

Parts for Automobile & Industrial Equipment

This segment accounted for approximately 22% of consolidated net sales. Major activities are the manufacture and sale of cast and forged products used as components in automobiles, aircraft, ships and industrial machinery.

Daido Steel's forged products are generally produced for two market sectors: automobiles and industrial machinery. For automobiles, the main products are die forgings, hot precision forgings, housings, turbine housings and cast products for turbine wheels and other applications. For industrial machinery, major products are aircraft, ship and gas turbine components and forged products used for drill collars in oil rigs. Industrial machinery products, which demand extremely high quality in terms of strength, toughness, heat resistance and other properties, are manufactured mainly at the Shibukawa Plant, which has one of the world's largest remelting facilities.

Segment Overview and Market Trends

Strong demand is foreseen for forged and cast products used in automobiles. One reason is tightening restrictions in industrialized countries on exhaust gas to prevent global warming. To meet these standards, automakers are increasingly seeking components that can make vehicles smaller, lighter and more efficient.

Subsidiary Daido Castings Co., Ltd. produces a variety of precision products using the counter-gravity low-pressure casting process. In Europe, demand for turbochargers is rising fast as a means of making vehicles more efficient. Daido Castings makes thin wall turbine wheels for turbochargers that incorporate Daido Steel's exclusive precision casting technology.

In the Brazil, Russia, India and China (BRICs) nations and other regions with fast-growing economies, a high level of investment is expected to continue in the transportation and energy fields, notably involving aircraft, railroads, ships and electric power facilities. This is expected to also create high demand for industrial machinery components.

Operating Highlights

In the automotive parts category, results benefited from strong sales of die forgings and hot precision forgings. Demand was fueled by high automobile output and the enactment of tight restrictions on diesel engine emissions for commercial and recreational vehicles. Furthermore, strong demand for turbochargers, mainly in Europe, boosted sales of precision castings. In the past fiscal year, orders received for die forgings increased 4.6% to 36.7 thousand tons, orders for precision forgings rose 8.0% to 71.7 thousand tons and monetary orders for steel precision castings increased 21.8% to ¥4,959 million.

In the industrial machinery category, rising aircraft demand led to growth in the output of jet engine shafts, a product where Daido Steel has a high market share. Sales also benefited from higher orders for marine diesel engine valves due to solid demand for ships, and from a high volume of orders for turbine shaft parts as demand for electricity climbs in China. During the past fiscal year, orders for free forging products increased 6.6% to 67.6 thousand tons. The result was ¥10,302 million, or 12.5%, growth in sales of automotive and industrial equipment parts to ¥93,003 million and an increase of ¥3,783 million, or 122.7%, in operating income to ¥6,865 million.

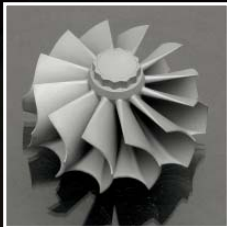
NUMBER-ONE PRODUCTS

Automobile Parts



Hot, High-speed Precision Forgings

Daido Steel has one of the world's largest die forging plants. This facility starts with billets and bars and handles every step through forging, heat treatment and shipment. We are one of the largest manufacturers of hot, high-speed precision forgings. Our products not only satisfy customer demands for lightweight, compact, high-strength and high-precision forgings needed for automotive parts, but also contribute to cost reductions through higher productivity.



Titanium Aluminide Alloy Turbine Wheel

With our LEVI-CAST process, in which metal is melted under a semi-levitated state and cast by counter gravity under low pressure conditions, we have achieved a world first by successfully putting gamma titanium aluminide alloys into practical use in turbine wheels for auto engines. Boasting high strength and durability, but much lighter than components made from superalloys, these titanium turbine wheels significantly improve the acceleration performance of turbocharged engines.

Industrial Machinery Parts



Manganese Crossings

Leveraging our unique casting technology, we produce and supply manganese rail crossings, which are less likely to crack, thanks to their high wear and impact resistance. These manganese crossings are used exclusively for Japan's *Shinkansen* (state-of-the-art express train) tracks. We supply a variety of other rail crossings to customers at home and abroad that help ensure smooth and comfortable travel by train.



Aircraft Engine Shafts

Daido Steel is certified by the three major aircraft engine builders as a supplier of shafts for medium-sized and large jet engines. We forge and press high-quality materials into components that demonstrate superior fatigue strength. One-third of engine shafts used in medium-sized and large-sized airplanes worldwide are supplied by Daido Steel. We also provide materials for engine disks, rings and landing gear.



Exhaust Valves for Maritime Diesel Engines

We provide exhaust valves to maritime diesel engine manufacturers across the world. Materials used in the valves, which have captured 70% of the global market, are resistant to both corrosion and wear.