyzes the \$13.9 billion US industrial valve industry, with forecasts for 2011 and 2016 presented by type and market. It also evaluates market share and profiles major manufacturers.
 #2205 05/2007..... \$4400

Industrial Fasteners in China

Demand in China for industrial fasteners will grow 9.4% annually through 2010. Nonthreaded sales will lead gains among standard types, with externally threaded fasteners remaining dominant. Aerospace-grade fasteners will outpace standard products. Construction will be the fastest growing market. This study analyzes the ¥25.6 billion Chinese industrial fasteners industry, with forecasts for 2010 and 2015 given by type and market. This study also evaluates company market share and profiles major players.
 #2187 06/2007..... \$4900

Industrial Fasteners

US demand for industrial fasteners will reach \$12.9 billion in 2011, driven by healthy growth in aerospace equipment and nonresidential construction, a rebound in motor vehicles and rising production of many durable goods. Aerospace-grade fasteners will grow four times as fast as standard types. The MRO segment will be the fastest growing market. This study analyzes the US industrial fastener industry to 2011 and 2016 by product and market. It also evaluates market share and profiles leading producers.
 #2173 04/2007..... \$4400

World Bearings

Global bearings demand will rise 5.5% yearly through 2010 based on higher manufacturing production and rising aerospace and motor vehicle output. Market advances in the developing world will significantly outpace demand in the US, Europe and Japan. China will register the largest gains, with growth in India, Thailand and Brazil also strong. This study analyzes the world bearings industry to 2010 and 2015 by market, product, world region and for 30 countries. It also details market share and profiles major players.
 #2081 07/2006..... \$5300

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