## **OVERVIEW**

The Group is engaged in the manufacture and sale of HSS, HSS cutting tools and die steel. The Group has been the largest manufacturer of HSS in China by volume for six consecutive years since 2001 and was the largest exporter of HSS in China in 2005 and 2006. According to 中國特鋼企業協會(Special Steel Enterprise Association of China), in 2006, the Group produced more than twice as much HSS than its nearest Chinese competitor. According to 中國機床工具工業協會(China Machine Tool & Tool Builders' Association), in 2006, the Group was the largest HSS cutting tools manufacturer by revenue and one of the largest exporters of HSS cutting tools by revenue. Based upon the above, the Directors believe that the Group was the number one integrated HSS and HSS cutting tools manufacturer by volume in China in 2006.

HSS and die steel, the latter of which the Group began to manufacture commercially in November 2005, are each types of "special steel". Special steel differs from regular steel in that it contains less than 0.04% sulphur and is made using different combinations of metals. It therefore typically has higher pressure and temperature tolerances than regular steel and is more wear resistant. While regular steel is used widely in the construction of buildings and in infrastructure projects, special steel products are produced for more specific, commonly industrial, applications such as in automobile or machinery manufacturing. HSS is used, among other things, to produce "cutting tools", such as drill bits. While HSS and die steel are each still niche special steel products in China, the demand for, and volume of manufacture of, each in China have grown rapidly in recent years. The volume of HSS manufactured in China grew at a CAGR of 17% from 2001 to 2006, and the volume of die steel manufactured in China grew at a CAGR of 38% from 2002 to 2005, according to 中國特鋼企業協會 (Special Steel Enterprise Association of China).

In each year of the Track Record Period, the Group's HSS cutting tools business consumed over 30% of the HSS produced by the Group (by volume). This internal consumption also benefited its HSS business by allowing the Group to use the available capacity productively. In addition, certain of the scrap HSS and other waste materials generated by the Group's HSS cutting tools manufacturing process could be consumed as raw materials by its HSS business, and thereby lowering the Group's overall manufacturing costs. In this highly cost-competitive industry, the cost advantages which derived from the complementary businesses have been critical to the Group's ability to manufacture and sell certain of its HSS cutting tools profitably.

In the highly cost-competitive HSS cutting tools industry, the Group's scale, along with the fact that it is also the largest manufacturer of HSS in China and that it has in recent years invested in equipment (including grinding and lathe machines imported from the United States) and adopted a recycling-grinding production technique that allows it to recycle scrap HSS and other raw materials more efficiently, enabled the Group to manage its costs with increasing effectiveness over the Track Record Period.

The Group sells its HSS and die steel primarily domestically (mainly to tools manufacturers and die molds manufacturers, respectively, who themselves use the HSS to make cutting tools and the die steel to manufacture high performance dies), though its export sales thereof have increased over the Track Record Period. The Group manufactures its HSS cutting tools primarily for export. In 2006, 86.7% of the Group's revenue from sales of HSS was derived from sales to more than 100 domestic tools manufacturers in 14 provinces and cities whereas 81.5% of the Group's revenue from sales of its HSS cutting tools were derived from exports to over 150 international tools manufacturers and retailers in over 30 countries

around the world and 74.0% of the Group's revenue from sales of die steel were derived from sales to domestic die molds manufacturers. According to 鎮江海關駐丹陽辦事處 (Danyang Customs Office of the Zhenjiang Customs District), the Group's revenues from export of its twist drill bits in 2006 represented over 15% of the total annual revenues from all export sales of twist drill bits produced in China in that year.

The following table shows the breakdown of the Group's revenue and gross profit margin by product category, as well as a breakout of revenue by export and domestic sales, for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007.

	Yea 31 Dece	r ende		Year 31 Decer	ended mber 2		Year ende 31 December		Three months 31 March 2 (unaudite	2006	Three montl 31 March	
	RMB'000		gross profit margin %	:		gross profit margin %		gross profit margin %		gross profit margin %		gross profit margin % %
HSS	408,889	48.6	21.6	522,730	47.7	22.5	667,600 51.2	23.2	156,063 62.7	23.3	185,130 48	.2 25.0
Domestic	408,889	48.6		504,203	46.0		578,987 44.4		140,809 56.6		150,040 39	.1
Export	. —	_		18,527	1.7		88,613 6.8		15,254 6.1		35,090 9	.1
HSS cutting												
tools	433,024	51.4	14.8	564,688	51.6	13.5	579,012 44.4	15.6	87,418 35.1	16.4	149,099 38	.8 16.6
Domestic	. 91,717	10.9		104,450	9.6		107,089 8.2		16,616 6.7		24,298 6	.3
Export	. 341,307	40.5		460,238	42.0		471,923 36.2		70,802 28.4		124,801 32	.5
Die steel	. —	_	n/a	7,293	0.7	5.5	57,375 4.4	7.5	5,399 2.2	7.2	49,806 13	.0 7.2
Domestic	. —	_		7,293	0.7		42,439 3.3		5,399 2.2		15,475 4	.0
Export	. —	_		_	_		14,936 1.1				34,331 9	.0
TOTAL	841,913	100	18.1	1,094,711	100	17.8	1,303,987 100	19.2	248,880 100	20.5	384,035 10	19.4

The Group's business evolved from the TG Group, which was formed in 1984 in Jiangsu Province, where the Group's headquarters and production facilities are still currently situated. This area is a hub of the cutting tools industry in China, and is located approximately 85 km from Nanjing and 200 km from Shanghai. The Group's current production facilities have a designed annual production capacity of 35,000 tonnes of HSS, 12,000 tonnes of die steel and 380 million units of HSS cutting tools. For the year ended 31 December 2006, the Group produced approximately, 32,000 tonnes of HSS, 4,300 tonnes of die steel and 366 million units of HSS cutting tools. The Group is currently capable of manufacturing over 3,500 varieties of HSS cutting tools with diameters ranging from 1 mm to 76 mm, ten primary formulations of HSS and two grades of cold-worked and hot-worked die steel.

### **STRENGTHS**

The large size of its operations gives the Group strong purchasing power and has allowed it to develop cost-saving know how, in particular its proprietary waste material recycling production know-how, and to invest in cost-saving, imported technology and equipment

The Group has been the largest manufacturer of HSS in China by volume for six consecutive years since 2001. According to 中國特鋼企業協會 (Special Steel Enterprise Association of China), the Group produced more than twice as much HSS than its nearest Chinese competitor in 2006. According to 中國機床工具工業協會 (China Machine Tool & Tool Builders' Association), the Group was also the largest HSS cutting tools manufacturer in China by sales revenue and one of the largest exporters in China of HSS cutting tools by revenue in 2006. The Directors believe that due to the size of the Group's operations, it has purchasing power that allows it to negotiate more favorable pricing terms with its major raw materials suppliers than its domestic competitors with smaller operations.

In addition, the Group has developed proprietary production know-how allowing it to more efficiently recycle wastage materials, thereby further lowering its cost of production. As a result of its size, it is also licensed in China to import scrap steel, alloy steel and iron. Its size has further allowed it to invest in cost saving, imported technology and equipment, including equipment from the United States for the production of drill bits, screw taps and milling cutters. The Directors believe that certain of the Group's competitors in China, both HSS manufacturers and HSS tools manufacturers, have stopped manufacturing certain competing products because, as competitive price pressures increased, they were unable to continue to manufacture their products profitably, as they may not have had some or all of the same cost-saving benefits.

# Vertical integration greatly benefits its HSS tools business by lowering its HSS costs and benefits its HSS business by allowing it to use capacity productively

In each year of the Track Record Period, the Group's HSS cutting tools business consumed over 30% of the HSS produced by the Group (by volume). This vertical integration greatly benefited the Group's HSS cutting tools business because it was thereby able to acquire HSS at a price lower than it would have had to pay a third party HSS manufacturer. In this highly cost-competitive industry, this cost advantage has been critical to the Group's ability to manufacture and sell certain of its HSS cutting tools profitably. This internal consumption also benefited its HSS business by allowing the Group to use the available capacity productively. While the demand for, and volume of manufacture of, each of HSS and die steel in China has grown rapidly in recent years, HSS and die steel are each still niche special steel products in the China. The Group's current facilities have a designed annual production capacity of 35,000 tonnes of HSS and 12,000 tonnes of die steel, and for the year ended 31 December 2006, the Group produced approximately, 32,000 tonnes of HSS and 4,300 tonnes of die steel. The Group's HSS tools business has therefore been an important source of demand for the Group's HSS over the Track Record Period.

# In China, the Group is the largest HSS manufacturer and is a leading HSS cutting tools manufacturer

According to 中國特鋼企業協會 (Special Steel Enterprise Association of China), the Group has been the largest HSS manufacturer in China by volume for six consecutive years since 2001. According to 中國機床工具工業協會 (China Machine Tool & Tool Builders' Association), the Group was the largest HSS cutting tools manufacturer by revenue and one of the largest exporters of HSS cutting tools by revenue in China in 2006. The Directors believe that the Group's leading market position provides an important competitive advantage in capturing business opportunities in China because economies of scale may lead to stronger pricing power.

# Long-term relationships with leading tool manufacturers, both foreign and domestic, driven by customer service

The Group maintains long-term relationships with leading international cutting and power tools manufacturers for its HSS cutting tools business and with leading domestic tools manufacturers for its HSS business. Established relationships with these customers enable the Group to maintain a leadership position and image. The Directors believe that in addition to delivering high-quality products, the provision of quality pre-sales and post-sales customer services are keys to potentially maintaining or enhancing its leading market position, market share and/or its profitability. Regular visits, provision of technological advisory services to customers and participation in industry fair events enable the Group to better serve its

customers' needs, resolve their problems and gain insights into industry trends. From time-to-time, the Group has also co-developed products with customers before starting production, to attempt to ensure that the resultant product meets the customer's unique and specific needs.

# Established relationships with research institutes

The Group has a dedicated research and development team which develop new production processes and facilities. The Group has also formed alliances with 鋼鐵研究總院 (Central Iron and Steel Research Institute), 成都刀具中心 (Chengdu Cutting Tools Centre) and 東南大學 (Southeast University) to work with them on the Group's research and development projects, bringing the combined expertise of the Group and these institutions together. These joint efforts have already yielded significant practical improvements to the Group's production processes and facilities, a number of which have become the subject of national patents or patent applications.

## **Experienced management team**

The Group has an experienced management team with extensive operational expertise in the manufacture of special steel. In particular, each of the key management personnel of the Group has on average over 10 years of experience in this industry. The Directors believe that the management's knowledge and experience have been crucial to the success of the Group's business, and the growth of each of its HSS business and its HSS cutting tools business. The Directors also believe that the Group's management team has been able to effectively imbue its employees with the Group's teamwork-oriented corporate values, which values are important to its ongoing success and the development of its business. Mr. Zhu, the Chairman of the Company, was named as 全國優秀鄉鎮企業家 (National Township Entrepreneur) in 1998 by 國家農業部 (Ministry of Agriculture) and as 全國機械工業優秀企業家 (National Mechanical Industry Entrepreneur) in 2004 by 中國機械工業聯合會 (PRC Mechanical Industry Federation).

### **BUSINESS STRATEGIES**

# Invest to upgrade existing production facilities to enable the Group to produce higher quality, higher margin products

It is the Group's objective to continue to upgrade its HSS and HSS cutting tools production facilities. The Company intends to enhance the Group's products by: (i) improving the quality of its HSS and its HSS cutting tools by enabling it to produce higher grade, and consequently higher margin, HSS products, so that the Group will not only be the leading producer of HSS and HSS cutting tools in terms of volume, but also become the domestic and global leader in terms of quality; and (ii) allowing it to produce more, and further developing higher end and more complex, varieties of HSS and HSS cutting tools, milling cutters, screw taps and hard alloys, which are more profitable than lower end, simpler HSS cutting tools.

## Increase the Group's international and domestic market share of HSS cutting tools

The Group aims to increase its share of the worldwide market for HSS cutting tools by establishing cooperative relationships with selected international HSS tools manufacturers and retailers. International tools manufacturers already allow the Group to apply their respective brands directly onto the HSS cutting tools produced by the Group for them. The Directors expect international tools manufacturers to increasingly outsource on an OEM basis production of cutting and drilling tools.

The Group also aims to increase its share of the domestic market in China for HSS cutting tools by leveraging and building on the Tiangong "TG" brand name which is already recognised among domestic machine tools manufacturers and is officially recognised by the PRC government as a 中國馳名商標 (Chinese Famous Trademark).

# Increase export sales of HSS and die steel

In each year during the Track Record Period, the Group has increased its revenues from export sales of HSS and die steel. Due to the cost advantage which the Group currently enjoys over other overseas HSS and die steel manufacturers, and because the prices that it can charge therefor (and the profit margin thereon) are substantially higher than those on sales in China, the Group intends to increase its export sales of HSS and die steel overseas by establishing more overseas sales offices.

## Develop die steel and other, non-HSS high alloy steel products

The Group intends to continue to expand its business beyond HSS into other types of high alloy steel, in particular die steel. The Directors expect that demand in China for die steel may continue to grow, driven by growth in downstream automotive, machinery and 3C industries (ie. consumer electronics, computer and communications industries) there. In March 2007, the Group acquired the remaining 25% interest in TG Aihe, a die steel manufacturing business physically situated adjacent to the Group's headquarters in Danyang, Jiangsu Province, which began commercial operations in November 2005 from Asia HSS. The Directors intend to increase its production capacity as well as to improve the grade of die steel manufactured there.

# Further increase production capacity of HSS, HSS cutting tools and die steel, in anticipation of potential future growth in demand in China

The Group intends to further upgrade its existing manufacturing facilities, to purchase new production equipment and to adopt newer production processes to increase its production capacity for HSS, HSS cutting tools and die steel. While the Group is not currently fully utilising its existing capacity, the Directors anticipate that demand may continue to grow in China in the future. In addition, any such increased production capacity may further enhance the competitive benefits that the Group already enjoys because of the scale of its operations.

For further details and information on the Group's future plans and use of proceeds, please refer to the section headed "Future plans and use of proceeds" in this prospectus.

## BUSINESSES

The Group generates its revenue from three broad categories: the manufacture and sale of (i) HSS, (ii) HSS cutting tools and (iii) die steel.

#### **HSS**

HSS, manufactured with the metals tungsten, molybdenum, chromium and vanadium, is characterised by greater hardness, red hardness, heat resistance and durability. These attributes make HSS suited to such applications as cutting tools and in the manufacturing of high-temperature bearings, high-temperature springs, dies, internal-combustion engines and rolls.

The Group began producing HSS in 1992 initially to secure its own source of supply of HSS for its pre-existing HSS cutting tools manufacturing business. HSS is by far the largest raw material constituent in tools production and accounts for up to approximately 65% of the cost of tools production. The HSS business has since grown and in 2006, revenues from sales of HSS accounted for 51.2% of the Group's total annual revenue. For the three years ended 31 December 2006 and the three months ended 31 March 2007, the HSS business contributed approximately 48.6%, 47.7%, 51.2% and 48.2% to the Group's total revenue.

The Group currently produces ten main specifications of HSS of varying alloy compositions (which consequently determines the usage of the product):

- (a) General use HSS: W4 (W4Mo3Cr4VSi), 4241 (W4Mo2Cr4V).
- (b) High performance HSS: M42 (W2Mo9Cr4VCo8), M35 (W6Mo5Cr4V2Co5), M2AI (W6Mo5Cr4V2AI), 9341AI (W9Mo3Cr4VAI), W9 (W9Mo3Cr4V), M2 (W6Mo5Cr4V2), M7 (W2Mo9Cr4V2), W18 (W18Cr4V).

General use HSS: due to its overall performance characteristics, it is used in manufacturing various cutting tools, such as turning tools, drills, and saw blades. In general, cutting tools manufactured with general use HSS are intended for cutting relatively easy-to-cut materials.

High performance HSS: harder and more heat-resistant than general use HSS, it is usually used for cutting hard materials or in the circumstances that require high speed cutting and special grinding resistant cutting tools such as screw taps, reamers, milling cutters, hobbers, slotting cutters and breaching cutters.

The following table sets forth the breakdown of the Group's revenue derived from sales of HSS by two product categories for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007:

		Year ended 31 December										Three months ended 31 March						
		2004			2005			2006			2006			2007				
	Tonnes	RMB'000	%	Tonnes	RMB'000	%	Tonnes	RMB'000	%	Tonnes	RMB'000 (unaudited)	%	Tonnes	RMB'000	%			
General use HSS High Performance	12,031	171,320	41.9	12,735	185,462	35.5	17,380	283,922	42.5	3,785	60,564	38.8	3,482	60,473	32.7			
HSS	7,654	237,569	58.1	6,521	337,268	64.5	7,136	383,678	57.5	1,808	95,499	61.2	2,217	124,657	67.3			
Total	19,685	408,889	100	19,256	522,730	100	24,516	667,600	100	5,593	156,063	100	5,699	185,130	100			

The table below sets forth the breakdown of the revenue derived from the Group from export and, separately, domestic sales of HSS for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007:

	Year ended 31 December										Three months ended 31 March						
	2004 2005						2006		2006 2007								
		DMD:000			DMDicoc			DMDicoc			RMB'000			DMDiago			
	Tonnes	RMB'000	%	Ionnes	RMB'000	%	Ionnes	RMB'000	%	Tonnes	( ,	%	Tonnes	RMB'000	%		
Export	_	_		505	18,527	3.5	1,411	88,613	13.3	232	15,254	9.8	551	35,090	19.0		
Domestic	19,685	408,889	100	18,751	504,203	96.5	23,105	578,987	86.7	5,361	140,809	90.2	5,148	150,040	81.0		
Total	19,685	408,889	100	19,256	522,730	100	24,516	667,600	100	5,593	156,063	100	5,699	185,130	100		
			=			_			=			=			_		

#### Production facilities

The Group's production facilities for HSS occupy a building area of approximately 76,610 sq.m., housing 52 HSS production sites, in Danyang, Jiangsu Province.

Since the production processes, particularly the front-end smelting and forging processes, for HSS and die steel production are very similar, much of the production equipment is also correspondingly similar and, to a substantial extent, interchangeable.

The Group's key production equipment for HSS includes:

- Smelting: electric arc furnaces for smelting, LF ladle finery, electroslag remelting machine;
- Forging: 2,000-tonne and 1,250-tonne quick forging machines, 500-tonne precision forging machines, hammers;
- Steel rolling: continuous-rolling machines and 650-model steel rolling machines;
- Straightening: straightening and cutting machines, polishing and stripping machines;
- Horizontal wire drawing machines

In the mid- to long-term, the Group will strive to improve its production facilities in order to (i) resolve production bottlenecks and increase its production volume and (ii) enable the Group to produce higher grades of HSS or die steel, or other types of special steel products with higher margins.

The utilisation rates of the Group's HSS manufacturing facilities for each of the three years ended 31 December 2006 are summarised and set out in the following table. The estimated maximum annual output is calculated by multiplying the aggregate of the maximum output per day of each machine or production line as applicable, by the maximum of working days a year.

	Approximate output for the year	Estimated maximum output for the year	Approximate utilisation rate for the year
	(Tonnes)	(Tonnes)	
For the year ended 31 December 2004	25,283	26,000	97.2%
For the year ended 31 December 2005	32,023	35,000	91.5%
For the year ended 31 December 2006	32,122	35,000	91.8%

# **Production process**

Set out below is a simplified process map for the production of HSS:

**Smelting**: melted scrap steel and varying proportions of the metals tungsten, chromium, molybdenum and vanadium are mixed to achieve the desired proportions while removing or reducing harmful gases or impurities. The Group has an array of smelting equipment of international standards.





**Electroslag re-melting**: electroslag is used for re-melting the steel. Since electroslag re-melting refines the internal structure of the steel and substantially removes impurities, steel which has gone through electroslag re-melting is regarded as a high-end product.





**Forging:** The internal structure of the steel is reorganised in the forging process, resulting in more refined and uniform alloy compounds for use as input materials in subsequent processing.





**Rolling**: Forged steel materials are formed into a range of rods and ingots in the rolling machines. The aim is to further refine the internal structure of the steel and prepare raw materials that meet various specifications and requirements for use in making steel wires. The Group possesses a high speed continuous rolling production line and a number of other models of rolling machines.





**Deep processing and precision forming**: The forged, refined and rolled steel undergoes further processing, including cold-drawing, hot-drawing, stripping, polishing, etc. and are shaped into more precise sizes and smaller cross-sections, as a result of which, higher utilisation rates of materials, better surface quality and higher commercial value are achieved.





**Inspection and packing**: All products have to undergo and pass stringent inspections and testing before delivery and their packing are up to client's requirements and international standards. This in turn ensures customer satisfaction of the Group's products.



#### Raw materials for HSS

The key raw materials used by the Group in producing HSS are set out below.

## Special metals

China possesses among the world's largest reserves of tungsten, as well as abundant supplies of molybdenum and vanadium, which are the main special metals used in the production of HSS.

Special metals comprised approximately 74% of the Group's cost of HSS production in 2006, making it the single most significant component of the Group's cost of sales.

# Scrap steel

Scrap steel is one of the most substantial raw material constituent of the Group's HSS products in terms of quantity. The use of scrap steel in the production of HSS can reduce the cost of HSS production. Accordingly, the Group purchases scrap steel from third parties (including from its own customers who are manufacturers of HSS cutting tools) through a network of branch offices and resellers situated in areas of high HSS usage in China, including Jiangsu Province, which is a hub with the second highest concentration of manufacturers of HSS and special steel products in China. The Group also recycles waste material from its own production processes.

Further, the Group is authorised by the PRC government to import scrap steel, and the Group actively sources good quality scrap steel and grinding swarf from the international market.

All scrap steel purchased by the Group is first tested for its alloy content and prices are set accordingly by the Group with reference to, and typically at a discount to, prevailing prices for these special metals in the market. This reduces the need for the Group to procure pure alloys at higher cost. Scrap steel comprised approximately 20% of the Group's cost of production for HSS in 2006.

# **HSS Cutting Tools**

The Group began producing and selling HSS cutting tools in 1987 and it is the longest running of the Group's current businesses. For almost 20 years, the business has grown to make the Group the largest producer of HSS cutting tools by volume in the PRC in 2006. For the year ended 31 December 2006, the HSS cutting tools business accounted for 44.4% of the Group's annual sales revenue and consumed approximately 30% of the Group's HSS production output. In 2006, the Group produced approximately 366 million units of HSS cutting tools, over 80% of its sales was exported to over 30 countries and regions throughout Europe, North America, Africa and the Middle East and to some of the top international brand names in the tools industry. In 2006, the Group's revenues from export of its twist drill bits represented over 15% of China's total export of twist drill bits by value.

The Group produces an extensive range of HSS cutting tools products which can be categorised into four types — twist drill bits, screw taps, end mills and turning tools. The two main types of HSS cutting tools manufactured by the Group are twist drill bits and screw taps.

#### Twist drill bits

Twist drill bits are used mainly in electric drills to create cylindrical holes, and have a wide range of industrial (e.g. carpentry, construction, automotive, aviation) as well as general applications.

In general, twist drill bits require a certain level of technical know-how to produce and have a wide range of application. For the year ended 31 December 2006, the Group sold approximately 332 million units of twist drill bits generating RMB480 million in revenue, representing 83% of annual revenue from the Group's HSS cutting tools business.

The Group holds patents for 24 patents relating to twist drill bits which provide a substantial competitive advantage to the Group by ensuring it the exclusive right to produce those varieties of twist drill bits.

### Others

Screw taps are used to make female screw threads on the inside surfaces of drilled holes and can be widely used in the manufacturing of industrial machines and automotive parts.

Milling cutters are used in milling machines to remove material from a metal surface in order to cut and form that surface.

Turning tools are used to produce cylindrical components in a lathe, by traversing the cutting tool along two axes of motion against a rotating cylindrical piece of wooden or metallic material, to produce precise diameters and depths.

For the year ended 31 December 2006, the Group's sales of these other types of HSS cutting tools amounted in aggregate to approximately RMB99.5 million representing approximately 17% of annual revenue from the Group's HSS cutting tools business.

Based on the Group's internal recommended end-use classifications, its HSS cutting tools can be classified as being for either industrial/professional use (which are generally made using high performance HSS, such as M42, M35, W9, M2 and M7) or non-industrial/general use (which are generally made using general use HSS, such as W4 and 4241). The table below sets out the split of the Group's HSS cutting tools between industrial/professional use and non-industrial/general use, for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007:

Year ended 31 December

Industrial/ professional use	
Non-industrial/ general use	

	2004			2005			2006			2006			2007	
000' units	RMB'000	%	000' units	RMB'000	%	000' units	RMB'000	%	000' units	RMB'000 (unaudited)	%	000' units	RMB'000	%
116,854	209,931	48.5	188,893	354,585	62.8	219,221	452,676	78.2	28,731	60,355	69.0	42,666	121,005	81.2
189,062	223,093	51.5	169,411	210,103	37.2	148,954	126,336	21.8	26,806	27,063	31.0	34,241	28,094	18.8
305,916	433,024	100	358,304	564,688	100	368,175	579,012	100	55,537	87,418	100	76,907	149,099	100

Three months ended 31 March

The table below sets out the turnover with export/domestic sales split of the Group's HSS cutting tools for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007:

		Ye	ear ended 31	Three m	nonths ended 31 March					
	2004		2005		2006		2006		2007	'
	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000 (unaudited)	%	RMB'000	%
Export	341,307	78.8	460,238	81.5	471,923	81.5	70,802	81.0	124,801	83.7
Domestic	91,717	21.2	104,450	18.5	107,089	18.5	16,616	19.0	24,298	16.3
Total	433,024	100	564,688	100	579,012	100	87,418	100	149,099	100

The main cutting tools that the Group produces, that is, twist drill bits, which accounts for over 80% of the Group's cutting tools revenue in 2006, can, in general, by the production craftsmanship involved in the production process, be categorised into three groups, namely rolling drills, grinding drills and milling drills. The main difference between these three types is that the helix grooves of each of them differ from one another. According to 中國機械工業金屬切削刀具技術協會 (Federation of Metal Cutting Technology of the PRC Mechanical Industry), the production process used to produce grinding drills and milling drills would produce drill bits for industrial use whereas the production process used to produce rolling drills would produce drill bits generally for general non-industrial use.

#### Production facilities

The Group's production facilities for its HSS cutting tools business occupy a building area of approximately 49,146.28 sq.m., housing 39 sites on the same piece of land as its HSS and die steel production facilities, reducing transition time, transportation cost and risk, and storage requirements between HSS output and HSS tools production.

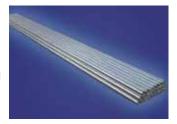
In 2006, the Group's utilisation rate for its HSS cutting tools manufacturing facilities was approximately 95%. Some of these machines are imported from the US, Germany and Japan which are used for the production of high-end twist drill bits and screw taps.

In the mid- to long-term, the Group will strive to improve its production facilities in order to (i) increase production volume and (ii) produce more HSS cutting tools with its greater complexity and higher quality using higher grades of HSS or die steel or other types of special steel, to enable the Group to manufacture higher margin products.

# Production processes

The production processes used by the Company to produce HSS cutting tools can vary significantly between each product type and specification. However, in general they include the following key steps:

Preparation and blanking: Collecting relevant materials according to product standards, material types, specifications and volume as required by orders. Large size materials are cut into segments using punching and cutting machines for further processing.



Packaging: Qualified twist drills then undergo anti-rust treatment and are packed with appropriate packaging materials for delivery to customers.



**Grinding**: Rough processing of materials using centerless grinding beds to smoothen their working surface and remove excess material.



Testing of finished products:
Complete testing of the geometric dimensions and usage capabilities of the processed and finished twist drills to ensure that they meet the standards for qualification

certificates.



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Materials are put into a high-temperature salt bath to achieve a specific degree of hardness through internal structural modification.

Heat treatment:



Surface treatment: Surface enhancement of the finished twist drills to increase their abrasive resistance and improve their outer appearance, generally by ways of surface reorientation and

nitrocarburisation.



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Slot, surface and edge grinding: Using automatic PC equipment to power grind and cut the slots, surfaces and edges of twist drills, forming the required geometric shapes.



Polishing: Using centerless grinding beds to process the surface of twist drills so as to achieve the required dimensions and sizes.



The Group's production processes allow the Group to produce a range of HSS cutting tools such as twist drill bits and screw taps, measuring in diameters ranging from 1 mm to 76 mm and weighing from less than 0.1g to over 10kg. The Group is also capable of producing custom-made products for its larger customers.

The Group is currently equipped with nine production lines, of which eight are dedicated to twist drill bits and one dedicated to screw taps, and the Group plans to invest approximately RMB350.0 million of the proceeds from the Global Offering to purchase, install and implement various production equipment which are designated for production of HSS, HSS cutting tools and die steel products of larger specification and higher grade.

For further details and information on the Group's future plans and use of proceeds, please refer to the section headed "Future plans and use of proceeds" in this prospectus.

The utilisation rates of the Group's HSS cutting tools manufacturing facilities for the three years ended 31 December 2006 are summarised and set out in the following table. The estimated maximum annual output is calculated by multiplying the aggregate of the number of production equipment by its maximum output per day and the maximum of working days a year.

	Approximate output for the year	Estimated maximum output for the year	Approximate utilisation rate for the year
	(000' units)	(000' units)	
For the year ended 31 December 2004	272,354	286,000	95.2%
For the year ended 31 December 2005	319,748	344,000	93.0%
For the year ended 31 December 2006	366,245	380,000	96.4%

#### Raw materials

The Group supplies all of the HSS required for the production of its HSS cutting tools internally. For the year ended 31 December 2006, the HSS cutting tools business consumed approximately 9,700 tonnes of HSS. Since HSS cutting tools production only consumes approximately 30% of the Group's HSS output, the Group does not need to rely on external suppliers of HSS.

### Die Steel

Die steel is another type of high alloy special steel manufactured using a production process similar to that used to manufacture HSS. It is suitable for use in dies and molds for die casting and machining processes.

The production of die steel is a relatively new business of the Group. The Group began producing die steel in November 2005. For the years ended 31 December 2004, 2005 and 2006, and the three months ended 31 March 2007, revenue from sales of die steel contributed nil, 0.7%, 4.4% and 13.0% to the Group's total revenue, respectively.

The Group's current die steel business is carried on through TG Tools and TG Aihe. TG Aihe began as a joint venture between TG Group and a French company Erasteel, one of the largest producers of HSS in the world. The Group has acquired full control of TG Aihe as of March 2007 and has made significant investments in its operations and capital.

Currently, the Group manufactures high-end die steel products such as H13 hot-worked die steel and D2 cold-worked die steel. Cold-worked die steel is mainly used to manufacture cold-forming dies, such as cold-punching dies, cold-pressing dies, cold and deep drawing dies, cold extrusion dies, imprinting dies, cold-heading dies, thread-pressing dies, and powder-pressing dies.

Hot-worked die steel is mainly used to manufacture hot-forming dies, such as hot-forging dies, hot-extrusion dies, and hot-heading dies.

The table below sets forth the turnover that the Group derived from sales of die steel broken down between export and domestic sales thereof for the three years ended 31 December 2006 and the three months ended 31 March 2006 and 2007:

	Year ended 31 December										Three mon	ths e	nded 31 N	larch	larch							
	2004 2005					2006		2006				2007										
	Tonnes	RMB'000	<u></u> %	Tonnes	RMB'000	<u></u> %	Tonnes	RMB'000	<u></u> %	Tonnes	RMB'000 (unaudited)	<u></u> %	Tonnes	RMB'000	%							
Export	_	_	_	_	_	_	659	14,936	26.0	_	. – ,	_	1,466	34,331	68.9							
Domestic	_	_	_	301	7,293	100	1,933	42,439	74.0	251	5,399	100	706	15,475	31.1							
Total			_	301	7,293	100	2,592	57,375	100	251	5,399	100	2,172	49,806	100							

Note: Since the Group only began producing die steel in October 2005, no figures for the year ended 31 December 2004 is presented and the figures for the year ended 31 December 2005 reflect only approximately two months' production.

### **Production facilities**

The Group's production facilities for die steel are situated on the TG Aihe site occupying a building area of approximately 63,280 sq.m., housing five die steel production factories, located immediately adjacent to the HSS production facilities site.

Since the production processes, particularly the front-end smelting and forging processes, for HSS and die steel production are very similar, much of the production equipment is also correspondingly similar and, to a substantial extent, interchangeable. For details regarding the production equipment used for manufacturing die steel, please refer to the sub-paragraph headed "Production facilities" above under the paragraph headed "HSS" of this section for further details.

The utilisation rates of the Group's die steel manufacturing facilities for each of the three years ended 31 December 2006 are summarised and set out in the following table.

# Die steel manufacturing facilities

	Approximate output for the year	Estimated maximum output for the year	Approximate utilisation rate for the year
	(Tonnes)	(Tonnes)	
For the year ended 31 December 2004	_	_	_
For the year ended 31 December 2005	618	2,000	30.9%
For the year ended 31 December 2006	4,321	12,000	36.0%

Note: the results of TG Aihe have been consolidated into the Group's results since 20 November 2005 and the manufacturing facilities of TG Aihe are therefore included in the above calculation from such date onwards.

# **Production process**

The production processes used by the Company to produce HSS and die steel remain largely similar across all of the various product types and specifications. The main differences derive from the varying compositions (of tungsten, chromium, molybdenum and vanadium), temperature parameters and the rate of heating and cooling at various stages of production.

For details regarding the process map for the production of die steel, please refer to the sub-paragraph headed "Production Process" above under the paragraph headed "HSS" of this section for further details.

#### Raw materials for die steel

Input raw materials are fundamentally the same for the production of both HSS and die steel, the differentiating factor being different proportions of those raw materials used in the manufacturing process.

## Special metals

In 2006, special metals comprised approximately 60% of the Group's cost of die steel production, making special metals the single most significant component of the Group's cost of sales. For details regarding the other raw materials used for the production of die steel, which is very much similar to HSS, please refer to the sub-paragraph headed "Raw materials for HSS" above under the paragraph headed "HSS" of this section for further details.

### Fuel and utilities

## Coal, electricity and water

The Group uses coal and electricity for annealing furnaces. The Group incurred RMB70.4 million, RMB81.2 million, RMB104.8 million and RMB23.0 million on coal, electricity and water, representing 10.2%, 9.0%, 9.9% and 7.4% of its total cost of sales, respectively for the three years ended 31 December 2006 and the three months ended 31 March 2007. The Group sources its coal from five independent coal suppliers through a tendering process and sources its electricity from 江蘇省電力公司丹陽供電公司 (Jiangsu Power Danyang Electricity Company), an independent third party which has been supplying electricity to the Group for over 20 years.

The Group schedules its most electricity-intensive processes (such as electric arc furnace smelting) at night time to take advantage of concessionary off-peak rates, representing a cost saving of up to 74% compared to peak daytime rates. Over the last 20 years, the Group has not suffered any electricity shortages that adversely affected its production.

To further reduce electricity costs, the Group has invested in a 110,000 voltage transforming electrical substation. This allows the Group to purchase and process wholesale electricity from the national power grid at cheaper rates than retail electricity from the local municipal power supplier.

The Group currently sources its drinking water supply from 丹陽後巷自來水廠 (Danyang Houxiang Waterworks) which has been supplying water to the Group for 15 years.

The Group also sources deep-well water and water from a stream system on the Group's property for cooling high temperature production equipment and facilities, which the Group recycles and reuses.

# Suppliers

Total purchases from the top five suppliers for the Group's combined operations amounted to RMB136.9 million, RMB352.9 million, RMB471.3 million and RMB105.5 million, representing approximately 27.7%, 29.6%, 56.0% and 39.8%, respectively of its total purchases for the three years ended 31 December 2006 and the three months ended 31 March 2007. Total purchases from the Group's largest supplier amounted to RMB70.0 million, RMB200.2 million, RMB165.6 million and RMB36.7 million, representing approximately 14.2%, 16.8%, 19.7% and 13.8%, respectively of the Group's total purchases for the three years ended 31 December 2006 and the three months ended 31 March 2007.

None of the Directors, their respective associates and, so far as the Directors are aware, any Shareholder who owns more than 5% of the Shares in issue immediately following completion of the Global Offering and the Capitalisation Issue (without taking into account any Shares which may fall to be issued upon exercise of the Over-allotment Option and any options that may be granted under the Share Option Scheme), has any interests in any of the five largest suppliers of the Group in the Track Record Period.

## **SALES AND MARKETING**

#### Overview

The majority of the Group's HSS and die steel is sold in the PRC domestic market, while the majority of the Group's HSS cutting tools are exported. The Group aims to increase its sales of HSS and die steel internationally.

The Group utilises a mix of two channels to sell its HSS and die steel in the PRC domestic market: direct sales and through resellers.

#### **Customers**

The main customers of the Group's HSS are predominantly domestic HSS cutting tools manufacturers in the main HSS hubs of Harbin, Chongqing, Guiyang, Shanghai, Zhejiang and in Hou Xiang district in Danyang, which is where the two largest PRC cutting and drilling tool makers, one of which is the Group, are located. The Group's HSS accounted for almost 45% of the total HSS market in the PRC by volume in 2006. For the three years ended 31 December 2006 and the three months ended 31 March 2007, sales attributable to the Group's top five customers amounted to RMB156.6 million, RMB206.2 million, RMB212.4 million and RMB68.0 million, representing 18.6%, 18.8%, 16.3% and 17.7%, respectively, of the Group's total revenue and sales attributable to the Group's largest customer amounted to RMB54.2 million, RMB78.4 million, RMB76.1 million and RMB19.5 million, representing 6.4%, 7.2%, 5.8% and 5.1%, respectively, of the Group's total revenue for the same period. None of the Directors, their associates and, so far as the Directors are aware, any Shareholder who owns more than 5% of the Shares in issue immediately following completion of the Global Offering and the Capitalisation Issue (without taking into account any Shares which may fall to be issued upon exercise of the Over-allotment Option and any options that may be granted under the Share Option Scheme), has any interests in any of the five largest customers of the Group in the Track Record Period.

The Group also exports its high performance HSS to leading tools manufacturers and retailers in Germany, Korea, India and Taiwan. According to 中國特鋼企業協會 (Special Steel

Enterprise Association of China), the Group was the largest exporter of HSS in China in terms of volume in 2006.

The Group's HSS cutting tools products are produced for three main markets: (i) OEM products for export to international tools manufacturers (ii) outsourced manufacturing for leading tools retailers; and (iii) "TG" branded products for sale domestically and internationally, particularly in the US and Canada. It is one of the Group's aims to extend the international market penetration with "TG" branded tools products by leveraging its existing relationships with its foreign customers.

In response to the PRC government's announcement of the impending further reduction of export tax rebates as of 1 July 2007, the Company intends to pass on to its overseas customers as much of the resultant increased costs as possible, given market conditions and other considerations. Toward that end, the Group has already received written confirmations from certain of its overseas customers who purchase its HSS cutting tools that they have agreed to an 8% price increase for orders after 1 July 2007, to reflect the corresponding cut in export tax rebates on those products.

Over the Track Record Period, the Group sold the majority of its die steel domestically. The Group has also cross-sold die steel to some of its existing HSS customers in Germany. The Group aims to expand its domestic sales through additional promotional efforts and engaging sales agents in order to build up a distribution network. The Group also intends to utilise its existing HSS export sales network to develop the export market for its die steel products.

## Sales channels

## HSS cutting tools

In 2006, the Group exported approximately 80% of its HSS cutting tools products to over 30 countries and regions. The Group sells such products either directly through the Group's headquarters or through independent domestic resellers, which have distributed the Group's products for approximately two years into the North American market.

The remaining approximately 20% of the Group's HSS cutting tools was sold domestically through a combination of direct sales and through the Group's resellers.

# HSS and die steel

The Group sells its HSS and die steel products through two channels:

- (a) Direct sales through the Group's corporate headquarters in Danyang and retailing and customer service branches in Guiyang, Chongqing and Harbin. The Group's headquarters is responsible for all exported products and major customers.
- (b) Independent resellers the Group also sells its products at a special discount to three independent resellers in Shanghai, Xian and Zhejiang.

# Marketing and customer service

The Group undertakes a number of marketing initiatives including annual budget review meetings and regular follow-ups with major customers, hosting and participating in annual

domestic conferences in relation to special steel, attending other conferences and annual trade shows in China, the U.S., Germany, the United Arab Emirates and Russia. The Group's regional branch managers also liaise regularly with customers in their respective localities to gauge market trends.

In addition, the Group also promotes customer confidence and loyalty by offering preand post-sale services, including educating its customers as to the specifications and technical characteristics of its products, providing certificates of quality and sending support personnel to assist with heat treatment requirements of its steels.

#### Credit terms

In order to maintain the Group's long term relationships with its customers, the Group selectively offers certain customers credit terms of within 150 days. For the year ended 31 December 2006, revenue from sales to customers to whom the Group offered credit terms of 150 days was RMB10.1 million or 0.8% of the Group's total annual revenue for that year. The Directors are of the view that such credit period is normal to the Group's industry in China.

All of the Group's domestic orders are settled in RMB, while its exports are settled in US dollars and Euros, generally by telegraphic transfers or letters of credit. Receivables are closely monitored and followed by the finance department. Provision for doubtful debts is made when collection of the full amount is no longer probable. Bad debts are written off as incurred.

# **Pricing policy**

The Group's HSS cutting tools pricing is determined by the Group's finance department and is set on a cost-plus-margin basis, taking into account a comprehensive range of factors including production overheads and costs, taxation, market trends and economic indicators.

The Group prices its HSS and die steel products primarily in accordance with the price movements of the special input metals for HSS and die steel production. Other factors influencing its pricing include market prices and demand according to product grade, quality and geography- and industry-driven economic factors.

Once an order is received, the Group's sales and marketing department refers it to the finance department which determines the appropriate prices for that order in accordance with the above criteria.

# **Inventory management**

The Group carries out physical stock-takes and performs inventory aging analyses each month to identify slow moving stocks and makes proper provision accordingly. The Group has set up a special team to monitor inventory movement. In scheduling the Group's production plan, the Group takes into account sale orders on hand, production capacity and closing inventories. The provision for inventory of the Group for the three years ended 31 December 2006 and the three months ended 31 March 2007 were RMB102,000, RMB318,000, RMB980,000 and RMB1,106,000, respectively, which were made mainly for the slow moving finished goods of the Group. Being an integrated HSS and HSS cutting tools manufacturer, the Directors consider that it is necessary for the Group to reserve a certain level of inventory on hand ready for immediate delivery in order to meet customers' rush orders and are of the view that the inventory level as at 31 March 2007 was reasonable and at a normal level.

In view of the importance and volatility of the principal raw material costs, the Group has set up a special team to closely monitor changes in principal raw material costs. When negotiating selling prices with its customers, the Group takes into account, amongst other things, the fluctuation in prices of principal raw materials. During the Track Record Period, the cost of principal raw materials had been volatile; however, the gross margin of the Group for the three years ended 31 December 2006 and the three months ended 31 March 2007, being 18.1%, 17.8%, 19.2% and 19.4% respectively, were kept relatively stable during the same period. The Directors believe that the Group has the ability to mitigate the impact from fluctuations in the cost of the principal raw materials through (i) the ability to pass on part of the increases to its customers due to its high bargaining power by virtue of being the largest integrated HSS and HSS cutting tools manufacturer in the PRC and the high quality and price competitiveness of its products; (ii) improvements in its production efficiency; and (iii) enjoying the benefits of economies of scale. With an experienced management team, comprising key management personnel each of whom has on average of over 10 years of experience in this industry, the Directors believe that the Group is able to manage fluctuations in the cost of the principal raw materials in order to maintain a stable gross margin in the future. Based on projections from industry reports in respect of the future prices of the principal raw materials, the existing export policies on the principal raw materials and current domestic demand and supply situation, the Directors believe that the prices of the principal raw materials will not fluctuate significantly for the period from the date of this prospectus to 31 December 2007. The Directors confirm that the Group did not build up an inventory level in order to lock in profits for the purpose of making the profit forecast in relation to the Listing.

## Delivery

The Group predominantly delivers its products by rail, road and sea freight in accordance with the particulars of each purchase order. The Group takes out insurance coverage for delivery risk on behalf of its customers. The Group is responsible for paying the premiums.

### RESEARCH AND DEVELOPMENT

Continuous refinement of existing, and development of new, processes and products to suit market trends are critical to maintaining the Group's competitiveness. For the three years ended 31 December 2006 and the three months ended 31 March 2007, the Group expended RMB0.6 million, RMB0.3 million, RMB2.9 million and nil respectively on research and development, representing less than one percent of its total revenue for those respective periods.

The Group's HSS, HSS cutting tools and die steel businesses are serviced by the Group's research and development team of 26 specialist researchers. Most of these researchers have completed specialist training in either engineering, mechanics, physics or smelting and have, on average, engaged in research and development for more than 15 years. They undertake a variety of research and development tasks, including inspection of defective products, formulation of improvements to the production process and product quality, development of new production technologies and product types, and conducting focus group tests. This team is complemented by the services of external experts and research teams from 東南大學 (Southeast University) and 鋼鐵研究總院 (Central Iron & Steel Research Institute), made available to the Group under alliances with those institutions. The Group's research and is also equipped with advanced inverted microscopes stereomicroscopes which meet EN standards EN61010-1, EN14971, EN61326, EN61000-3-2, EN61000-3-3 and EN55011, EN50082-2, EN61010-1, respectively, and other advanced testing and analysis equipment.

One of the recent successes of the research and development team has been the development and implementation project of a horizontal continuous casting process for high quality rare earth HSS. The Group was the first enterprise in China to use the horizontal continuous casting technique, in substitution for die casting, for the production of HSS electrode billets. This results in higher alloy steel yield rates being achieved and HSS quality being improved while energy consumption is reduced. The successful implementation of the project brings significant improvement to the production technique of HSS and reduces the production costs of HSS, which enhances the competitiveness of the manufacturer. Also, the technique more fully leverages the special alloy and rare earth metals resources in China to achieve higher enterprise competitiveness. The Group was selected as a Special Funds Project of Key Technology Results Transformation of Jiangsu Province and received subsidy from 江蘇省科學技術廳 (Jiangsu Science and Technology Department) in the amount of RMB 20 million in 2006.

The Group emphasises on the collaboration between its production, training and research functions. As such, it has established cooperative relationships with 東南大學 (Southeast University), 鋼鐵研究總院 (Central Iron & Steel Research Institute), 南京理工大學 (Nanjing University of Science and Technology) and 江蘇大學 (Jiangsu University).

# 東南大學 (Southeast University)

Since March 2004, the Group had set up the 江蘇省高速鋼及工具工程技術研究中心 (Jiangsu HSS and Tools Research Centre) with 東南大學 (Southeast University), which conducts research on HSS and cutting tools. The center shares the equipment and know-how of 東南大學 (Southeast University) to develop new products and provides training to encourage those individuals who may be interested in this industry.

In May 2005, the Group had also joined the research and development of key technologies R&D program of Jiangsu Province during the 10th Five-Year Plan with 東南大學 (Southeast University), namely the "R&D of technologies related to super hard HSS with high purity and quality rare earth and their industrialisation", (BE2003040). The Group invested approximately RMB 2.1 million into this project. The project was completed in December 2006 and the intellectual property rights of this project are jointly owned by the Group and Southeast University. The results of this project has enabled the Group to develop higher quality HSS products.

## 鋼鐵研究總院 (Central Iron & Steel Research Institute)

Since March 2003, the Group had also jointly set up a HSS research centre with 鋼鐵研究總院 (Central Iron & Steel Research Institute) which conducts research and develops new production technologies in relation to HSS. The funding of the research mainly comes from funds raised by the centre itself and partly subsidised by 江蘇省科學技術廳 (Jiangsu Science and Technology Institute). In addition, the Group invested RMB 1.7 million in this project. One of its recent achievements was the "horizontal continuous casting technologies of HSS" the intellectual property rights of which are jointly owned by the Group and the Central Iron & Steel Research Institute. The result of this project has helped resolve practical difficulties and problems relating to the Group's HSS production techniques.

## 南京理工大學 (Nanjing University of Science and Technology)

In March 2004, the Group entered into a cooperative agreement with 南京理工大學 (Nanjing University of Science and Technology) for a research project titled "High quality rare earth

HSS and its industrialisation". According to the agreement, 70% of the costs incurred were to be borne by the Group with the remaining 30% to be borne by 南京理工大學 (Nanjing University of Science and Technology). The intellectual property rights of this project are jointly owned by the Group and the Nanjing University of Science and Technology. Up to the Latest Practicable Date, no research and development results have yet materialised from, nor has the Group injected any research and development funding into, this co-operation.

# 江蘇大學 (Jiangsu University)

In order to improve the production efficiency and quality of the Group's cutting tools, the Group also entered into a cooperative agreement with 江蘇大學 (Jiangsu University) in January 2006. The aim was to conduct research and produce high quality cutting tools at lower cost. The intellectual property rights derived therefrom are to be jointly owned by the Group and Jiangsu University. Up to the Latest Practicable Date, no research and development results have yet materialised from, nor has the Group injected any research and development funding into, this co-operation.

The above cooperative relationships facilitate the resolution of practical problems that the Group encounters during the production of HSS and HSS cutting tools, as well as the building up of a pool of personnel with relevant skills. These relationships have led to the Group's research and development achievements, as exemplified by the "horizontal continuous casting technologies of HSS" and "new PID automatic remelting of HSS with rare earth content". The Group and 鋼鐵研究總院 (Central Iron & Steel Research Institute), joint owners of the intellectual property rights of these two projects, intend to apply for patents registration in respect of the projects.

### QUALITY CONTROL

The Group has implemented a quality control system in accordance with the ISO9001:2000 certification standard covering the design and production of HSS and HSS cutting tools.

The Group examines the raw materials upon their arrival by taking samples for laboratory testing for chemical content to ensure their quality meets the specifications of its products. During the production process, physical and chemical analyses on the semi-finished products of each stage of production are done from time to time to attempt to ensure that their cracking condition, hardness, and chemical composition meet with international, PRC and customer-prescribed quality standards before delivery to the Group's customers. The Group has also devised a specific quality control manual for each particular type of its HSS and die steel products to ensure consistently stable quality. Each particular manual sets out details such as the desirable ratios for mixture of chemicals to satisfy the Group's customers' needs for that product.

The Group has acquired a number of technologically advanced production equipment including instruments and equipment imported from Germany, Japan, Austria and the United States to enhance its product quality. The Group has also retained approximately 20 experts specialised in steel manufacturing as its consultants on product quality.

## **EMPLOYEES AND EMPLOYEE BENEFITS**

The Group had 4,989 employees as at 31 March 2007, of whom 496 were management and administration personnel. In order to improve the Group's productivity and further enhance

the quality of the Group's workforce, the Group has implemented mandatory continuing education and training programs conducted on a monthly basis for all its staff. For positions which require special skills and professional qualifications, the Group requires the relevant employees to attend special training and review sessions. For newly recruited employees, they are required to attend an induction course, with topics including the Group's production flow, disciplinary training, working schedule and production safety. Every member of the Group's senior management is also required to undergo regular training to make sure that they are kept abreast of the latest technological developments in the steel industry, the industry trends and management skills.

As at 31 March 2007, the Group's employees as categorised by department are as follows:

Department	Total
Management and administration	496
Production	4,239
Sourcing of raw materials and equipment	12
Sales and Marketing	69
Finance and accounting	37
Quality Control	82
Research and Development	26
Transport	28
	<u>4,989</u>

For the three year ended 31 December 2006 and the three months ended 31 March 2007, the Group incurred staff costs of RMB66.5 million, RMB72.5 million, RMB75.9 million and RMB21.7 million respectively, representing 8%, 7%, 6% and 6% respectively of the Group's turnover.

Each of the Group's employees receives a basic salary. The Group enters into individual employment contracts with its employees to cover matters such as wages, employee benefits and safety at the workplace and grounds for termination.

Under the relevant PRC national labour laws and regulations, business enterprises in China are required to provide social insurance (namely, medical, unemployment, pension, employment-related injury and maternity insurance) and housing funds to all of their employees. According to the implementation policies of the local governments in Danyang, business enterprises are only required to provide social insurance to employees who are locally registered residents or graduates from full-time secondary school or university undergraduates or postgraduates, or who have been working for the business enterprise for over three years. In addition, the local authority allows the Group not to participate in the contribution of housing funds.

The Group has complied with all applicable local and national requirements and regulations in the PRC on social insurance and housing fund during the Track Record Period and has made all necessary contributions according to such policies. As a law-abiding enterprise, the Group will comply with both the local and national requirements as to social insurance and housing funds applicable to the Group as and when required. Nevertheless, an indemnity has been provided by the Controlling Shareholders that in the event there is any retrospective change in the local and national implementation policies resulting in any loss to be suffered by the Group for any violation of the requirements on social insurance prior to the Listing, the Controlling Shareholders will keep the Company fully indemnified.

Pursuant to the Reply from the People's Government of Danyang regarding the Implementation of Measures on Social Insurance and Housing Fund by Tiangong Tools [Dan Zhen Fu (2007) No. 1 (<<丹陽市人民政府關於天工工具執行社會保險及住房公積金政策的覆函>> [丹政覆(2007)1號]), the Group has contributed to the pension contribution plan, work-related injury insurance plan, medical insurance plan, unemployment insurance plan and maternity insurance plan for its employees. Based on the confirmations issued by 丹陽市勞動和社會保障局 (Danyang Labour and Social Security Bureau), 丹陽市地方税務局 (Danyang Local Taxation Bureau), 丹陽市醫療保險管理中心 (Danyang Medical Insurance Management Centre), 鎮江市勞動和社會保障局 (Zhenjiang Labour and Social Security Bureau) and 江蘇省勞動和社會保障廳 (Jiangsu Labour and Social Security Department), the Company's subsidiaries established in the PRC have fully complied with the social security registration for employees and have made full payment in accordance with the regulations of Danyang City. As a result, the Group does not expect to be requested to pay any additional social security contribution, or be subject to any administration enquiry or penalised for any non-payment.

## INTELLECTUAL PROPERTY

The Group has obtained approximately 24 patents for its products and is also making additional patent applications in the PRC. The Group also uses a number of trademarks and trade names in connection with its business, namely in categories six, seven, nine and thirteen, which the Group has registered as trade marks in the PRC. Please refer to the section headed "Statutory and General Information" in Appendix VI to this prospectus for details of the Group's registered trademarks and patents.

## COMPETITION

In respect of its HSS and die steel businesses, the Group competes mainly with domestic Chinese HSS suppliers. Domestic HSS manufacturing is oligopolistic, with the top three HSS manufacturers accounting for more than 77.1% of domestic sales and output in 2006, of which the Group and the second largest player accounted for approximately 44.7% and 21.7% respectively. The Directors believe that the Group has a broader product range with more consistent and better product quality when compared with the other domestic suppliers.

In respect of its HSS cutting tools business, the Group faces competition from both domestic Chinese and international manufacturers. However, China is a major beneficiary from a global outsourcing trend due its rich resources in raw materials and low manufacturing overhead. According to 中國機床工具工業協會 (China Machine Tool & Tool Builders' Association), the Group was the largest HSS cutting tools manufacturer by volume and one of the largest exporters of HSS cutting tools by value in China in 2006. The Group believes that it has strong competitive advantages in cutting tools sales and manufacturing over its international and domestic competitors due to its lower manufacturing costs and large production scale. See the paragraph headed "Strengths" in this section for more details on these advantages.

The Group faces domestic and international competition for its die steel production. According to 中國特鋼企業協會 (Special Steel Enterprise Association of China), the production capacity of the three leading domestic players accounted for over 70% of the overall production capacity in China in 2005. The international players are dominant in the high grade precision die steel segment. Die steel production is a relatively new business of the Group and the Group will strive to improve its product quality and increase its market share.

### SAFETY AND ENVIRONMENTAL PROTECTION

## Workplace Safety

The PRC laws and regulations that are applicable to the Group in relation to social responsibility such as labour, health, safety, insurance and accidents aspects are: 中華人民共和國安全生產法 (Law of the People's Republic of China on Work Safety), 中華人民共和國職業病防治法 (Law of the People's Republic of China on Prevention and Control of Occupational Diseases), 中華人民共和國勞動法 (Labour Law of the People's Republic of China), 社會保險費征繳暫行條例 (Interim Regulation on the Collection and Payment of Social Insurance Premiums), 工傷保險條例 (Regulation on the Work-related Injury Insurance), 江蘇省勞動保護條例 (Regulation on Labour Protection of Jiangsu Province), 江蘇省安全生產條例 (Law of the People's Republic of China on Work Safety) (Regulation on Work Safety of Jiangsu Province) and 勞動防護用品監督管理規定 (Regulation on Supervision and Control of Labour Protection Products). As advised by the PRC lawyer of the Company, the Group has complied with the relevant labour and safety regulations in all material respects and has maintained a relatively clean safety records without the occurrence of any major employment-related injury during the Track Record Period. The Group provides safety-related education to every new employee and they are required to pass an exam before they can start working in the production site. Moreover, the Group provides training to the factory workers on the use of factory equipment and on safety standards when using equipment. The Group has also devised a number of internal safety guidelines and instructions for its production process including the operation of production equipment and handling of chemicals. Each production site leader is required to sign a responsibility letter, assuming his responsibility to ensure workplace safety in his production site. Employees who do not follow the internal safety guidelines and instructions will be penalized according to the punishment systems in each production site. Furthermore, in order to comply with the above PRC laws and regulations and to ensure the safety of the employees, a work safety group ("Work Safety Group") led by personnel who have obtained safety management qualification accredited from 江蘇省安全生產監督管理局 (Jiangsu Province Safety Production Management Bureau) has been set up. About 38 staff from the production site act as safety patrol prefects, monitoring whether all workers are in compliance with these guidelines and instructions. The Work Safety Group meets monthly to review work safety reports from each production site, to discuss work safety issues and to formulate new guidelines and instructions when necessary. In addition, any potential work safety problem will also be closely supervised by the Work Safety Group. For instance, the safety patrol prefects will carry out monthly review on the safety standards of the equipment in each production site. Continuous training and testing will also be carried for technical staff to enhance their work safety awareness as well as update them with new safety measures. There is regular inspection of the Group's factory equipment by the relevant governmental authorities to ensure its major equipment is in compliance with relevant national standards.

### **Environmental Protection**

The Group's business is subject to PRC's environmental laws and regulations as well as environmental regulations promulgated by the local governments where the Group operates. These include regulations on waste discharge and emissions disposal. In order to fully implement environmental measures and to create a "green" environment, the Group has acquired a range of equipment and established an environmental protection division with supervisors who are mainly responsible for the general implementation and management of environmental protection measures within the Group. Each branch factory and department has its own environment officer who is responsible for inspection and reporting of and

improvement in environmental issues in a timely manner. Inspection and supervision are carried out at irregular spots by environment supervisors 24 hours a day in order to handle any potential pollution problem in a timely manner. As at the Latest Practicable Date, the environmental protection division is headed up by a leadership committee consisting of 9 supervisors, each of which possesses experience in environmental protection roles ranging from 5 to 12 years. This leadership committee supervises a managerial staff of 24 personnel, each of which also possesses 5 years or more experience in environmental protection roles. These managers oversee a staff of 48 environmental officers, each of which possesses 4 years or more experience in environmental protection roles. Trainers from the 丹陽市環境保護局 (Danyang Environmental Protection Bureau) are invited to the Group annually to conduct training sessions for all levels of staff in the environmental protection division.

The green belt of the Group, representing 30% of the total area of the Group, not only enhances the aesthetic value of the landscape, but also effectively improves the air quality. With the Group's environmental measures, the emission of dust particles, oil mists and smoke by its branch factories is in line with the relevant PRC standard. All oil refuse generated from production is processed by oil refuse plants for recycle use. Sewage is processed by a sewage treatment plant to meet the relevant PRC standard before discharging. Coal combustion and the Group's chimney are gradually replaced by electric arc furnaces and liquefied petroleum gas ("LPG") furnaces which are pollution-free. Cinders generated from LPG producers are later supplied to tile manufacturers which have a huge demand for cinders. The Group will continue to strive to achieve its aim by further reducing energy consumption and fully implementing a "green" production.

In addition, environmental protection will be monitored closely during production. Through the above environmental protection measures and creating a "green" environment, the Group intends to instil in its staff a sense of personal accountability in protecting the environment, and achieve further development of the Group by turning waste materials into useful valuables and promoting recycling practice within the Group, most notably the use of scrap steel and grinding swarf to smelt and produce new steel. The Group is one of the approved enterprises in China authorised by the PRC government to import scrap steel. For instance, a large scale dust remover will be installed to eliminate dust generated from fire lighting of LPG producers when it is switched on and from the remaining smoke when it is switched off. In respect to oil mist and dust particles, the Group intends to further invest in the future in large scale environment equipment and enhance the environmental awareness of technical staff. New construction projects have to follow the strict environment principle of 三同時 (Three Concurrence). In addition to fully comply with the management standards required by any environment authorities of the PRC, the Group will further invest in environmental protection equipment and strengthen its management, inspection and supervision efforts over environment issues and punishment system.

For the three years ended 31 December 2006 and the three months ended 31 March 2007, the Group invested RMB0.4 million, RMB0.5 million RMB0.7 million and RMB0.2 million respectively in greening and facilities for treatment of waste, waste oil, sewage and dust. Pursuant to a confirmation issued by 丹陽市環境保護局 (Danyang Environment Protection Bureau) on 12 March 2007, the Group has complied with the relevant environment laws and regulations in the PRC. The Group is not aware of any failure in complying with material environmental laws and regulations as currently in place. For details of the applicable laws and regulations, please refer to the section headed "Regulations" in this prospectus.

As advised by the Company's PRC legal adviser, the Group has complied with the relevant environmental rules and regulations in all material respects including the obtaining of

all the relevant permits and environmental approvals for its production facilities. In addition, there has been no major environmental pollution incident discovered during the Track Record Period and there has not been any penalty imposed on the Group as a result of violation of environmental rules and regulations.

#### **INSURANCE**

As at the Latest Practicable Date, the Group has insurance coverage with PICC Property and Casualty Company Limited to cover the Group's third party liability and risks attached to freight. The Group also maintains insurance coverage for damage to fixed assets and current assets with insured amounts of approximately RMB300 million and RMB500 million respectively.

Consistent with what the Group believes to be standard practice in its industry in the PRC, the Group does not currently maintain insurance coverage for third party liability, business interruption or environmental damage rising from accident on its sites or relating to its operations. The Directors consider that the insurance coverage of the Group is adequate given the nature of the Group's business and the risks that are faced by the Group.

### AWARDS AND CERTIFICATES

The Group has received the following major awards and distinctions:

- Named as 中國重質量講誠信進出口企業 (One of the "Quality-and-Integrity Excellent Import-export Enterprises of China") by the 中國出入境檢驗檢疫協會 (China Exit & Entry Inspection & Quarantine Association) in 2002
- Named as 出口創匯十佳企業 (One of the top 10 export enterprises) and 產品銷售收入十佳企業 (One of the top 10 enterprises in product sales) in PRC by 中國機床工具工業協會 (China Machine Tool & Tool Builders' Association) in 2002, 2003, 2004, 2005 and 2006 and 2006, 2004, 2005 and 2006, respectively
- Named as 全國守合同重信用企業 (The national best credit enterprise) by 國家工商行政管理總局 (The State Administration for Industry and Commerce) in 2003
- Named as 金屬工具製造行業效益十佳企業 (One of the top 10 enterprises in efficient metal tools manufacturing) by 國家統計局工業交通統計司 (Department of Industrial an Transport Statistics, National Bureau of Statistics of China), 中國信息報社 (China Information Agency) and 中國行業企業信息發佈中心 (China Industrial Information Issuing Center) in 2003
- Obtained official recognition from the Torch High Technology Industry Development Centre of the Ministry of Science and Technology as a 國家重點高新技術企業 (Prominent High and New Technology Enterprise) in 2004
- Named as 中國五金工業百強企業 (One of the top 100 enterprises in PRC metal industry) by 中國市場監測中心 (China Marketing Monitoring Centre) in 2005
- Named as 2006年中國切削工具製造行業排頭兵企業 (No. 1 enterprise in PRC industry of metal tools manufacturing of 2006) by 中國工業經濟聯合會 (China Federation of Industrial Economics) and 中國工業報社 (China Industry News) in 2006

- Certain tools of the Group obtained 中國名牌產品 (the Chinese famous award) granted by 國家質量監督檢驗檢疫總局 (General Administration of Quality Supervision, Inspection and Quarantine of the PRC) in 2006
- Obtained official recognition by the PRC government as 中國馳名商標 (a Chinese Famous Trademark) in 2006
- Named as 中國機電行業十大影響力品牌 (One of the Top Ten Most Influential Brands in the Electrical and Mechanical Industries) by 品牌雜誌社 (Brand Magazine), 財富時報社 (Fortune Times Press), 中國聯合商報社 (China United Business Press), 購物導報社 (Shopping Guide), 中國中小商企業協會 (China Association of Small and Medium Enterprises), 中國國際品牌學會 (China Int'l Brand Academy), 中國國際市場協會 (China International Marketing Association), 國際合作中心中國辦事處 (International Cooperation Promoting Centre) in 2007.

#### LEGAL PROCEEDINGS

The Group is not currently involved in any material litigation or legal proceedings which the Directors expected to have any material adverse effect on its business or operations.

## PROPERTY INTEREST

The headquarter and the production facilities of the Group are located in Danyang, Jiangsu Province, the PRC.

The industrial complex of TG Tools occupies a total gross floor area of 142,566.49 sq. m. and is built on a site with site area of approximately 239,590.20 sq. m. The industrial complex of TG Aihe occupies a total gross floor area of 67,200.76 sq. m and is built on a site with site area of approximately 169,926.5 sq. m. In addition, in respect of TG Aihe, there are two buildings under construction with a total gross floor area of approximately 12,079.6 sq. m. Construction permits in respect of all these buildings have been obtained. American Appraisal China Limited valued the industrial complexes at RMB306,980,000 as at 31 May 2007. The offices and work places of Tianfa Forging and Tianji Packaging are co-located in the industrial complex of TG Tools.

The Group rented office premises of a total floor area of 8,000 sq. m. from TG Group, a connected person, at the prevailing market rate for a term commencing from 1 January 2007 to 31 December 2009.

The Group also has established sale offices in each of Danyang, Harbin City, Chongqing City and Guiyang City. Details of the tenancy agreements are set out in the valuation certificates contained in Appendix IV to this Prospectus.