



Global and China Automotive Aluminum Wheel Industry Report, 2008-2009

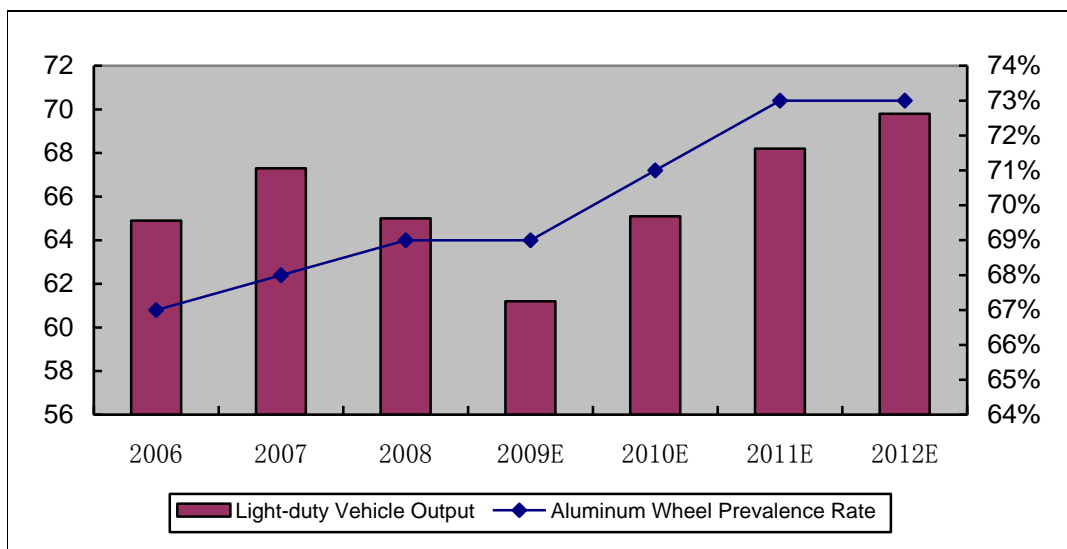
June/2009



6. Aluminum Automotive Wheel Industry & Market

6.1 Global Aluminum Automotive Wheel Market

Global Light-duty Vehicle Output and Aluminum Wheel Prevalence Rate, 2006-2012



The aluminum wheel is mainly applied for light-duty vehicles, and the prevalence rate reaches 10% and 7% respectively in passenger vehicles and trucks, and it is a bit higher in North America. In the meantime, the aluminum wheel market is divided into OEM and after-sales, and the latter has not a large number of shipment, while the average unit price is high.

The U.S.A Market:

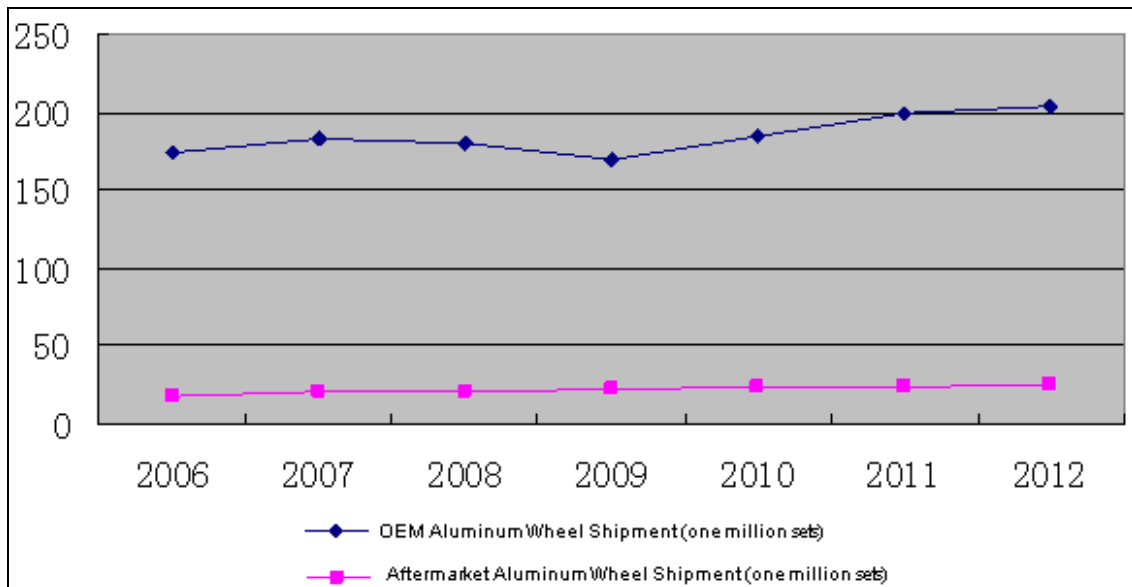
The U.S.A is the world's largest auto manufacturing and consumption market, and three giants GM, Ford and Daimler Chrysler have dominated the market. The auto aluminum wheel demand was about 40 million sets in 2008, and it was estimated that the annual demand in retail market reached eight million sets. In the recent years, the electroplating has gradually become the mainstream in retail market, while the manufacturing cost in the U.S.A is higher, especially electroplating, so many auto aluminum alloy wheel

manufacturers have suffered the difficulties in operation. Many companies targeting retail market have shut up, most of which have been acquired by domestic companies. Therefore, American auto manufacturers have improved market competition advantages via global purchasing to cut off cost. The local America auto manufacturers have tended to import aluminum alloy wheel, which has provided a huge market for China's auto aluminum alloy wheel manufacturing industry.

Japan Market

Japan, the second largest auto manufacturer in the world, has a huge auto aluminum alloy wheel market, since its local auto manufacturers such as Toyota, Honda, Nissan, Mitsubishi and FUJI all have more than 10 million sets of output. However, the Japan's auto manufacturers are particularly exclusive, it is very difficult for the companies without Japan and Taiwan background to enter their accessory system. Therefore, the auto aluminum alloy wheel products from the other countries only have access to the retail market.

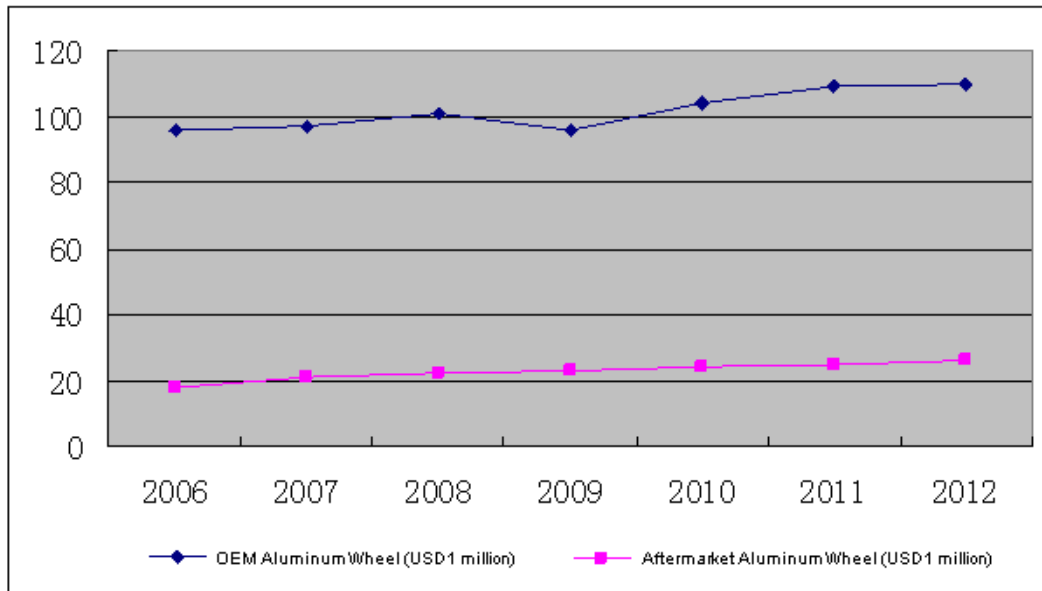
Global Aluminum Alloy Wheel Shipment, 2006-2012E



The aftermarket is for the young to pursue novelty, beauty and special. As for the young, the global economy downturn has no impact on consumption, since their consumption is extreme and irrational. Therefore, the aftermarket is stable, and with increasingly growth.

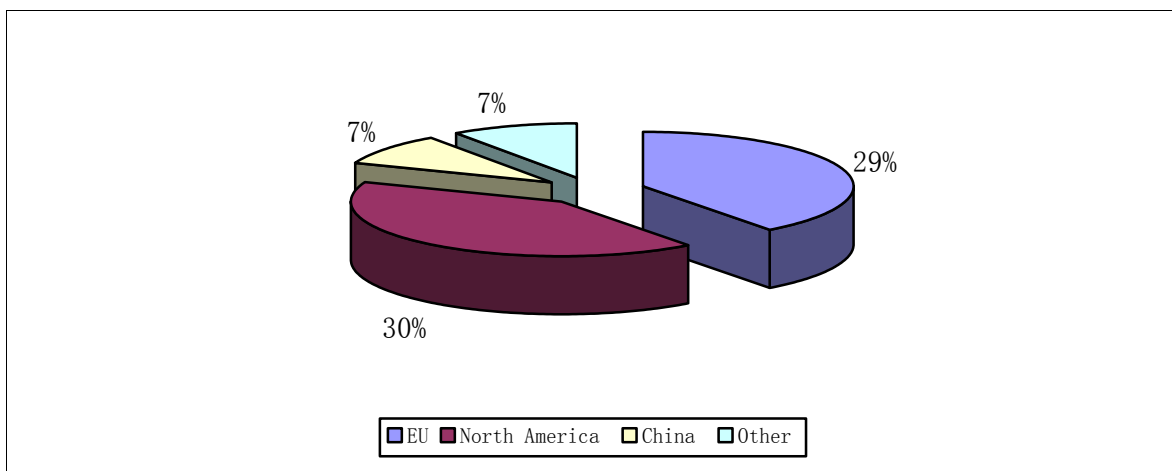
The aluminum wheel market size was about USD12.3 billion in 2008, and OEM and aftermarket respectively accounted for USD10.1 billion and USD2.2 billion.

Global Aluminum Wheel Market Size, 2006-2012E



Currently, the aftermarket is mainly targeted developed countries. The output in China was 1.5 million sets in 2008, while it was with huge growth potential. It is forecasted that it will increase 50% at least in 2009.

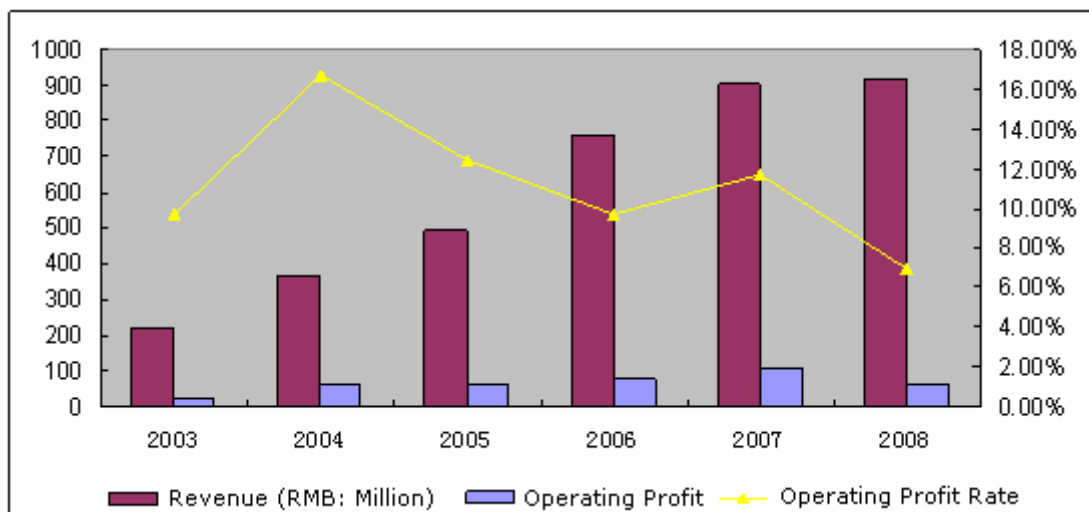
Regional Distribution of Auto Aluminum Wheel After-sales Market, 2008



7.2 Lizhong Wheel

Baoding Lizhong Wheel Manufacturing Co., Ltd. was established in June 1995, with the registered capital of RMB50 million. Its leading products are automotive aluminum alloy wheels. July 13, 2004, Singapore China Wheel Holdings Co., Ltd. changed Baoding Lizhong Wheel Manufacturing Co., Ltd. to be a wholly foreign-owned enterprise through equity acquisition, with the registered capital of RMB171.5 million. On October 19, 2005, Lizhong and Qinhuangdao Dicastal Meilv Wheel Co.,Ltd. were listed on the Main Board of SGX after reorganization. Lizhong Group has 9 subsidiaries; except Baoding Longda Aluminum Industry Co., Ltd. (Sino-Japan joint venture) and Guangdong Longda Aluminum Industry Co., Ltd. (Sino-Japan joint venture), the other subsidiaries are foreign-owned or share-holding companies. The subsidiaries are located in Baoding (Hebei), Qinhuangdao (Hebei), Zengcheng (Guangdong), Qingyuan (Guangdong), Tianjin and Chongqing. High-purity casting aluminum alloy A356 developed by Lizhong Group solely in 1993 was assessed by experts to be an ideal substitute of imported materials, and was awarded with the certificate of "National Key New Product" in China. The product has become the preferred materials of many automotive aluminum alloy wheel manufacturers in China. In the second half of 2006, Guangdong Longda Aluminum Industry Co., Ltd. started 100,000-ton project, Tianjin Lizhong Alloy Co., Ltd. set out 100,000-ton project, and Hebei Lizhong Non-ferrous Metal Co., Ltd. also began to establish 60,000-ton project.

Revenue & Operating Profit Rate of Lizhong Wheel, 2003-2008



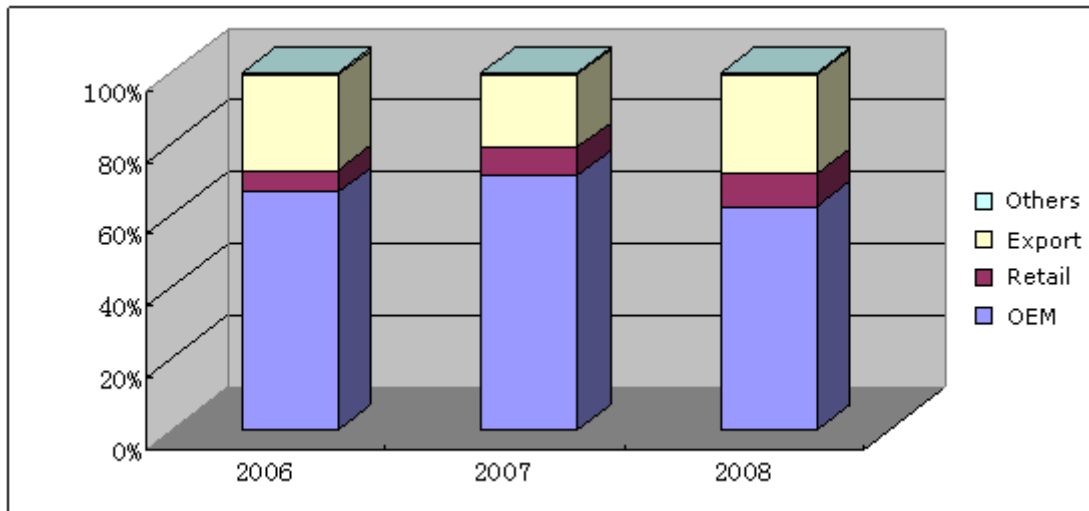
Lizhong Wheel Group was founded in Singapore on June 10, 2004. The registered address is No. 19-08, Ocean Building, Collyer Quay No.10. The group has five subsidiaries in China, namely Baoding Wheel Manufacturing Co., Ltd. (wholly-owned subsidiary), Qinhuangdao Dicastal Meilv Wheel Co., Ltd. (share-holding subsidiary), Tianjin Lizhong Wheel Manufacturing Co., Ltd. (wholly-owned subsidiary, under construction), Tianjin Dicastal Wheel Manufacturing Co., Ltd. and Inner Mongolia Lizhong Huomei Wheel Manufacturing Co., Ltd. (under construction).

Subsidiaries of Lizhong Group

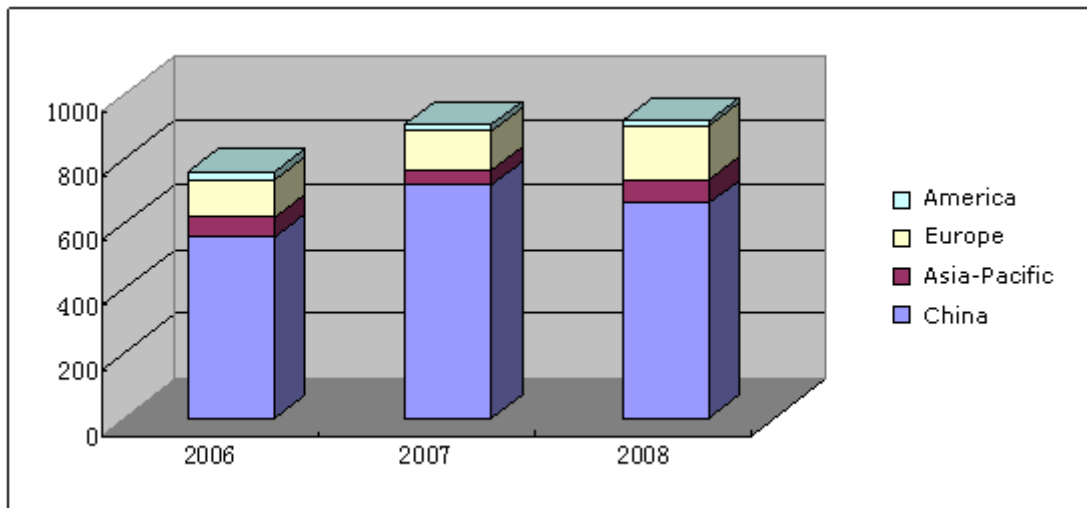


The group specializes in design, manufacture and sales of a variety of automotive aluminum alloy wheels, including more than 400 kinds of electroplating and spraying aluminum alloy wheels, with the annual production capacity of 5.6 million.

Products of Lizhong Wheel, 2006-2009

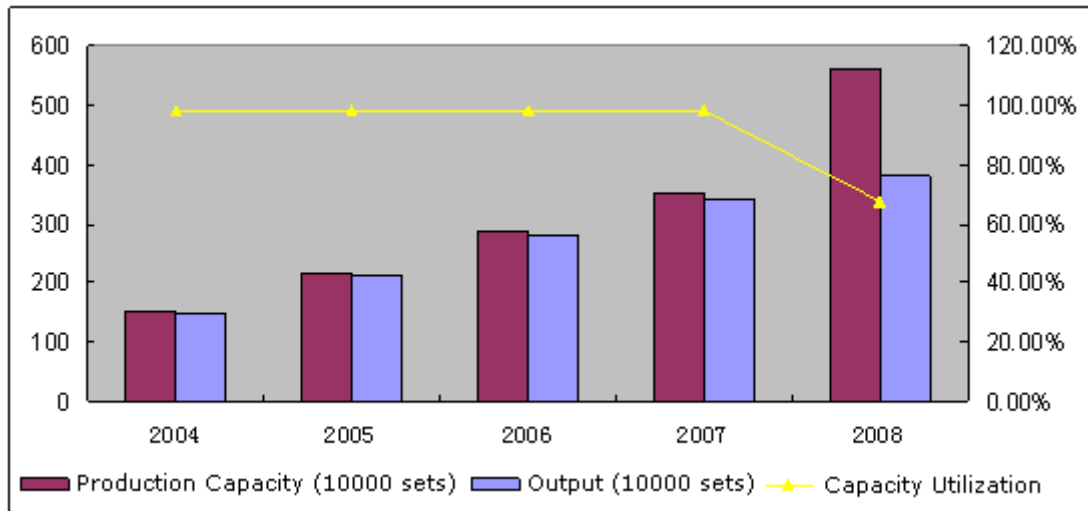


Revenue of Lizhong Wheel by Region, 2006-2009



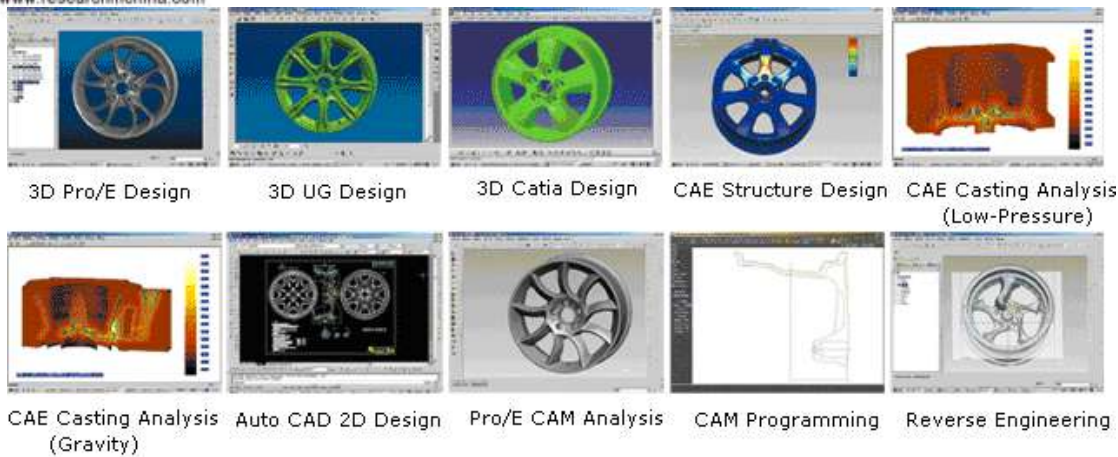
The group adopts multi-channel marketing strategy, selling products to OEM, Chinese retailers and overseas customers. In OEM marketing, the target clients are Chinese automobile manufacturers; meanwhile, it also sells products to international car manufacturers through the help of experienced wheel manufacturers and wheel suppliers. In retail market, it has 40 designated regional dealers, basically involving China; besides, it cooperates with Michelin to explore new market for its high-end products. In export, it mainly exports products to the wheel dealers in the United States, Europe, Japan and South Korea. At present, Lizhong cooperates with Tianjin FAW, Hainan Mazda, Dongfeng, Zhengzhou Nissan, Zhejiang Geely, Changfeng Liebao, Great Wall Motor, Zhongxing Automobile and so on.

Production Capacity & Capacity Utilization of Lizhong Wheel, 2004-2008



The group has an excellent R & D team, cooperating with Tsinghua University for 11 technology development projects. R & D center was recognized by the provincial government in 2005. The group is committed to the development of new types of wheels and the improvement of quality. By using CAD, CAM, CAE and Pro/E to support R & D, the group establishes a digital "paperless" system integrating R & D system with IT facilities, which benefit R & D personnel when they design, develop and produce new types of wheels. At the same time, the group has built up real-time Internet-based technology platform, which enables R & D staff to communicate with customers and develop new products with them synchronously. All of the above effectively ensure the group's technological superiority in China wheel manufacturing. Now, the group has obtained the patent for more than 60 wheel design plans in China, researches and develops over 50 types of wheels successfully each year.

Pro/E Wildfire 3.0 Development Platform includes two-dimensional and three-dimensional CAD design, CAE structure analysis and movement analysis, CAM machining simulation analysis, mold design, advanced rendering, reverse engineering; therefore, the development of new products is more efficient, and the communication with customers becomes more convenient. EXPERT casting simulation analysis software can predict the structural defects of molds and products, which makes new products launch in the market in the shortest possible time. UG and CATIA 3D design softwares let the group have the most professional 3D design softwares and 2D AUTOCAD design software in the world, building a perfect platform for communicating with all customers.



Tianjin Lizhong Wheel/ Dicastal Wheel Manufacturing Co., Ltd.

In order to further expand production capacity, Lizhong Wheel Group set up Tianjin Lizhong Wheel Co., Ltd. and Tianjin Dicastal Wheel Manufacturing Co., Ltd. in New Binhai District of Tianjin, with the total investment of RMB780 million and the registered capital of RMB260 million, covering an area of 285,000 square meters. The project is constructed by three phases. The annual output of automotive aluminum alloy wheels will reach 5 million within 3 years. After completing the project, Lizhong Wheel Group will achieve the annual production capacity of 8.6 million, becoming one of the largest automobile aluminum alloy wheel manufacturers in China.

Dicastal Meilv Wheel Co.,Ltd.

Qinhuangdao Dicastal Wheel Group and Hebei Lizhong Group set up Dicastal Meilv Wheel Co.,Ltd. jointly, of which Lizhong holds 90% shares. Dicastal Meilv Wheel Co.,Ltd. owns advanced production equipment and auxiliary facilities, such as low-pressure casting units made in Germany, ultra-precision metal mirror cutting machines made in Japan and processing center, with the annual output of 600,000 aluminum alloy wheels.

Financial Data of Qinhuangdao Dicastal Meilv, 2004-2007

	Main Business Revenue/RMB1000	Main Business Cost/RMB1000	Operating Expenses/RMB1000	Management Cost/RMB1000	Financial Cost/RMB1000	Total Profit/RMB1000	Industrial Intermediate Input/RMB1000	Employees	Export Delivery Value/RMB1000
2004									
2005									
2006									
2007									

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