Importance of Die Casting
Shaping America’s Future

America’s most fundamental industry, metal casting, continues to play a critical role in the success of U.S. manufacturing through the production of high quality castings and support of key industry sectors. In fact, castings are used in 90% of all finished manufactured products.

As an important segment of the larger metal casting industry, the die casting industry produces over one-third of all metal castings. Today, there are over 300 U.S. die casters manufacturing thousands and thousands of non-ferrous castings: from automobile engine and transmission parts to intricate components for computers and medical devices.

In the United States, die casters contribute over $7 billion to the nation’s economy annually and provide over 50,000 jobs directly and indirectly.

The die casting industry is a microcosm of American business with over 55% of the companies having fewer than 100 employees, while our larger firms are world leaders.

In the medical field, die casting applications include portable medical monitors, dental X-ray units, electronically operated hospital beds, EKG machines, ultrasound equipment, and other hand-held medical devices.

Steering the Auto Industry

Today’s auto is a complex, integrated product with more than 3,000 parts. Aluminum, magnesium and zinc die castings are helping automakers design and manufacture cleaner, safer, better performing cars that use less fuel and produce fewer emissions. In fact, the metalcasting industry supplies at least 100 castings in every lightweight vehicle produced in the U.S. die casters can produce parts for hybrid vehicles, plug-in electric and hydrogen vehicles, as well as vehicles using alternative fuels such as ethanol flexible-fuel and natural gas vehicles.

Motorcycle Tail Section – This single die cast magnesium tail section replaced a four pound aluminum weldment consisting of over twenty-five parts. It is made by Twin City Castings of Minnesota.

Key Industries Served

Die casters provide valuable products to all major market sectors including:

- Aerospace
- Appliance
- Automotive
- Consumer Products
- Construction
- Defense
- Lawn & Garden
- Lighting
- Medical
- Motorcycle
- Power Tools
- Pumps
- Sports & Recreation
- Telecommunications
Growth in Renewable Energy Castings
Castings also play an integral part of the global energy-production chain. In addition to traditional uses for castings in oil and gas production, they are essential to the growth of renewable-energy sources and in the production of more energy efficient vehicles.

Bio power utilizes several cast components, including industrial fans, pumping equipment, piping and turbines while propellers, pumps and pumping castings are vital to the production of geothermal power.

According to the U.S. Department of Energy (DOE), the areas of most promise for alternative energy resources include biomass, geothermal heat, pumps, hydropower, solar photovoltaic, wind, and energy efficiency. Metal castings will play a key role in the expansion of all renewable energy sources.

"The automation of equipment, new processes, and stringent requirements for casting to perform even more difficult tasks pose great opportunities and challenges to the die casting industry for the future."

North American Die Casting Association (NADCA) is the sole trade and technical association of the die casting industry. NADCA membership consists of both corporate and individual members from over 350 companies located in every geographic region of the U.S.