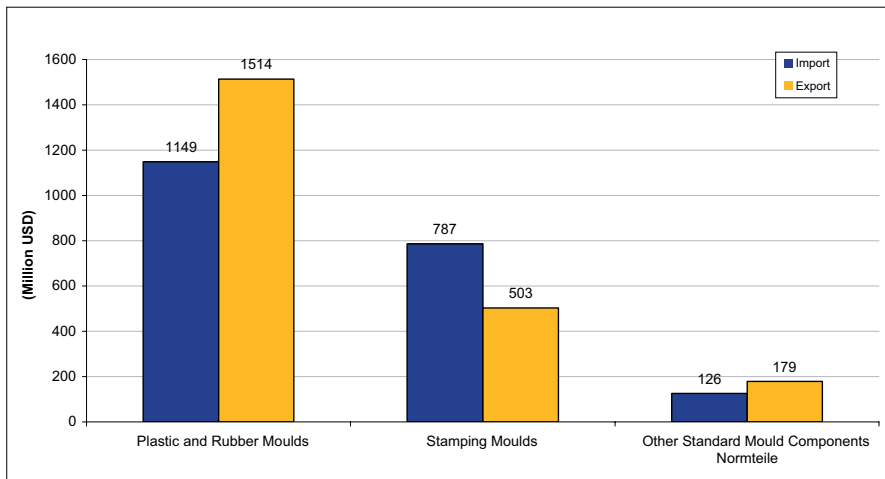
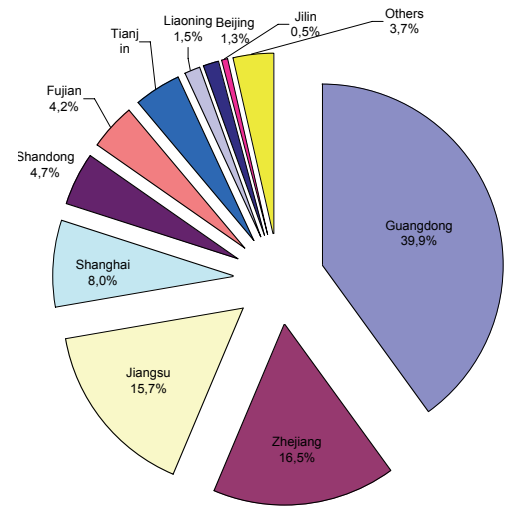


Tool and Mould Making in China: Opportunities and Risks

Procuring product-forming tools from the low-cost country can pay off, but suppliers must be selected with caution.



An import/export overview of the Chinese tool and mould making industry in 2010. Source: CDMIA.



Chinese exports of tool and mould making products in 2010 by region of origin. Source: CDMIA.

Foreign demand for Chinese-made tools and moulds, even in high-technology and emerging industries, is strong, owing to the local production advantage of very low labour and material costs. Sales in the Chinese tool and mould making industry in 2010 topped 112 billion RMB (€12 billion). Providing jobs for half a million people, this branch has developed rapidly in recent years. Growth has averaged 20% annually over the past decade.

Last year, China's tool and mould industry exported \$2.2 billion (€1.56 billion) worth of products, 19.2% more than in 2009. Most of these were plastic- and rubber-moulding tools (69%), following at 23% were stamping moulds. Stamping mould technology improved in 2010, even as tool and mould prices in China fell generally. Product quality, punctuality and delivery reliability held steady or improved, fur-

ther increasing China's competitiveness in this sector.

The China Die & Mould Industry Association (CDMIA) foresees stable industry development in 2011, along with greater demand for high-quality precision moulds. For the period 2011–2015, production valued at 250 billion RMB (€27 billion) is expected.

The Industry

Around 30,000 tool and mould making organizations operate in China. A few more than 40 have an annual production above €10.8 million, and another 200-plus exceed €3.2 million. The largest manufacturers are in the south, in Guangdong, from which 39.9% of all Chinese tool and mould products, worth \$876 million (€620 million), were exported in 2010.

The suppliers' market is fragmented and complex, and turnover per employee ranges from

€10,800 to €21,600 annually. What's worse, most Chinese companies cannot achieve Western standards. Few, therefore, can become active in the international market. Also, implementing and maintaining quality standards poses a challenge in China.

Slightly more than 100 Chinese tool and mould companies have reached an international level of competence, however. They can make so-called megamoulds (up to 120 tons), high-precision moulds, durable moulds lasting 300 to 400 million cycles, and high-speed precision stamping moulds turning out 2,500 units per minute. CDMIA refers to these as key enterprises.

Its Strengths

The Chinese tool and mould making industry provides a complete value-added chain, offering the benefits of economic integration.

Also, companies use new technologies: CAD/CAM is standard, hot runner injection moulding and multi-position progressive pressing techniques are becoming more widespread, some companies have started to use CAE, CAPP, PLM and ERP systems, and the key enterprises are already employing high-speed processing, concurrent engineering, reverse engineering, paperless production, virtual production and standardized production technologies.

The Chinese industry tends toward great structural concentration. Twenty industrial parks in the country are dedicated exclusively to tool and mould making. These have a very high production capacity. However, the level of skilled technical staff remains at only 15%. The target for 2015 is 20%.

Procurement Risks

Tool and mould companies in China also pose problems that should be taken into account. For instance, the Chinese government at all levels does not know the tool and mould making industry well, focusing on the meeting of plan targets while ignoring industry realities. This makes it harder to select suitable suppliers and cooperation partners.

The industry in China is in its infancy. Many companies are still accumulating capital and experience, and production and quality standards will have to improve before many foreign orders can be handled.

The Chinese market does not value mutual trust or the observance of contracts highly. Though not a branch-specific problem, an overriding interest in maximizing profit and competing ruthlessly for market share can mean failing to honour delivery schedules and agreed-upon quality levels for foreign orders.

Finally, the protection of intellectual property is a recognized problem in China. Extreme care is required in selecting suppliers there.

Conclusion

The development of business relationships with Chinese tool and mould makers—as suppliers or cooperation partners—entails great opportunities and enhanced risks. Indispensable to successful entry into this market, therefore, is a professional selection and validation of candidate enterprises.

This article is edited from text provided by Mingming Du, a senior consultant at Chinabrand Consulting, a German management consulting company.

» **Chinabrand Consulting**

Munich, Germany
www.chinabrand.de