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# **Tiangong International Company Limited**

# 天工國際有限公司\*

(Incorporated in the Cayman Islands with limited liability)

(Stock Code: 826)

# ANNUAL RESULTS ANNOUNCEMENT FOR THE YEAR ENDED 31 DECEMBER 2024

# FINANCIAL HIGHLIGHTS

RMB' million (unless otherwise specified)

	Year ended 31 December 2024	Year ended 31 December 2023	Change
Revenue	4,832.0	5,163.3	(6.4%)
Gross profit	983.5	1,143.4	(14.0%)
Net profit attributable to equity			
shareholders of the Company	358.8	370.2	(3.1%)
Basic earnings per share (RMB)	0.131	0.133	(1.5%)
Gross profit margin	20.4%	22.1%	(1.7 ppt)
Margin of profit attributable to equity			
shareholders of the Company	7.4%	7.2%	0.2 ppt
Net Assets	7,452.7	7,384.6	0.9%
Net Debt <sup>(1)</sup>	2,459.7	2,289.9	7.4%
Net Gearing <sup>(2)</sup>	33.0%	31.0%	2.0 ppt

### Notes:

- (1) Net debt equal to total bank borrowings plus other financial liability less pledged deposits, time deposits and cash and cash equivalents.
- (2) Net gearing is measured as net debt to equity.

The board of directors (the "Board") of Tiangong International Company Limited (the "Company") is pleased to announce the audited consolidated statement of profit or loss and the consolidated statement of profit or loss and other comprehensive income of the Company and its subsidiaries (collectively the "Group") for the year ended 31 December 2024 and the consolidated statement of financial position of the Group as at 31 December 2024, together with the comparative figures for the same period of 2023 as follows:

## CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For the year ended 31 December 2024

	Note	2024 RMB'000	2023 RMB'000
Revenue Cost of sales	4	4,832,036 (3,848,493)	5,163,306 (4,019,922)
Gross profit		983,543	1,143,384
Other income Distribution costs Administrative expenses Research and development costs Other operating expenses	<ul><li>5</li><li>6</li></ul>	176,215 (144,072) (172,675) (301,548) 1,055	127,253 (118,053) (160,122) (312,361) (53,482)
<b>Profit from operations</b>	_	542,518	626,619
Finance income Finance expenses		33,530 (171,651)	41,624 (198,587)
Net finance costs	7(a)	(138,121)	(156,963)
Share of profits less losses of associates	-	4,857	8,702
Share of profits less losses of joint ventures		(1,117)	(12,888)
Profit before taxation Income tax	7 8	408,137 (7,974)	465,470 (45,542)
Profit for the year		400,163	419,928
Attributable to: Equity shareholders of the Company Non-controlling interests		358,757 41,406	370,209 49,719
Profit for the year	:	400,163	419,928
Earnings per share (RMB) Basic	9	0.131	0.133
Diluted	:	0.131	0.133

*Note:* Details of dividends payable to equity shareholders of the Company attributable to the profit for the year are set out in Note 13(a).

# CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2024

	2024 RMB'000	2023 RMB'000
Profit for the year	400,163	419,928
Other comprehensive income for the year (after tax adjustment)  Item that will not be reclassified to profit or loss: Equity investments at fair value through other comprehensive income (FVOCI) — net movement in fair value reserve (non-recycling) (inclusive of tax effect of RMB2,794,000 (2023: RMB1,600,000))  Item that may be reclassified subsequently to profit or loss:	19,782	(7,328)
Exchange differences on translation of:  — financial statements of entities with functional currencies other than RMB (inclusive of nil tax (2023: nil))	(107,458)	(12,962)
Other comprehensive income for the year	(87,676)	(20,290)
Total comprehensive income for the year	312,487	399,638
Attributable to: Equity shareholders of the Company Non-controlling interests	271,536 40,951	349,996 49,642
Total comprehensive income for the year	312,487	399,638

# CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2024

	Note	2024 RMB'000	2023 RMB'000
Non-current assets			
Property, plant and equipment		4,392,861	4,506,918
Lease prepayments		242,711	248,869
Intangible assets		56,224	57,721
Goodwill		144,600	144,600
Interest in associates		103,781	99,181
Interest in joint ventures		25,141	29,823
Other financial assets		265,070	192,840
Deferred tax assets		117,871	63,372
		5,348,259	5,343,324
Current assets			
Financial assets measured at fair value through			
profit or loss (FVPL)		61,025	1,111
Inventories		2,524,870	2,477,492
Trade and other receivables	10	3,543,048	3,552,788
Pledged deposits		134,494	129,288
Time deposits		605,231	1,307,985
Cash and cash equivalents		1,068,922	749,087
		7,937,590	8,217,751
Current liabilities			
Trade and other payables	11	1,452,755	1,583,176
Interest-bearing borrowings		1,827,473	2,209,423
Other financial liability	12	983,676	1,581,250
Current taxation		35,042	26,729
		4,298,946	5,400,578
Net current assets		3,638,644	2,817,173
Total assets less current liabilities		8,986,903	8,160,497

# CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

As at 31 December 2024

	2024 RMB'000	2023 RMB'000
Non-current liabilities		
Interest-bearing borrowings	1,457,193	685,598
Deferred income	30,098	37,788
Deferred tax liabilities	46,874	52,523
	1,534,165	775,909
Net assets	7,452,738	7,384,588
Capital and reserves		
Share capital	48,164	49,055
Reserves	7,044,913	7,015,500
Total equity attributable to equity		
shareholders of the Company	7,093,077	7,064,555
Non-controlling interests	359,661	320,033
Total equity	7,452,738	7,384,588

### **NOTES**

### 1. REPORTING ENTITY

The Company was incorporated in the Cayman Islands on 14 August 2006 as an exempted company with limited liability under the Companies Law, Cap 22 (Law 3 of 1961 as consolidated and revised) of the Cayman Islands. The Company's shares have been listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") since 26 July 2007. The Company and its subsidiaries are collectively referred to as the "Group".

#### 2. BASIS OF PREPARATION

The financial statements have been prepared in accordance with all applicable International Financial Reporting Standards ("IFRSs"), which collective term includes all applicable individual International Financial Reporting Standards, International Accounting Standards ("IASs") and Interpretations issued by the International Accounting Standards Board ("IASB") and the requirements of the Hong Kong Companies Ordinance. These financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

The IASB has issued certain amendments to IFRSs that are first effective or available for early adoption for the current accounting period of the Group and the Company. Note 3 provides information on any changes in accounting policies resulting from initial application of these developments to the extent that they are relevant to the Group for the current accounting periods reflected in the financial statements.

The financial information relating to the year ended 31 December 2024 that is included in this preliminary annual results announcement does not constitute the Group's consolidated financial statements for the year ended 31 December 2024 but is derived from those financial statements.

### 3. CHANGES IN ACCOUNTING POLICIES

The IASB has issued the following amendments to IFRSs that are first effective for the current accounting period of the Group:

- Amendments to IAS 1, Presentation of financial statements Classification of liabilities as current or non-current ("2020 amendments") and amendments to IAS 1, Presentation of financial statements Non-current liabilities with covenants ("2022 amendments") Insurance contracts
- Amendments to IFRS 16, Leases Lease liability in a sale and leaseback
- Amendments to IAS 7, Statements of cash flows and IFRS 7, Financial instruments: Disclosures
   Supplier finance arrangements

None of these developments have had a material effect on how the Group's results and financial position for the current or prior periods have been prepared or presented. The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period.

### 4 REVENUE AND SEGMENT REPORTING

#### (a) Revenue

The principal activities of the Group are the manufacturing and sales of high alloy steel, (including die steel ("**DS**") and high speed steel ("**HSS**")), cutting tools, titanium alloy and others after eliminating intercompany transactions. Further details regarding the Group's principal activities are disclosed in Note 4(b).

## (i) Disaggregation of revenue

Disaggregation of revenue from contracts with customers by products divisions or business lines is as follows:

	2024	2023
	RMB'000	RMB'000
DS	2,273,870	2,345,986
HSS	821,478	815,904
Cutting tools	879,342	905,754
Titanium alloy	756,370	963,836
Others	100,976	131,826
	4,832,036	5,163,306

The Group's revenue from contracts with customers is recognised at a point in time. Disaggregation of revenue from contracts with customers by geographic markets is disclosed in Notes 4(b)(iii).

The Group's customer base is diversified and includes one customer (2023: one customer) with whom transactions have exceeded 10% of the Group's revenue.

# (ii) Revenue expected to be recognised in the future arising from contracts with customers in existence at the reporting date

The Group has applied the practical expedient in paragraph 121 of IFRS 15 to its sales contracts for products such that the above information does not include information about revenue that the Group will be entitled to when it satisfies the remaining performance obligations under the contracts for sales of products that had an original expected duration of one year or less.

## (b) Segment reporting

The Group manages its businesses by divisions, which are organised by a mixture of both business lines (products and services) and geography. In a manner consistent with the way in which information is reported internally to the Chairman (the chief operating decision maker) for the purposes of resource allocation and performance assessment, the Group has presented the following five reportable segments. No operating segments have been aggregated to form the following reportable segments.

— DS	The DS segment manufactures and sells materials that are used in the die set manufacturing industry.
— HSS	The HSS segment manufactures and sells materials that are used in the tools manufacturing industry.
— Cutting tools	The cutting tools segment manufactures and sells HSS and carbide cutting tools to the tooling industry.
— Titanium alloy	The titanium alloy segment manufactures and sells titanium alloys to the titanium industry.
— Others	Others segment assembles and sells power tools kits.

### (i) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Chairman (the chief operating decision maker) monitors the results, assets and liabilities attributable to each reportable segment on the following basis:

Segment assets include all tangible, intangible assets and current assets with the exception of interest in associates, interest in joint ventures, other financial assets, deferred tax assets, financial assets measured at fair value through profit or loss (FVPL), pledged deposits, time deposits, cash and cash equivalents and other head office and corporate assets. Segment liabilities include trade and other payables and deferred income attributable to the manufacturing and sales activities of the individual segments with the exception of interest-bearing borrowings, other financial liability, current taxation, deferred tax liabilities and other head office and corporate liabilities.

Revenue and expenses are allocated to the reportable segments with reference to revenue generated by those segments and the expenses incurred by those segments or which otherwise arise from the depreciation or amortisation of assets attributable to those segments.

The measure used for reporting segment profit is "adjusted EBIT", i.e. "adjusted earnings before interest and taxes", where "interest" is regarded as net finance costs. To arrive at adjusted EBIT, the Group's earnings are further adjusted for items not specifically attributed to individual segments, such as share of profits less losses of associates and joint ventures and other head office or corporate administration costs.

In addition to receiving segment information concerning adjusted EBIT, management is provided with segment information concerning revenue (including inter-segment revenue) generated by the segments in their operations. Inter-segment revenue is priced with reference to prices charged to external parties for similar orders.

Information regarding the Group's reportable segments as provided to the Chairman (the chief operating decision maker) for the purposes of resource allocation and assessment of segment performance for the years ended 31 December 2024 and 2023 is set out below.

	2024					
			Cutting	Titanium		
	DS	HSS	tools	alloy	Others	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Revenue from external customers	2,273,870	821,478	879,342	756,370	100,976	4,832,036
Inter-segment revenue	8	303,698	5,494			309,200
Reportable segment revenue	2,273,878	1,125,176	884,836	756,370	100,976	5,141,236
Reportable segment profit						
(adjusted EBIT)	24,867	<u>81,817</u>	200,841	200,808	14,911	523,244
Reportable segment assets	5,505,231	2,618,865	1,858,533	758,493	132,183	10,873,305
Reportable segment liabilities	668,962	293,185	347,623	108,527	41,241	1,459,538
			20	23		
			Cutting	Titanium		
	DS	HSS	tools	alloy	Others	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Revenue from external customers	2,345,986	815,904	905,754	963,836	131,826	5,163,306
Inter-segment revenue	95	271,527	5,319			276,941
Reportable segment revenue	2,346,081	1,087,431	911,073	963,836	131,826	5,440,247
Reportable segment profit						
(adjusted EBIT)	108,679	97,624	195,368	208,914	20,233	630,818
Reportable segment assets	5,285,497	2,683,495	1,807,993	962,227	216,757	10,955,969
Reportable segment liabilities	790,334	303,962	287,618	198,385	18,715	1,599,014

# (ii) Reconciliations of reportable segment revenue, profit or loss, assets and liabilities

	2024 RMB'000	2023 RMB'000
Revenue		
Reportable segment revenue Elimination of inter-segment revenue	5,141,236 (309,200)	5,440,247 (276,941)
Consolidated revenue (Note 4(a))	4,832,036	5,163,306
	2024 RMB'000	2023 RMB'000
Profit Reportable segment profit Net finance costs Share of profits less losses of associates	523,244 (138,121) 4,857	630,818 (156,963) 8,702
Share of profits less losses of joint ventures Unallocated head office and corporate profits/(expenses)	(1,117) 19,274	(12,888) (4,199)
Consolidated profit before taxation	408,137	465,470
	2024 RMB'000	2023 RMB'000
Assets Reportable segment assets Interest in associates Interest in joint ventures Other financial assets Deferred tax assets Financial assets measured at fair value through profit or loss (FVPL) Pledged deposits Time deposits Cash and cash equivalents Unallocated head office and corporate assets  Consolidated total assets	10,873,305 103,781 25,141 265,070 117,871 61,025 134,494 605,231 1,068,922 31,009 13,285,849 2024 RMB'000	10,955,969 99,181 29,823 192,840 63,372 1,111 129,288 1,307,985 749,087 32,419 13,561,075
Liabilities Reportable segment liabilities Interest-bearing borrowings Other financial liability Current taxation Deferred tax liabilities Unallocated head office and corporate liabilities Consolidated total liabilities	1,459,538 3,284,666 983,676 35,042 46,874 23,315 5,833,111	1,599,014 2,895,021 1,581,250 26,729 52,523 21,950 6,176,487

# (iii) Geographical information

The Group's business is managed on a worldwide basis, but participates in four principal economic geographies, the People's Republic of China, and for the purpose of this announcement only and except where the context requires otherwise, excluding Hong Kong, Macao Special Administrative Region and Taiwan (the "PRC"), North America, Europe and Asia (other than the PRC).

The following table sets out information about the geographical location of the Group's revenue from external customers. The geographical location of customers is based on the location at which the services were provided or the goods delivered.

Substantially all of the Group's assets and liabilities are located in the PRC and accordingly, no geographical analysis of segment assets and liabilities is provided.

Revenues from

			Revenues from	
			external customers	
			2024	2023
			RMB'000	RMB'000
	Revenue			
	The PRC		2,511,112	2,594,152
	North America		719,275	926,221
	Europe		1,004,074	1,067,180
	Asia (other than the PRC)		561,394	528,550
	Others		36,181	47,203
	Total		4,832,036	5,163,306
5	OTHER INCOME			
			2024	2023
		Note	RMB'000	RMB'000
	Government grants	(i)	54,695	61,316
	Sales of scrap materials		2,759	2,890
	Dividend income	(ii)	12,476	14,367
	Unrealised fair value changes of other financial assets		(4,769)	(4,420)
	Net (losses)/gains on trading securities		(5,380)	70
	Net foreign exchange gains		113,136	45,738
	Net (losses)/gains on disposal of property, plant and			
	equipment		(843)	747
	Others		4,141	6,545
			176,215	127,253

- (i) The subsidiaries of the Company, located in the PRC collectively received unconditional grants amounting to RMB46,440,000 (2023: RMB53,490,000) from the local government. The Group also recognised amortisation of government grants related to assets of RMB8,255,000 (2023: RMB7,826,000) during the year ended 31 December 2024.
- (ii) The Group received dividends totalling RMB12,476,000 (2023: RMB14,367,000) from listed equity investments, unlisted units in investment funds and trading securities.

## 6 OTHER OPERATING EXPENSES

	2024 RMB'000	2023 RMB'000
(Reversal)/Provision for loss allowance on trade and		
other receivables	(4,652)	48,487
Charitable donations	2,400	3,346
Others	1,197	1,649
	(1,055)	53,482

### 7 PROFIT BEFORE TAXATION

Profit before taxation is arrived at after charging/(crediting):

### (a) Net finance costs

	2024 RMB'000	2023 RMB'000
Interest income	(33,530)	(41,624)
Finance income	(33,530)	(41,624)
Interest on bank loans Interest expenses arising on other financial liability	120,345 51,306	141,987 56,600
Finance expenses	171,651	198,587
Net finance costs	138,121	156,963

## (b) Staff costs

	2024 RMB'000	2023 RMB'000
Contributions to defined contribution retirement plans Salaries, wages and other benefits	33,760 387,845	32,978 364,138
	421,605	397,116

The Group participates in defined contribution pension funds managed by the PRC local government authorities. According to the respective pension fund regulations, the Group is required to pay annual contributions determined by the respective authorities in the PRC. The Group remits all the pension fund contributions to the respective social security offices, which are responsible for the payments and liabilities relating to the pension funds. The Group has no obligation for payment of retirement and other post-retirement benefits of employees other than the contributions described above.

# (c) Other items

	Note	2024 RMB'000	2023 RMB'000
Amortisation of intangible assets		7,684	8,215
Depreciation charge — owned property, plant and equipment — lease prepayments (right-of-use assets)		386,994 6,158	371,974 6,158
		393,152	378,132
Net foreign exchange gains	5	113,136	45,738
Auditor's remuneration  — audit services  — other services		7,035	6,387 1,554
		7,035	7,941
(Reversal)/Provision for write-down of inventories Cost of inventories*		(12,071) 3,848,493	10,157 4,019,922

<sup>\*</sup> Cost of inventories includes amounts relating to staff costs and depreciation and amortisation expenses, which are also included in the respective total amounts disclosed separately above or in note 7(b) for each of these types of expenses.

#### 8 INCOME TAX IN THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

(a) Taxation in the consolidated statement of profit or loss represents:

	2024 RMB'000	2023 RMB'000
Current tax		
Provision for PRC Corporate Income Tax	55,352	57,649
Provision for Hong Kong Profits Tax	4,526	8,242
Provision for Thailand Corporate Income Tax	553	199
Deferred tax	60,431	66,090
Origination and reversal of temporary differences	(52,457)	(20,548)
	7,974	45,542

- (i) Pursuant to the rules and regulations of the Cayman Islands and British Virgin Islands, the Group is not subject to any income tax in the Cayman Islands or British Virgin Islands.
- (ii) The provision for PRC Corporate Income Tax is based on the respective corporate income tax rates applicable to the subsidiaries located in the PRC as determined in accordance with the relevant income tax rules and regulations of the PRC.

Jiangsu Tiangong Tools New Materials Company Limited ("TG Tools"), Jiangsu Tiangong Aihe Technology Company Limited (formerly known as Tiangong Aihe Company Limited ("TG Aihe")), Jiangsu Weijian Tools Technology Company Limited ("Weijian Tools"), Jiangsu Tiangong Technology Company Limited ("TG Tech") and Jiangsu Tiangong Precision Tools Company Limited ("Precision Tools") are subject to a preferential income tax rate of 15% in 2024 available to enterprises which qualify as a High and New Technology Enterprise (2023: 15%).

As at 16 December 2024, Jiangsu Tiangong Carbide Technology Company Limited ("Carbide Technology") is qualified as a High and New Technology Enterprise and is subject to a preferential income tax rate of 15% in 2024 (2023: 25%).

The statutory corporate income tax rate applicable to the Group's other operating subsidiaries in the PRC is 25% (2023: 25%).

The income tax law of the PRC and its relevant regulations also impose withholding tax at 10%, unless reduced by a tax treaty/arrangement, on dividend distributions made out of the PRC from earnings accumulated from 1 January 2008. Undistributed earnings generated prior to 1 January 2008 are exempted from such withholding tax.

- (iii) Pursuant to the income tax rules and regulations of Hong Kong, the Group's subsidiaries in Hong Kong are liable to Hong Kong Profits Tax at a rate of 16.5% (2023: 16.5%) for the year ended 31 December 2024.
- (iv) According to the policy of Industrial Promotion Act of Thailand, Tiangong Precision Tools (Thailand) Company Limited ("TGPT"), a subsidiary of the Group located in Thailand, is entitled to a preferential income tax rate of 0% for six years from May 2021, and 20% from May 2027 and thereafter.

Pursuant to the income tax rules and regulations of Thailand, Tiangong Special Steel Company Limited ("TGSS") and Tiangong New Material (Thailand) Co., Ltd ("New Material (Thailand)"), TGSS are liable to Thailand Corporate Income Tax at a rate of 20% (2023: 20%) for the year ended 31 December 2024, New Material (Thailand) are liable to Thailand Corporate Income Tax at a rate of 20% for the year ended 31 December 2024.

# (b) Reconciliation between tax expense and accounting profit at applicable tax rates:

	2024 RMB'000	2023 RMB'000
Profit before taxation	408,137	465,470
Notional tax on profit before taxation, calculated using		
the PRC statutory tax rate of 25% (2023: 25%)	102,034	116,368
Effect of preferential tax rates	(3,558)	(15,349)
Effect of different tax rates	(25,993)	6,559
Tax effect of non-deductible expenses	12,703	16,359
Tax effect of non-taxable income	(7,747)	(3,199)
Tax effect of unused tax losses not recognised	1,592	282
Tax effect of derecognition of previously recognised tax losses	100	2,869
Tax effect of bonus deduction for research and		
development costs	(75,011)	(78,239)
Under/(over)-provision in respect of prior year	1,527	(108)
Effect on deferred tax balances at 1 January resulting		
from a change in tax rate	2,327	
Actual tax expense	7,974	45,542

## 9 EARNINGS PER SHARE

# (a) Basic earnings per share

The calculation of basic earnings per share is based on the profit attributable to ordinary equity shareholders of the Company of RMB358,757,000 (2023: RMB370,209,000) and the weighted average of 2,743,226,197 ordinary shares (2023: 2,778,642,505 ordinary shares) in issue during the year, calculated as follows:

# Weighted average number of ordinary shares

	2024	2023
Issued ordinary shares at 1 January Effect of repurchase of own shares	2,775,000,000 (31,773,803)	
Weighted average number of ordinary shares at 31 December	2,743,226,197	2,778,642,505

# (b) Diluted earnings per share

The diluted earnings per share for 2024 and 2023 are the same as the basic earnings per share as there are no dilutive potential ordinary shares during the years.

## 10 TRADE AND OTHER RECEIVABLES

	2024	2023
	RMB'000	RMB'000
Trade receivables	2,226,434	2,246,281
Bills receivable	732,940	818,760
Less: loss allowance	(143,288)	(149,555)
Net trade and bills receivable	2,816,086	2,915,486
Prepayments	159,747	224,199
Non-trade receivables	477,599	311,133
Less: loss allowance	(9,498)	(7,907)
Current taxation	99,114	109,877
Net prepayments and non-trade receivables	726,962	637,302
	3,543,048	3,552,788

Certain bills receivable held by the Group are achieved by both collecting contractual cash flows and sales, which are measured at fair value through other comprehensive income.

Trade receivables of RMB137,751,000 (2023: RMB161,843,000) have been pledged to a bank as security for the Group's bank loans.

# (a) Ageing analysis

As of the end of the reporting period, the ageing analysis of trade and bills receivable (which are included in trade and other receivables), based on the invoice date and net of loss allowance, is as follows:

	2024 RMB'000	2023 RMB'000
Within 1 years 1 to 2 years Over 2 years	2,546,878 252,646 16,562	2,723,886 172,756 18,844
	2,816,086	2,915,486

Trade receivables are due from 90 to 180 days from the date of billing.

## (b) Loss allowance of trade receivables

The Group measures loss allowance for trade receivables at an amount equal to lifetime expected credit losses ("ECLs"), which is calculated using a provision matrix.

The following table provides information about the Group's exposure to credit risk and ECLs for trade receivables:

		2024	
	Expected loss rate %	Gross carrying amount RMB'000	Loss allowance RMB'000
Current (not past due) 1–9 months past due 9–21 months past due More than 21 months past due	5.0% 5.0% 10.0% 54.5%	1,078,721 830,676 280,608 36,429	53,857 41,602 27,962 19,867
		2,226,434	143,288
		2023	
	Expected loss rate %	Gross carrying amount <i>RMB'000</i>	Loss allowance <i>RMB'000</i>
Current (not past due) 1–9 months past due 9–21 months past due More than 21 months past due	5.0% 5.0% 10.3% 61.0%	1,164,532 840,878 192,544 48,327	58,097 42,187 19,788 29,483
		2,246,281	149,555

Expected loss rates are based on actual loss experience over the past years. These rates are adjusted to reflect differences between economic conditions during the period over which the historic data has been collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

Movement in the loss allowance account in respect of trade receivables during the year is as follows:

	2024 RMB'000	2023 RMB'000
Balance at 1 January	149,555	111,645
Amounts written-off during the year	_	(93)
Loss allowance (reversed)/recognised during the year	(6,895)	36,464
Exchange gain and loss adjustment	628	1,539
Balance at 31 December	143,288	149,555
11 TRADE AND OTHER PAYABLES		
	2024	2023
	RMB'000	RMB'000
Trade and bills payable	1,189,125	1,246,803
Contract liabilities	14,445	13,394
Non-trade payables and accrued expenses	249,185	322,979
	1,452,755	1,583,176

All trade and other payables are expected to be settled or recognised as income within one year or are repayable on demand.

As of the end of the reporting period, the ageing analysis of trade and bills payable (which are included in trade and other payables), based on the invoice date, is as follows:

	2024	2023
	RMB'000	RMB'000
Within 1 year	1,160,725	1,217,139
1 to 2 years	16,470	17,056
Over 2 years	11,930	12,608
	1,189,125	1,246,803

### 12 OTHER FINANCIAL LIABILITY

The analysis of the carrying amount of other financial liability is as follows:

	2024	2023
	RMB'000	RMB'000
Contingent redeemable capital contributions in a subsidiary	983,676	1,581,250

On 28 December 2020, the Company, TG Tools, Jurong Tiangong New Materials Technology Company Limited, China Tiangong (Hong Kong) Company Limited, Precision Tools, TG Aihe, Weijian Tools, Jiangsu Tiangong New Materials Company Limited, TG Development and certain third party investors (the "Investors") entered into an investment agreement, pursuant to which the Investors will invest RMB1,415,000,000 to acquire 16.65% of the equity interest in TG Tools (collectively referred to as "the Investment in TG Tools"). The Investors are entitled to the same voting rights and dividend rights as other equity holders of TG Tools, whereas certain special rights including redemption, anti-dilution and preferential liquidation rights are granted to the Investors. As at 31 December 2021, the Group received all the capital contributions of RMB1,415,000,000 from the Investors.

At the date of issuance of the Investment in TG Tools, the Investment in TG Tools is initially recognised at fair value and is carried at amortised cost for subsequent periods. Interest on the Investment in TG Tools is calculated using the effective interest method and recognised in the consolidated statement of profit or loss.

During the year ended 31 December 2024, five of the Investors exercised redemption right to redeem capital contributions and interests of RMB648,880,000. As at 31 December 2024, 89.00% (2023: 82.35%) of the equity interest in TG Tools was held by the Group.

### 13 DIVIDENDS

# (a) Dividends payable to equity shareholders of the Company in respect of the year

	2024	2023
	RMB'000	RMB'000
Dividend proposed after the end of the reporting period		
of RMB0.0263 per ordinary share (2023: RMB0.0400 per ordinary share)	71,751	111,063
(2023. RMB0.0400 per ordinary share)		111,003

The final dividend proposed after the end of the reporting period has not been recognised as a liability at the end of the reporting period.

### (b) Dividends declared to equity shareholders of the Company in respect of the interim period

	2024 RMB'000	2023 RMB'000
Declared interim dividend of RMB0.0203 per ordinary share (six months ended 30 June 2023: nil)	55,311	

# (c) Dividends payable to equity shareholders of the Company in respect of the previous financial year, approved and paid during the year

	2024	2023
	RMB'000	RMB'000
Dividend in respect of the previous financial year,		
approved and paid during the year of RMB0.0400 per		
ordinary share (2023: RMB0.0362 per ordinary share)	109,074	100,459

# (d) Dividends payable to equity shareholders of the Company in respect of the interim period and paid during the year

	2024 RMB'000	2023 RMB'000
Interim dividend of RMB0.0203 per ordinary share		
(six months ended 30 June 2023: nil)	55,110	_

In respect of the final dividend for the year ended 31 December 2023, there is a difference of RMB1,989,000 between the final dividend disclosed in the 2023 annual financial statements and amounts approved and paid during the year, which is mainly due to the change in number of ordinary shares arising from repurchase and cancellation of shares from March to June 2024 and the RMB/HKD exchange rate difference between the fixed middle average exchange rate on the date of the 2023 annual result announcement and the actual exchange rate applied on the date of payment.

In respect of the interim dividend for the six months period ended 30 June 2024, there is a difference of RMB201,000 between the final dividend disclosed in the 2024 interim financial statements and amounts approved and paid during the year, which is mainly due to the change in number of ordinary shares arising from repurchase and cancellation of shares in October 2024 and the RMB/HKD exchange rate difference between the fixed middle average exchange rate on the date of the 2024 interim result announcement and the actual exchange rate applied on the date of payment.

## MANAGEMENT DISCUSSION AND ANALYSIS

### **BUSINESS REVIEW**

# For the year ended 31 December

	2024		202	2023		Change	
	RMB'000	%	RMB'000	%	RMB'000	%	
DS	2,273,870	47.1	2,345,986	45.4	(72,116)	(3.1)	
HSS	821,478	17.0	815,904	15.8	5,574	0.7	
Cutting tools	879,342	18.2	905,754	17.5	(26,412)	(2.9)	
Titanium alloy	756,370	15.6	963,836	18.7	(207,466)	(21.5)	
Others	100,976	2.1	131,826	2.6	(30,850)	(23.4)	
	4,832,036	100.0	5,163,306	100.0	(331,270)	(6.4)	

# DS — accounted for 47.1% of the Group's revenue in FY 2024

For the year ended 31 December	For th	ie vear	ended 31	1 December
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	For the year ended 31 December					
	2024		2023	2023		e
	RMB'000	%	RMB'000	%	RMB'000	%
DS						
Domestic	1,008,398	44.3	868,040	37.0	140,358	16.2
Export	1,265,472	55.7	1,477,946	63.0	(212,474)	(14.4)
	2,273,870	100.0	2,345,986	100.0	(72,116)	(3.1)

DS is a type of high alloy special steel manufactured using rare metals including molybdenum, chromium and vanadium. DS is mainly used in die and mould casting as well as machining processing. Many different manufacturing industries require moulds, including automotive, home appliances and electronic industries.

The sales volume of domestic DS increased by 6%, primarily driven by its applications in plastics, die-casting, stamping, and casting. Benefiting from the development of China's new energy vehicle (NEV) industry, there was a robust demand for components, part molds, and integrated large-scale die-casting, driving a 34.4% growth in production value in this downstream application. Consequently, domestic DS sales gradually improved from the fourth quarter of 2023 and experienced significant growth this year. The average selling price of domestic DS increased by 9% compared to the previous year, attributed to a favorable domestic sales environment for DS and adjustments to the product mix.

The export sales volume of DS decreased by 12%, primarily due to price competition from overseas competitors. The Group's major competitors in Europe, which previously maintained a high-quality, high-price strategy in the global market, adopted price reductions strategy amid the sluggish market demand and intense competition. The average sales price decreased by 2%, reflecting marginal fluctuations driven by weak overseas demand, market stagnation, and ongoing price competition.

Overall, sales revenue of the DS segment decreased by 3.1% to RMB2,273,870,000 (2023: RMB2,345,986,000).

HSS — accounted for 17.0% of the Group's revenue in FY 2024

	For the year ended 31 December						
	2024		2023	2023		Change	
	RMB'000	%	RMB'000	%	RMB'000	%	
HSS							
Domestic	422,033	51.4	384,336	47.1	37,697	9.8	
Export	399,445	48.6	431,568	52.9	(32,123)	(7.4)	
	821,478	100.0	815,904	100.0	5,574	0.7	

HSS, manufactured using rare metals including tungsten, molybdenum, chromium, vanadium and cobalt, is characterised by greater hardness, heat resistance and durability. These attributes make HSS suitable to such applications as cutting tools and in the manufacture of high-temperature bearings, high-temperature springs, internal-combustion engines and rolls, with wide usage in specific industrial applications such as automotive, machinery manufacturing, aviation, and electronics industries.

The recovery in overseas DIY cutting tools demand drove increased raw materials demand from domestic export-oriented tools manufacturers. This, in turn, stimulated domestic revenue of HSS, a key material for cutting tools, to increase by 9.8% to RMB422,033,000 (2023: RMB384,336,000).

The export sales volume of HSS decreased by 7%, with the average selling price decreased by 1%. The situation was similar to our DS export performance. Amid intense price competition in overseas markets and Euro depreciation, the Group implemented a pricing strategy adjustments to maintain its market position while prioritizing product quality retention.

Overall, sales revenue of the HSS segment decreased by 0.7% to RMB821,478,000 (2023: RMB815,904,000).

# Cutting tools — accounted for 18.2% of the Group's revenue in FY 2024

	For the year ended 31 December						
	2024		2023	2023		Change	
	RMB'000	%	RMB'000	%	RMB'000	%	
Cutting tools							
Domestic	333,274	37.9	385,726	42.6	(52,452)	(13.6)	
Export	546,068	62.1	520,028	57.4	26,040	5.0	
	<u>879,342</u>	100.0	905,754	100.0	(26,412)	(2.9)	

Cutting tools segment includes HSS and carbide cutting tools. HSS cutting tools products are mainly twist drill bits and screw taps. All of these are used in industrial manufacturing and civil purposes. The Group's vertical integration extending from upstream HSS production to downstream HSS cutting tools production brought us a significant cost advantage over our peers. High-end carbide tools manufactured by the Group mainly comprised of carbide inserts and solid tools.

Domestic cutting tools sales revenue decreased by 13.6% to RMB333,274,000 in 2024. While China's manufacturing sector exhibited signs of broad-based recovery, domestic distributor clients continued to carry over cutting tools inventories from the previous fiscal year. The gradual digestion of these stockpiles throughout 2024 resulted in decreased domestic revenue.

Cutting tools export sales revenue increased by RMB26,040,000 in 2024, primarily driven by the global recovery of the cutting tools market. The North American market demonstrated particularly strong performance, with increasing demand for machine tools fueled by accelerated automation adoption, widespread implementation of CNC technology, and advancements in precision machining, which collectively stimulated downstream demand for cutting tools. The Group's cutting tools production base in Thailand enabled the capturing of opportunities in the North American market. Export revenue recorded an increase.

Despite divergent demand patterns for cutting tools across domestic and export markets, intense competition persists throughout the value chain. Downstream customers increasingly prioritize cost-optimized product configurations as their primary procurement focus, a strategic shift driven by macroeconomic pressures. This procurement strategy shift compelled the Group to implement price adjustments, resulting decrease in average selling price in both markets.

Overall, sales revenue of the cutting tools segment decreased by 2.9% to RMB879,342,000 (2023: RMB905,754,000).

# Titanium alloy — accounted for 15.6% of the Group's revenue in FY 2024

	For the year ended 31 December						
	2024		2023	2023		Change	
	RMB'000	%	RMB'000	%	RMB'000	%	
Titanium alloy							
Domestic	747,406	98.8	956,050	99.2	(208,644)	(21.8)	
Export	8,964	1.2	7,786	0.8	1,178	15.1	
	756,370	100.0	963,836	100.0	(207,466)	(21.5)	

The low density, high strength, high heat resistance and good corrosion resistance nature of titanium alloy promoted the extensive applications of titanium alloy in various industries, including chemical energy, consumer electronics, aerospace, marine engineering, biological sciences and other industries.

A certain end customer imposed higher requirements on utilization of recycled titanium alloy for titanium alloy wire materials used in consumer electronics, demanding titanium suppliers to further increase the reuse ratio of recycled materials. Considering the limited capacity of the existing production equipment to improve the reuse ratio of returned materials, the Group actively responded to client needs by deciding to construct new vacuum electron beam cooling bed ("EB") furnace production lines that offer greater advantages for reusing recycled materials. The new EB furnace production line was put into operation by the end of March 2024. However, due to the fact that main competitors already possessed EB furnace production lines within their original business scope, coupled with the required time for post-commissioning product optimization and verification processes, the Group's supply rhythm of titanium materials for the client's smartphones lagged behind competitors, resulting in decreased titanium alloy wire revenue in 2024.

At the same time, demand from another end customer in consumer electronics field increased, the Group has actively cooperated with the end customer on their pure titanium wire orders. However, compared to the titanium alloy wire, the average selling price of pure titanium wire was slightly lower. Despite a 9.1% increase in sales volume increase, there was a 28.4% decrease in average selling price. In all, titanium alloy segment domestic revenue decreased by 21.8% to RMB747,406,000 in 2024.

For the export, certain amount of high-end titanium alloy wires were exported to North America as the raw material for the 3D printing application, serving as a touchstone for entering the global market.

Our North American export initiative achieved strategic breakthroughs through premium titanium alloy wire specifically engineered for additive manufacturing applications. These high-precision products not only validated our technical capabilities in serving cutting-edge 3D printing sectors but also established critical supply chain credibility. This successful market penetration served dual purposes: commercially, it demonstrated our capacity to meet quality requirements for high-precision manufacturing applications; strategically, it created a replicable blueprint for global expansion into additive manufacturing markets and industrial laser sintering applications.

# Others — accounted for 2.1% of the Group's revenue in FY 2024

	For the year ended 31 December					
	2024	2024		2023		ge
	RMB'000	%	RMB'000	%	RMB'000	%
Export	100,976	100.0	131,826	100.0	(30,850)	(23.4)

In the others segment, the Group mainly procures raw materials like hardware, plastic and electronic components from suppliers, which will then be assembled and packed into power tool kits by ourselves or commissioned packagers for sale to overseas customers. The power tools currently sold include electric drill sets, electric batch sets, electric toothbrush sets, hardware sets, small fans and safety lights, etc. The entire segment is an export operation.

The others segment experienced a RMB30,850,000 sales contraction, primarily driven by weakened overseas demand for economy-tier hardware kits. This market downturn directly impacted downstream procurement patterns. Orders for entry-level hardware set reduced. The demand erosion reflected structural shifts in global DIY tool consumption, where inflationary pressures were accelerating market polarization between premium professional-grade equipment and budget-conscious consumer products.

In all, the total revenue from others segment decreased by 23.4% to RMB100,976,000 (2023: RMB131,826,000).

## FINANCIAL REVIEW

Net profit attributable to equity shareholders of the Company decreased by 3.1% from RMB370,209,000 in 2023 to RMB358,757,000 in 2024.

#### Revenue

Revenue of the Group for 2024 totalled RMB4,832,036,000 representing a decrease of 6.4% when compared with RMB5,163,306,000 in 2023. In 2024, the advanced materials industry confronted multidimensional market forces as our four core divisions charted divergent paths. DS and HSS achieved an increase in domestic revenue growth, while encountered intensifying export competition. Cutting tools achieved an increased export growth, while domestic sales experienced an erosion as domestic distributor clients continued to carry over cutting tools inventories from the previous fiscal year. Most critically, titanium alloy segment delivered 9.1% volume growth against 28.1% decrease in average selling price. This was mainly due to the increased requirements on utilization of recycled titanium alloy of a certain end customer. The completion time of the new EB furnace, for increasing the utilization of recycled titanium alloy, caused the Group to miss some orders for titanium alloy wire products with high average selling prices. The sales gap was filled by lower average selling price pure titanium wire. For an analysis of individual segments, please refer to the "Business Review" section.

### Cost of sales

The Group's cost of sales was RMB3,848,493,000 in 2024 representing a decrease of 4.3% as compared with RMB4,019,922,000 in 2023, as a result of the decrease in revenue and related subcontracting fee.

# **Gross margin**

In 2024, the overall gross margin was 20.4% (2023: 22.1%). Set out below are the gross margin of the five segments of the Group in 2024 and 2023:

	2024	2023
DS	12.1%	15.5%
HSS	15.2%	17.2%
Cutting tools	30.3%	29.1%
Titanium alloy	33.5%	31.6%
Others	15.5%	17.1%

DS

One of the major export markets for the Group's high alloy steel products was Europe. Faced with the dual pressures of economic contraction in the region and fierce price competition from local competitors, adding the Euro exchange rate continued to be weak, resulting in products priced in Euros lowering the average selling price of the export products and compressed export gross margins. In all, the gross margin decreased to 12.1% in 2024 (2023: 15.5%).

## HSS

Similar to the DS situation, intensifying competition in the overseas market, and the Euro exchange rate restricted product pricing. Both exerted pressure on the export gross margin. The overall gross margin was compressed to 15.2% in 2024 (2023: 17.2%).

# Cutting tools

The gross margin of cutting tools increased from 29.1% in 2023 to 30.3% in 2024, primarily driven attributable to increased capacity utilization at the Thailand production facility driven by export growth, which reduced average unit costs.

# Titanium alloy

The gross margin of titanium alloy increased from 31.6% in 2023 to 33.5% in 2024. The purchase price of its raw material, titanium sponge, decreased in 2024. In addition, the adoption of short-process technology and continuous optimization of production processes for titanium wire used in the consumer electronic industry reduced the production costs of titanium wire. All these caused an increase in gross margin.

#### Others

The procurement and assembly cost of power tool kits increased slightly during the period, causing the decrease of the gross margin of others segment from 17.1% in 2023 to 15.5% in 2024.

#### Other income

In 2024, USD appreciated significantly against the RMB. The Group's net monetary assets denominated in USD were higher in 2024 than in 2023, resulting in larger exchange gains on net monetary assets denominated in USD at the end of the year. On the other hand, fewer local government subsidies were received in 2024 than in 2023. Offsetting the above impact, other income increased from RMB127,253,000 in 2023 to RMB176,215,000 in 2024.

## **Distribution costs**

Distribution costs in 2024 were RMB144,072,000 (2023: RMB118,053,000). Although export revenue decreased by 9.6% from RMB2,569,154,000 in 2023 to RMB2,320,924,000 in 2024, the freight and related logistics expenses increased due to (1) the unresolved Red Sea Crisis caused a longer route around the Cape of Good Hope, leading to an increase in shipping unit costs; and (2) the anticipation of increased tariffs causing orders from United States were placed in advance, resulting in tight shipping capacities and high sea freight rates. In 2024, distribution costs amounted to approximately 3.0% of revenue (2023: 2.3%).

# Administrative expenses

Administrative expenses increased from RMB160,122,000 in 2023 to RMB172,675,000 in 2024. The increase was mainly due to (1) the increase in the number of administrative staff; and (2) increased depreciation and insurance costs on the newly added factory and office buildings. In 2024, administrative expenses amounted to approximately 3.6% of revenue (2023: 3.1%).

# Research and development expenses

Major component of the research and development expenses was the material consumed in the projects. Projects that took place in 2024 used more relatively cheap recycled material, resulting in a decrease in the cost of materials consumed by the project. Further, some projects were in late stage which required less material input. As a result, the research and development expenses decreased from RMB312,361,000 in 2023 to RMB301,548,000 in 2024.

## Other operating expenses

In 2023, an impairment provision of approximately RMB48,487,000 was provided according to the credit loss estimation policy of the Group. During 2024, tighter control was applied and no significant additional impairment provision was required. Other operating expenses decreased from RMB53,482,000 in 2023 to RMB(1,055,000) in 2024.

## **Net finance costs**

The Group's net finance costs decreased from RMB156,963,000 in 2023 to RMB138,121,000 in 2024, primarily attributed to (1) lower average balance of interest-bearing borrowings, and (2) favorable monetary policy tailwinds that drove the average borrowing rate down from 4.77% to 4.10%.

### **Income tax**

As set out in Note 8 to the consolidated statement of profit or loss, the Group's income tax expense decreased from debited RMB45,542,000 in 2023 to RMB7,974,000 in 2024.

# Profit for the year attributable to equity shareholders of the Company

As a result of the factors set out above, the Group's share of profit decreased by 3.1% from RMB370,209,000 in 2023 to RMB358,757,000 in 2024. The margin of profit attributable to equity shareholders of the Company increased from 7.2% in 2023 to 7.4% in 2024.

# Total comprehensive income for the year attributable to equity shareholders of the Company

In 2024, total comprehensive income for the year attributable to equity shareholders of the Company was RMB271,536,000 (2023: RMB349,996,000) after taking into account foreign currency translation differences and fair value adjustments on equity investments.

During the year, the Group debited to other comprehensive income a foreign currency translation difference of RMB107,458,000 (2023: credited RMB12,962,000) related to translation of financial statements of overseas subsidiaries and overseas equity accounted investees.

The Group also recognised a fair value loss in the consolidated statement of profit or loss and other comprehensive income of RMB19,782,000 (2023: income of RMB7,328,000) on its equity investments.

# Other financial assets

Other financial assets held by the Group mainly included equity interests in Bank of Jiangsu Co., Ltd., 雲南菲爾特環保科技股份有限公司 (Yunnan Filter Environment Protection S.&T. Co., Ltd.\*), Nanjing Xiaomuma Technology Co., Ltd., JM Digital Steel Inc.. 寧波梅山保税港區啟安股權投資合夥企業(有限合夥) (Ningbo Meishan Free Trade Port Oian Equity Investment Partnership (Limited Partnership)\*), 中金佳泰叁 期(深圳)私募股權投資基金合夥企業(有限合夥) (CICC Jiatai Private Equity Fund III (Shenzhen) Partnership (Limited Partnership)\*), Ji'nan Financial Fosun Weishi Equity Investment Fund Partnership (Limited Partnership), 丹陽博雲恒大天工產業投資中心 (有限合夥)(Danyang Boyun Hengda Tiangong Industrial Investment Center (Limited Partnership)\*) and 蘇州毅鳴新材料創業投資合夥企業 (有限合夥) (Suzhou Yiming New Materials Venture Capital Partnership Enterprise (Limited Partnership)\*). All of these investments were stated at their fair value as at 31 December 2024. Other than the fair value loss, net of tax, of RMB19,782,000 (2023: loss of RMB7,328,000) recorded in the other comprehensive income in 2024, the fair value loss of RMB4,769,000 was recorded in other income (2023: loss of RMB4,420,000) for financial assets measured at fair value through profit or loss during the year.

### Trade and bills receivable

Trade and bills receivable decreased from RMB2,915,486,000 in 2023 to RMB2,816,086,000 in 2024. This was mainly because tighter control applied on trade receivable.

Loss allowance of RMB143,288,000 (2023: RMB149,555,000) accounted for 4.8% (2023: 4.9%) of the trade and bills receivable.

# **INDUSTRY REVIEW**

In 2024, China's economy maintained steady growth amid internal and external challenges, with the annual gross domestic product (GDP) reaching RMB134.9 trillion, at a growth rate of 5.0%, which is in line with the target set by the government. During the year, the Chinese government intends to accelerate the establishment of a domestic circulation and promote high quality development by introducing several major policies to stimulate domestic demand and boost the economy. The large-scaled equipment replacement and consumer goods "trade-in" policy has successfully encouraged consumers to replace items such as old cars and household appliances with new products through fiscal subsidies and promotional activities, and supported upgrades in the industrial sector. This series of measures has directly boosted investments and consumer demands. Data showed that the "Two New" policy led to a year-on-year increase of 15.7% in investment in equipment and tools purchased during the year, contributing 67.6% to the overall investment growth for the year; meanwhile, the policy drove the sales of bulk consumer durables to exceed RMB1.3 trillion. The implementation of the

policy has boosted the public's enthusiasm for replacement and prompted the related industries towards intelligence and high-end transformation and upgrades. For example, in the fields of automotive and household appliances, high-tech and high energy efficiency products are highly favored, which sales proportion of new energy vehicles and first grade energy-efficient household appliances increased significantly. Promoting these high-end products implies a simultaneous increase in demand for high-end materials, such as advanced alloy steel and new alloys, with policies exerting a positive pull effect on the high-end materials market.

Under this major premise, China's automobile production and sales in 2024 reached new highs again, with a similarly significant impact on the household appliance market. In 2024, more than 36 million consumers nationwide participated in the renewal of eight major categories of household appliances, purchasing a total of over 62 million units of household appliance products, driving sales revenue of approximately RMB270 billion. The scale of the automobile and household appliance industries continues to expand, indicating a simultaneous increase in demand for high-quality high-end materials required by the industry. The large-scale equipment replacement initiative directly benefits the machinery and machine tool industries. In 2024, the central budget for ultra-long-term special treasury bonds to support equipment upgrades in sectors such as industry and transportation. The total number of equipment updates in key areas nationwide exceeded 20 million units (sets). Industrial enterprises took advantage of the policy tailwind to accelerate the elimination of outdated equipment, purchase advanced equipment such as high-end CNC machine tools, creating a new market space for high strength and high performance alloys and other materials.

In recent years, the high-end materials market has shown a trend of "diminishing prices and growing sales volume", which the market demand and production volume grow simultaneously while product unit prices continue to decline. Such phenomenon is mainly due to multiple factors, among which the expansion of production capacity and increase in supply have intensified competition in the market, eventually, resulting in reduction of prices by some manufacturers to maintain their respective market share. At the same time, the lower prices of upstream raw materials and auxiliary materials, such as sponge titanium and specialty steel, provided room for downstream high-end material manufacturers to adjust their prices. In addition, technological advancements have improved production efficiency, reduced production costs, and facilitated a reasonable market price adjustment indirectly. Even so, the robust domestic demand and the acceleration of domestic substitution continue to create profit opportunities for domestic high-end material suppliers.

Tool Steel: Technological upgrades drive competitiveness, market applications continue to expand, leading to industry demand growth, achieving technological breakthroughs and import substitution.

In 2024, special steel became an important sector for the steel industry to compete in a new track and cultivate new quality productivity. The special steel industry maintained steady growth through increased technological innovation, adjustment of product structure, and active expansion into international markets, demonstrating higher application value in multiple fields.

With the rapid development of high-end manufacturing industries such as automotive, aerospace, machinery manufacturing and energy, the demand for high-performing special steel has significantly increased. The demand for light weight and high strength materials in the automotive industry has led to an increase in the application of special steel in components, while the aerospace sector continues to see a rising demand for high temperature resistant and high strength special steel. In addition, the improvement in domestic high-end special steel technology has accelerated the trend of import substitution, which further expanded the market share of domestic special steel and significantly enhanced the competitiveness among the industry.

In 2024, the market size of mold industry in China was approximately RMB302.833 billion, indicating its key position in the manufacturing industry. Domestic mold enterprises have achieved significant breakthroughs in technological upgrades, intelligence and digital applications, with the continuous growth in market demand, particularly in the fields of high precision and personalized customization. During the year, the total import of molds in China was USD1.458 billion, showing a declining trend as compared to previous years, which indicated a gradual improvement in the self-sufficiency of the domestic mold industry. With breakthroughs in high-end molding technology, the reliance of domestic enterprises on imported products has decreased, further consolidating China's position as a global molding manufacturing hub.

In terms of overseas markets, Europe has always been one of the important destinations for China's steel exports. Looking back at 2024, the European tool steel market faced the dual challenges of supply and demand imbalance and price pressure. The slowdown in the manufacturing sector have led to continued weak demand in the region, while the uncertainty in the global economy has prompted downstream companies to be highly sensitive to cost control and to favor more price-competitive materials.

In recent years, with the transformation and enhancement of China's manufacturing industry and the increasing demand for high-end manufacturing, the market demand for powder metallurgy HSS has been expanding continuously. Domestic enterprises are actively investing in research and development in order to enhance product quality and technological standards, gradually breaking the technological monopoly of foreign companies, and accelerating the import substitution process. In the past, powder metallurgy HSS technology was primarily controlled by foreign companies. However, as the Group made breakthroughs in key technological areas such as powder preparation, forming, sintering, and heat treatment, a relatively complete technological system has established. With the continuous advancement of technology, the performance of domestic powder metallurgy HSS products has gradually approached international standards and is widely used in the aerospace, automotive manufacturing, high-end tools, and mold industries. In addition, the Group not only introduces and assimilates international advanced technologies but also strengthens independent innovation and establishes deep cooperation with universities and research institutions, promoting technological upgrades and application expansion through industry-university-research joint development.

With the increasing product competitiveness, powder metallurgy HSS enterprises in China are actively expanding into international markets, and increasing their global market shares continuously. Benefiting from enhanced technological capabilities and production cost advantages, the international competitiveness of China's powder metallurgy HSS products has significantly strengthened. At the same time, the application of intelligent production and digital management has further enhanced product quality and production efficiency, making China's powder metallurgy HSS more attractive in the global market.

Despite the fact that China's powder metallurgy HSS market shows a certain trade surplus, some high-end powder metallurgy HSS products still rely on imports. However, with the Group actively introducing advanced technologies and equipment, and accelerating independent research and development, the production capacity and technological level of domestic powder metallurgy HSS are expected to further improve, leading to a continuous decrease in import dependency. With the "Belt and Road initiative" advancement and the strengthened international trade cooperation, the international market competitiveness of China's powder metallurgy HSS products has further improved, aiding the development of China's manufacturing industry towards high-end.

# **Cutting Tools: Manufacturing Industry Recovery, Continuous High-End Transformation of the Industry, Accelerated Domestic Substitution Process**

In 2024, driven by policy support and increased investment in equipment renewal, China's manufacturing PMI remained at the expansion level above 50 in the fourth quarter. Indicating a rebound in manufacturing production and demand. The industry has benefited significantly, among which, the metal cutting machine tools and metal forming machine tools industry continues to grow, further boosting the demand for cutting tools market. Metal-cutting machine tools rely on high performance cutting tools to enhance processing precision, while metal-forming machine tools require specialized tools for efficient processing, these demands have driven the continued expansion of the cutting tools market in China. In 2024, the total scale of the cutting tool market in China surpassed RMB55 billion, with high-end tools accounting for over 35%, representing a year-on-year growth of 15%.

With the rapid improvement of domestic technology levels, the import dependency of high-end cutting tools has further decreased to 35%, indicating an accelerated process of domestic substitution, promoting industrial upgrading. Domestic enterprises continue to innovate in material research and development, coating technology and manufacturing precision, enabling domestic cutting tools to approach or surpass imported products in terms of durability, processing efficiency, and stability. Moreover, and the price is generally lower than similar imported cutting tools, demonstrating significant advantages advantage in cost-effectiveness. However, in the overall market environment, downstream enterprises focus more on the cost-effectiveness of cutting tools, with a significant increase in price sensitivity, leading to a "diminishing prices and growing sales volume" trend in the domestic high-end cutting tool market. This phenomenon further prompts enterprises to enhance product competitiveness by upgrading technology, extending tool life, and improving processing efficiency in order to maintain profit margins and expand market share in a price-constrained market environment..

In addition to the upgrade and expansion of the domestic market, the global DIY retail market continues to grow, driving the expansion of China's tool product exports. In 2024, China has leveraged its comprehensive industrial system and strong supply chain advantages, which became an important support for the global export of tool products. With the recovery of overseas market consumption willingness and the increase in infrastructure and maintenance demand, according to statistics from the China Machine Tool Industry Association based on customs data, the export of China's cutting tools in 2024 was RMB25.7 billion, representing a year-on-year increase of 9.8%. This growth not only reflects China's critical position in the global supply chain but also indicates a strong recovery in global market demand for DIY tools, further driving the development of China's cutting tool industry.

# Titanium alloy: Application fields continue to expand, driving high-end market demand

With the development of the global high-end manufacturing industry, the titanium alloy market is showing positive changes in terms of production growth, application expansion, and technological upgrades. As a significant participant in the global titanium industry, China is experiencing increasingly intense competition driven by the improvement of the industrial chain and market demand, leading to further optimization of the market structure.

In terms of application areas and market demand, titanium alloy is widely used in consumer electronics products such as smartphones and smart wearable devices due to its advantages of light weight, high strength, and corrosion resistance. Particularly, its penetration rate in the fields of smartphone mid-frames and folding screen hinges is continuously increasing, with the penetration rate of smartphone mid-frames expected to reach 40% by 2027. In the aerospace sector, titanium alloys are primarily used in critical components such as aircraft beams, bulkheads, engine cowlings, and exhaust systems. With the advancement of global aviation technology and the increase in aircraft orders, market demand continues to rise. In addition, due to its biocompatibility and corrosion resistance advantages, the application of titanium alloy in medical device fields such as artificial joints, orthopedic implants, and dental materials is also rapidly growing. Meanwhile, the applications in the fields of shipbuilding, chemical equipment, and sports equipment have also been further expanded due to the development of new material technology.

In recent years, competition in China's titanium alloy market has intensified, with stateowned enterprises maintaining an advantage in the high-end titanium material sector, while private enterprises have expanded their market share through technological upgrades and market expansion. The participation of foreign enterprises has further intensified competition, leading to a more diversified industry landscape. Currently, China has established a complete titanium industry chain, covering all aspects from mining and selection, metallurgy, processing, equipment manufacturing to engineering applications. With technological innovation and industrial upgrading, the market is developing towards high-end and high value-added directions. The government continues to intensify its support for the titanium industry, including policies to support technological innovation, promoting industrial upgrading and the development of the high-end titanium alloy market. Nevertheless, despite favourable policies and the continuous expansion of application scenarios, the external dependency on high-end titanium raw materials remains relatively high, and the competition in the international market is intensifying, posing certain challenges for enterprises. However, with the advancement of global technology and industrial transformation, the titanium alloy market still possesses vast growth potential, and the future market will further extend into high-end application fields.

# **MARKET REVIEW**

### **Tools steel**

In 2024, China's special steel industry continued to grow. According to a report by China Steel News Network, the output of special steel, including stainless steel, will continue to grow in the future, with its proportion steadily increasing and quality further improving. This growth is mainly driven by the expanding demand from downstream high-end manufacturing industries, including the increasing demand for high performance materials in sectors such as machinery manufacturing, automotive, and aerospace. In addition, the development of the new energy industry and highend equipment manufacturing has further driven the demand in the special steel market, promoting the industry's advancement towards higher technological standards. According to the report by Qianzhan Industrial Research Institute, as China's steel industry enters the stage of high quality development during the "14th Five-Year" period, the special steel market is expected to continue its steady growth. In the future, with technological upgrades, increased environmental protection requirements, and supply chain optimization, the special steel industry will further develop towards high added value and high performance, providing stronger support for the domestic high-end manufacturing industry.

In 2024, with the continued development of the automotive and household appliance industries, the demand for high-end DS will further expand. In the manufacturing processes of automobiles and household appliances, the demand for DS materials with high precision, high wear resistance, and high strength continues to rise. The development of new energy vehicles has increased the demand for light weight and high strength components, further driving the application of high performance DS. At the same time, the intelligent and high-end development of the home appliance industry has increased its reliance on precision molds, leading to a continuous rise in demand for high-wear-resistant and high-toughness DS.

During the year, China's automobile industry continued to improve, with annual production and sales exceeding 31 million vehicles, among which new energy vehicles surpassed 10 million vehicles, achieving a market penetration rate of 40.9% and an export growth of 19.3%. At the same time, the household appliance industry has been experiencing stable growth under policy support, with both domestic and international demand driving market expansion. These trends have provided strong demand support for the DS market. The National Development and Reform Commission and the Ministry of Finance jointly issued "Several Measures to Intensify Support for Large-scale Equipment Renewal and Old-for-new Replacement of Consumer Goods"(《關於加力 支持大規模設備更新和消費品以舊換新的若干措施》), which includes supporting the scrapping and renewal of old operational trucks, raising subsidy standards for new energy busses and power batteries, and enhancing subsidy standards for vehicle scrapping and renewal. The policy also encourages consumers to replace old home appliances with new ones by providing purchase subsidies, thereby stimulating market demand growth. It is expected that the continuous development of the automobile and household appliance industries will further expand the demand for high-end DS.

During the year, China's integrated die-casting technology developed rapidly, becoming an important technology driving the transformation and upgrading of automobile manufacturing. The technology forms body structural components in one step through large die-casting equipment, significantly enhancing production efficiency and reducing costs compared to the traditional "stamping + welding" method. With the rapid growth of the new energy vehicle market, the application scope of integrated die-casting technology is expanding and has received strong support from national and local governments. It is expected that the application of relevant technologies will become more mature and popular in 2025.

As the core material of integrated die-casting processes, DS must possess excellent high-temperature strength, thermal fatigue resistance, and wear resistance to cope with the high-temperature and high-pressure environment in large-scale production processes. Therefore, the widespread adoption of integrated die-casting technology has further increased the market demand for high-end DS and driven enterprises to enhance technological research and development to meet the stringent requirements of die-casting molds in the new energy vehicle sector.

The powder metallurgy HSS market in China has currently reached a certain scale. With the enhancement of technological capabilities of domestic enterprises and the expansion of market demand, the market size is expected to further expand. However, with intensified market competition and increased demand for product differentiation, companies are enhancing technological innovation and brand building to increase product added value and market competitiveness, thereby consolidating their industry advantages. Within the year, the manufacturing industry both domestically and internationally has continued to recover, leading to increased demand for high performance cutting tools and molds, as well as rapid development in high-end manufacturing sectors such as aerospace and automotive. The market demand for powder metallurgy HSS is expected to continue expanding.

## **Cutting tools**

The cutting tools market is closely related to the machine tool industry. With the downstream machine tool manufacturing enterprises strengthening cost control, and placing increasing emphasis on the cost-effectiveness of cutting tools, the domestic highend cutting tool market has also undergone changes. In recent years, the technological advancements in domestic high-end cutting tools have enhanced the competitiveness of domestic products in terms of machining precision, durability, and price advantages. This has prompted downstream enterprises to accelerate their shift towards using domestic suppliers, reducing reliance on imported high-end cutting tools.

According to the research by Rui Lue Consulting (睿略咨詢研究), the global HSS metal cutting tools market size reached RMB21.749 billion in 2023, with the market size in China being RMB6.794 billion. It is expected that the global market will increase to RMB30.995 billion by 2029, with a CAGR of approximately 5.84%. With the recovery of the domestic machine tool industry and the growth in demand for high-end manufacturing, the Chinese market is expected to maintain stable growth and accelerate the process of import substitution. The report also anticipates that the global tool market size will exceed USD60 billion for the first time in 2024, and reach USD67.3 billion in 2026, with an average annual growth rate of approximately 4%, indicating a continuous increase in global market demand. With the U.S. market benefits from the growth in demand for construction maintenance, the deepening of DIY culture, and the need for product iteration, with the future market growth rate expected to reach 5.9%, driving the increase in export demand for China's tool products and providing broader development opportunities for the cutting tool market.

## Titanium alloy

In 2024, China's sponge titanium market faces excess capacity and price pressure, with prices likely to remain low in the short term, while the price of titanium and titanium alloy materials fell less than that of sponge titanium, indicating a strong demand from the downstream applications. In particular the consumer electronics industry, which opened up a huge and ubiquitous new application field for titanium alloy. With the sustained growth in global high-end market demand, especially in the fields of aerospace, medical devices and new energy, it is expected that the titanium alloy market still has long-term growth potential, which provides a favourable operating environment for the Group. The Group will reduces production costs and enhances product added value by optimizing procurement and smelting processes to expand market opportunities.

With the increasing technological thresholds and the expansion of market demand, companies with advanced processes and international certifications will occupy a more significant position in the global titanium alloy industry chain, further promoting the development of China's titanium alloy industry towards the high-end market.

## **Group Achievements**

The Group achieved a series of significant breakthroughs in technological innovation from the first quarter of 2024 to 2025, while actively promoting intelligent manufacturing, green development, and digital transformation. The Group has further consolidated its leading position in the global high-end materials market by successfully leading national key research and development projects, obtaining international certifications, optimizing industrial chain cooperation, and enhancing brand value, thereby laying a solid foundation for sustainable growth in the future.

At the beginning of 2024, the Group's tool steel and titanium products have been successfully passed the rigorous review by a renowned new energy vehicle company, marking a high recognition of the Group's product quality and technical strength by the leading automotive industry. This lays a solid foundation for direct cooperation with the new energy vehicle company in the future and further enhances the Group's market competitiveness in the new energy vehicle industry chain. With the sustainable growth in demand for new energy vehicles, the Group will continue to deepen cooperation with brands, promote the wider application of high-end materials within the industry, and accelerate market deployment in the new energy sector.

During the year in review, the Group officially established a technical committee to comprehensively integrate internal and external technical resources, deepen technological innovation and industrial upgrading, and further consolidate its technological advantages in the high-end materials and precision manufacturing sectors. To promote various technological breakthroughs, the Group has successively introduced top tool technology experts from Sweden and South Korea, comprehensively enhancing research and development capabilities and product competitiveness. Meanwhile, the Group has initiated the planning and construction of a Precision Tools Research Institute, focusing on the research and development of cutting-edge technologies and application breakthroughs, aiming to establish a globally leading precision tools technology platform and promote the advancement of China's high-end tools industry to a higher level.

In July 2024, the Group successfully developed double spiral hole carbide rods, which has passed the preliminary testing by customers and is ready for mass production and supply. The product could be used in the manufacturing of high-performance carbide drills, which are widely applied in the automotive, aerospace, and precision mold sectors. By optimizing the cooling effect through spiral hole design, the processing efficiency is enhanced and the useful life of the drills is extended. This technological breakthrough has enhanced the Group's market position in the field of hard alloys and provided superior material solutions for the global high-end manufacturing industry.

In November 2024, the Jiangsu Trademark Association officially announced the latest recognition results, and the trademark under the Group was included in the list of "Jiangsu Province Well-Known Trademarks" (江蘇省高知名商標) with a validity period of three years. This recognition not only reflects the market influence and industry credibility of the Tiangong brand, but also further strengthens the brand competitiveness of the Group in both domestic and international markets.

In January 2025, the TGE23 series products produced by the Group successfully passed the certification of the North American Die Casting Association (NADCA), becoming the first enterprise in China to receive this honor. The certification is highly authoritative, with only a limited number of companies worldwide having obtained it. The Group has successfully broken through with its excellent product quality and technological strength, providing strong endorsement for further expansion into the North American and international markets.

In February 2025, Jiangsu Tiangong Technology Company Limited and Jiangsu Tiangong Tools New Materials Company Limited, subsidiaries of the Company, were successfully selected for the Jiangsu Province 2024 "Green Factory" list. This honor highlights the Group's outstanding performance in green manufacturing, energy conservation and emission reduction, as well as sustainable development. In recent years, the Group has continuously optimized the production process, increased the proportion of recycled waste, and advanced carbon footprint management to provide carbon content values for export products, thereby meeting the stringent requirements of international markets for green environmental standards.

During the period, the Group collaborated with Tsinghua University, Contemporary Amperex Technology Co. Limited, and eight other renowned entities to jointly initiate the national key research and development project—'Research and Application of Key Technologies in Powder Metallurgy and Additive Manufacturing for New Die Casting Mold Steel.' The implementation of this project will accelerate China's technological breakthroughs in the field of DS manufacturing and promote the industrial application of high-end die-casting mold materials. As the leading entity in DS manufacturing with powder metallurgy technology, the Group has not only enhanced its research capabilities in the field of advanced materials but also secured an important position in the layout of national strategic emerging industries.

In March 2025, second phase of EB Furnace project successfully completed its hot test on casting high-quality titanium ingots. This breakthrough further consolidates the Group's technological advantage in the high-end titanium and titanium alloy sector. Since the commissioning of the first EB furnace at the beginning of 2024, the Group has continuously optimized the smelting process, overcome challenges, and successfully smelted several high-end titanium alloy grades. In addition, the Group's innovations in return material processing and recycling technology have effectively improved resource utilization, reduced production costs, and met the stringent environmental and ESG standards required by domestic and international customers. This technological breakthrough not only strengthened the Group's competitiveness in the global high-end titanium alloy market but also promoted the expansion of the Group's products in the consumer electronics, aerospace fasteners, and medical devices sectors.

During the period, the Group successfully delivered its first aerospace-grade titanium alloy wire order for fasteners. The titanium alloy wires delivered have undergone multiple technical breakthroughs and process optimizations by the Group, ultimately meeting the high standard requirements of the aerospace sector. It successfully passed rigorous certification processes and material testing, earning customer recognition. This breakthrough not only demonstrates the Group's technological strength but also aligns with the nation's high attention to the aerospace industry. In recent years, China has actively promoted the development of the commercial space industry and has consistently emphasized its strategic importance in the Two Sessions work report. From the proposal of "actively creating new growth engines" in 2024 to further emphasizing "cultivating and expanding" and "promoting safe and healthy development" in 2025, national policies have provided ample development space for the aerospace industry. The Group will continue to increase investment in technology research and development, promote the localization process of high-end materials to meet the growing demand for commercial aerospace, and assist China's aerospace industry in reaching new heights.

As a leading enterprise in the new materials industry, the Group actively fulfills its social responsibilities while promoting technological innovation and business development. At the beginning of this year, the subsidiary of the Group, Jiangsu Tiangong Tools New Materials Company Limited, was awarded the title of the third "Jiangsu Charity Star" in recognition of its long-term contributions to charitable and public welfare undertakings. The Group has long been committed to funding education and rural revitalization, with a total donation amount of several ten million dollars. The Group will continue to fulfill its social responsibility and contribute to the sustainable development of the nation in the future.

In terms of the capital market, the Group has actively repurchased shares, conducting a total of 51 share repurchases in 2024, with an accumulated repurchase quantity reaching 50 million shares, marking the largest annual repurchase effort since its listing in 2007. This move demonstrates the Group's strong confidence in the future business development and helps to enhance earnings per share, further increasing shareholder value.

## Operation Strategy of the Group

The Group has been leading the industry with its professional equipment, technology and management advantages. Over the years, the Group focused on research and development as well as cost control. It is committed to transforming its longstanding achievements and experience into innovative applications in the advanced materials industry. This effort aims to empower the industry's development and upgrade, while also striving to meet the domestic market demand and gain international market share. Precise strategy, efficient execution ability and world leading technology are the three cores of the Group.

# Actively Respond to Changes in Domestic Demand

In response to the national initiative to expand domestic demand and in alignment with consumer upgrades and industrial transformation, the Group has actively responded to market changes on multiple fronts. We have accelerated the development of advanced material technologies and capacity layouts to meet the demands of core industries such as new energy vehicles and consumer electronics. To adapt to the trends of lightweight and cost-effective new energy vehicles, the Group has expedited the development of integrated die-casting DS, introducing materials with high wear resistance and toughness to enhance the lifespan and stability of die-casting DS. This aids new energy vehicle manufacturers in improving production efficiency and product performance. At the same time, the second phase of the Group's EB furnace project was successfully launched, expanding our refining capabilities for high-purity titanium and titanium alloys to meet the growing demands in the new energy, aerospace, and medical equipment sectors.

In the fields of powder metallurgy and precision manufacturing, the Group has strategically deployed to support smart manufacturing and high-end industrial applications. The Group has successfully led the national key research and development program on "Key Technologies in Powder Metallurgy and Additive Manufacturing for New Die-Casting Die Steels", further consolidating our technological edge in the field of high-end die materials. Additionally, with upgrades in our precision tools business, we have initiated the construction of a Precision Tools Research Institute and recruited industry experts from Sweden and South Korea to deepen our research capacity in high-end cutting tools, enhancing the competitiveness of domestically produced high-performance tools and meeting the domestic manufacturing industry's demand for cost-effective products. The Group will continue to drive industrial upgrades with technological innovation, actively expand into high-end markets, and support the development of China's high-end manufacturing sector, thereby providing strong support for the growth of the domestic market.

## Export Business Expansion

The Group has profound insight into the industry's development trends and is committed to transitioning its products into the realm of deep processing. This strategic structural adjustment has allowed the Group to optimize its product structure and position itself at the forefront of the high-end market. The Group aims to develop and supply more refined, high value-added tool steel products, catering to the increasing global demand for high-quality special steel.

Guided by its globalisation strategy, the Group has established a diversified overseas sales network. The second phase of the plants in Rojana Rayong Pluak Daeng Industrial Park, Rayong, Thailand was officially completed. The total annual production capacity of the two-phase project amounted to approximately 100 million pieces, attempting to expand its annual production capacity to 140 million pieces. This project not only strengthens the production capacity of the Group but also actively responds to the demand in overseas markets. It also demonstrates the Group's keen insight into global market trends. In addition, the Group has actively pursued a global strategy, having earlier established a tool steel production base in Thailand to ensure products is produced locally. This is to respond to international market shifts and export tariff challenges, further reducing export costs and enhancing competitiveness. Through this strategic deployment, the Group not only effectively addresses trade barriers but also enhances the flexibility of our supply chain in providing more efficient products and services to global customers. The Group will continue to optimize and consolidate its current overseas layout in respond to the recovery of overseas demand and global uncertainties.

## **Product Development Strategy**

## Powder Metallurgy Industry

With the official completion and launch of its first large-scale tool steel powder metallurgy production line in the PRC in December 2019, the Group successfully entered the powder metallurgy industry. As the only enterprise in the domestic cutting tool sector with a complete industry chain from producing high-end powder materials to powder tools, the Group has made significant breakthroughs in overcoming foreign technical monopoly and expending into the high-end market.

In the first half of 2024, the Group continued with the transformation towards high-end powder metallurgy products, vigorously promoted the application of powder metallurgy HSS cutting tools, including powder metallurgy taps and powder metallurgy drill bits and achieved import substitution. As these projects continue to advance, the Group's high-end product matrix has been further improved, driving the steady growth of product sales, unleashing our profitability gradually and, therefore, demonstrating higher competitive advantages and market expansion potential.

In respect of policies, the "Resolution of the Central Committee of the Communist Party of China on Further and Comprehensively Deepening Reform to Advance Chinese Modernization (中共中央關於進一步全面深化改革、推進中國式現代化的決定)" had been reviewed and approved on the Third Plenary Session of the 20th Central Committee of the Communist Party of China (二十屆三中全會) (the "Resolution"). The Resolution has indicated that the long-term mechanism by which private enterprises could participate in the construction of major international projects will be improved, to support capable private enterprises in leading major national technological breakthroughs. As the first domestic enterprise equipped with powder metallurgy technology, the Group has ended the foreign monopoly and will continue to benefit from the implementation of the policy in relation to the "Resolution".

## *Integrated Die-casting of DS Industry*

The Group initiated the construction of a 7,000-ton fast forging project in 2022. The goal of this project is to further enhance the Group's product structure system to meet the increasing demands for mold materials amid the comprehensive technological and equipment upgrades in downstream industries, including the integrated die-casting sector. In August 2023, the 7,000-ton fast forging project was officially launched, marking an end to domestic reliance on imported oversized DS. Simultaneously, the Group has established connections with several well-known new energy automobile manufacturers, laying the groundwork for future material research and development, as well as market expansion.

## Diversified Cutting Tool Industry

As the only domestic enterprise with a full industrial chain from the production of highend materials to cutting tools, in recent years, the Group has continuously improved material performance and led the upgrading of cutting tools. During the year under review, the Group's cutting tools products covered traditional HSS cutting tools, powder metallurgy HSS cutting tools and carbide cutting tools. In particular, carbide products included three major products, namely blades, cutting tools and rods. These products collectively form a complete and specialized cutting tools product system capable of meeting cutting needs in different fields and levels.

During the period under review, the Group achieved a major technological breakthrough in carbide products. Showing excellent product performance, the self-developed double spiral hole rod (雙螺旋孔棒材) has passed the preliminary testing by customers and is ready for mass production and supply. Designed with screw holes for producing internal cooling carbide drills, the bar can effectively reduce the heat generated during high-speed cutting, and thus extend the useful life of the drills, thereby enhancing processing efficiency.

In recent years, the Group has conducted in-depth optimization on the material composition, structure and manufacturing process through numerous experiments, simulation and analyses, and has successfully developed 44 specifications of double spiral hole rod (雙螺旋孔棒材) to meet the production needs of various carbide drills, which gradually increase the market influence of the Group's products in automotive, aerospace and precision mold industries. The Group intends to actively develop into a one-stop solution provider for cutting tools, which could seize the opportunities brought by the continuous growth in demand for different cutting tools products and further consolidate the Group's leading position in the global cutting tools market

### Titanium Alloy Industry

TG Tech, a subsidiary of the Company, has entered into various important cooperation involving the use of titanium and titanium alloy wire produced by TG Tech to manufacture frames which are then used by renowned consumer-electronics manufacturers as a key component of their end products. Since the formation of this cooperation, the average selling price, revenue, and business contribution of the Group's titanium alloy products have significantly increased, becoming a major driving force behind the overall revenue growth of the Group.

TG Tech is currently applying for a listing on the Beijing Stock Exchange to raise funds for its development and expansion plans, under which the production lines for high-end titanium and titanium alloy rods and wires will be constructed to further advance the strategy of providing of titanium materials with higher added value. Besides expanding the production of high-end titanium and titanium alloy wires, TG Tech will enhance its product performance, thereby improving the market competitiveness of the products to meet the growing market demand.

The rapid growth of the titanium alloy business is expected to become a new growth engine for the Company, driving the Group's continuous advancement in diversification and high-end development, further reinforcing its leading position in the industry.

The Group's technical strength in the field of advanced materials continues to receive high recognition in the international market. During the reporting period, we have officially received orders from leading North American metal 3D printing companies and have entered the initial supply phase, marking our successful entry into the global additive manufacturing industry chain and further verifying the Group's technological breakthroughs and market competitiveness in the field of titanium materials for additive manufacturing. This not only further consolidates our leading position in the global high-end materials market but also lays a solid foundation for more international collaborations in the future, accelerating the integration of Chinese high-end titanium alloy materials into the global supply chain.

# **Marketing strategy**

The Group has gradually upgraded and transformed from a material supplier to a material service provider, deeply involved in all aspects of the industry chain and established close cooperation with downstream high-end heat treatment technical service and piece-cutting suppliers, establishing cooperation companies to provide technical support to downstream customers, enhancing product performance to reduce the defect rate of customer finished products, and enhancing the customer service system to improve after-sales service capability. Through understanding customers' needs, which strengthen product research and development and improvement and achieved closed-loop management of current development of product.

At the same time, the Group actively promotes the market development of high-end materials, such as powder metallurgy HSS and large-size mold steel. By establishing direct contact with end-users, the Group gains an in-depth understanding of market needs, thereby providing professional and customized services

## **Green Development**

The Group actively advocates for a circular economy model and is committed to recycling and sustainable resource management with a special emphasis on saving materials during our production processes. As a model in the new material industry adopting the shortened production processes, the Group consistently focuses on green development by recycling waste materials and optimizing production processes to reduce carbon emissions. The Group adopts an electron beam cold bed furnace for short-process smelting to effectively deploy alloys and reuse scrap materials for producing high-quality materials through the formation of alloy residue closed-loop recycling system. Not only did such measures optimize production processes, but also they could reduce energy consumption and emissions, greatly enhancing resource efficiency. Moreover, through regular innovation and by means of the production technology for the shortened processes, the Group has significantly streamlined our production cycles and enhanced our product quality control, thereby enabling the market to evolve. This approach has minimized material waste and environmental pollution, further solidifying the Group's commitment to green production principles.

Relevant policies and industrial guidelines have recognized low-carbon and ecofriendly development as the prerequisite for the survival and growth of advanced material enterprises. Not only did they clarify the social responsibility of corporates, but also they have become the key drivers for the manufacturing industry to move towards high-quality and sustainable development. The Group adheres to the core concept of "Green Development" and would not sacrifice the environment in exchange for business development. Instead, heavy investment has been made into environment protection equipment. Such steps not only improve our environmental, social and governance performance, but also demonstrated the Group's commitment to sustainable development. In the future, while developing our business, the Group will continue to devote itself to the concept of responsible corporate and environment protection so as to become a role model for the sustainable green manufacturing system.

#### **FUTURE OUTLOOK**

With the upgrading of the manufacturing industry and the development of emerging industries, China's manufacturing sector will embrace opportunities for sustained growth. In traditional application, such as the automotive, machinery, and energy industries, the demand for high strength, light weight special steel will continue to rise. In particular, the rapid development of new energy vehicles and smart vehicles will drive the growth in demand for high performance special steel materials, while the market demand for high precision, wear-resistant cutting tool products in the machinery manufacturing industry will also further expand. At the same time, the rise of emerging industries such as consumer electronics, aerospace and marine engineering will drive the demand for titanium and titanium alloy products, particularly for applications requiring corrosion resistance and high strength, which will become more urgent.

The pace of industrial upgrading will accelerate, and technological innovation will become the core driving force for industrial development. The Group will increase investment in basic research and frontier technology development, utilizing intelligent manufacturing technology to enhance the quality and manufacturing processes of special steel products. In addition, intelligent production will facilitate industry transformation. The Group will accelerate the introduction of intelligent production equipment and management systems to enhance production efficiency and product quality, promoting the construction of smart factories, and further boosting the international competitiveness of China's manufacturing industry.

Green and sustainable development will also become an inevitable trend in the industry. Against the backdrop of increasingly stringent environmental policies, the Group will strengthen the application of energy-saving and emission reduction technologies, enhance resource utilization efficiency, and promote the research, development, and market application of low-carbon and environmentally friendly products to meet the requirements for sustainable development both domestically and internationally.

#### **Tools steel**

Looking ahead to 2025, China's steel industry will encounter continuous growth opportunities in the automotive and home appliances sectors. According to a comprehensive calculation by the China Metallurgical Industry Planning and Research Institute (冶金工業規劃研究院), the steel consumption in the automotive industry is expected to be approximately 57.5 million tonnes in 2024, showing a year-on-year growth of 1.8%. In 2025, driven by the "Two New" policy and policies to encourage the purchase of new energy vehicles, the automotive industry is expected to maintain a growth trend, also taking into account maintenance and other needs., the growth rate of steel demand in the automobile industry is expected to be approximately 4% in 2025, with the increase in steel demand for new energy vehicles being particularly significant.

With the impetus of technological innovation and market demand, China's integrated die-casting industry is entering a phase of rapid growth. It is expected that by 2025, the market size will reach RMB38.9 billion to 40.5 billion, with applications in the new energy vehicle sector accounting for RMB25.8 billion to 30 billion. With the expansion of the pure electric vehicle and plug-in hybrid vehicle markets, the penetration rate of integrated die-casting technology continues to increase, becoming an important trend in automotive light weighting and cost reduction and efficiency enhancement. Under the dual impetus of policy and market demand, domestic vehicle and component enterprises will accelerate their deployment, promoting the industry's further development towards high-end and intelligent transformation.

On the other hand, the Chinese powder metallurgy HSS market is also in a rapid development phase, with technological advancement and market demand rising in tandem. With the transformation and upgrading of the manufacturing industry and the expansion of high-end manufacturing sectors, the application scope of powder metallurgy HSS will be further expanded. The Group will closely monitor market trends, intensify technological research and development efforts, consolidate the domestic market while actively expanding into international markets, enhance global competitiveness, and occupy a more significant position in the global high-end manufacturing supply chain.

It is expected that China's tool steel industry will develop towards intelligence, automation, greening, and customization, with technological innovation and globalization strategy becoming the main driving forces. The Group will closely follow market trends, strengthen research and development and technology upgrades to enhance competitiveness. However, the Group is mindful that the industry development still faces multiple risks, and changes in the international macroeconomic environment could have significant impacts, including the escalation of geopolitical risks, financial crises, and potential economic recession. In addition, changes in the United States tariff policy may exacerbate the uncertainty of China's exports. The Group will closely monitor the impact of policy changes on the market.

The current escalation of global trade barriers and the intensification of channel and logistics risks may further affect the stability of the global supply chain. Enterprises need to actively respond to changes in the international market and enhance industrial competitiveness through technological innovation, industrial upgrading, and global market expansion to ensure long-term competitive advantage.

#### **Cutting tools**

During the year under review, policy-driven market demand growth has presented new development opportunities for China's machine tool and cutting tools industry. In 2024, the State Council issued the "Action Plan for Promoting Large-Scale Equipment Renewal and Trade-In of Consumer Goods," proposing to deepen the remanufacturing of traditional equipment such as machine tools. It plans that by 2027, the penetration rate of digital research and development design tools in industrial enterprises above a designated size will exceed 90%, and the numerical control rate of key processes will exceed 75%. This policy will have a profound impact on China's cutting tool industry. With the popularization of CNC machine tools and the advancement of equipment remanufacturing, the market demand for high precision and high durability tools will significantly increase. Enterprises need to accelerate technological innovation and develop CBN tools and carbide tools suitable for intelligent machining centers to enhance processing precision and production efficiency. In addition, the policy emphasizes equipment remanufacturing and digital transformation, promoting the development of cutting tool regrinding and reuse technologies to enhance sustainability.

The promotion of policies will continue to drive the gradual expansion of domestic market demand, and the machine tool market is expected to continue recovering. With the improvement of domestic technology levels, the trend of import substitution will accelerate and help enhance export competitiveness. At the same time, the rapid growth of emerging industries such as new energy vehicles, aerospace, and artificial intelligence will bring new market opportunities to the machine tool industry. In the future, the industry will maintain a stable development trend. Enterprises need to closely follow market changes and policy directions, actively responding to industry challenges and opportunities to ensure sustainable growth.

Furthermore, the global DIY market is also steadily growing in 2024, with technological innovation, brand development, and channel integration becoming the core elements of corporate competition. It is expected that in the coming years, the market will continue to expand, providing more development opportunities for the cutting tools industry. The Group will strike to seize trends, promote product upgrades and market positioning to enhance competitiveness and expand market share.

#### Titanium alloy

The supply-demand balance of the global titanium alloy market will be affected by geopolitical factors, and changes in the Russia-Ukraine situation may bring new challenges and opportunities. If the ban on Russian titanium product exports is lifted, the global market will face increased supply and intensified competition. In the short term, the speed of Russian titanium products returning to the European and American markets may be affected by trade policies and geopolitical factors. However, in the long run, their return will reshape the market landscape, compress the market share of existing suppliers, and exert downward pressure on prices. In the mid to low-end market, the price advantage of Russian titanium products will intensify competition, while the highend market, due to higher technical barriers, will be relatively less affected in the short term.

The advancement of new materials and processes will further expand the titanium alloy market, with high-end market demand driving companies to enhance technological innovation and improve product quality and performance. The application of titanium alloy is rapidly growing in sectors such as aerospace, medical devices, consumer electronics, and the automotive industry. For example, the aerospace sector extensively applies titanium alloy in aircraft engine blades, fuselage structures, and rocket casings, which helps reduce weight and enhance fuel efficiency. The medical industry utilizes the biocompatibility of titanium alloy to manufacture artificial joints, dental implants, and cardiovascular stents, enhancing the safety and durability of medical devices. The consumer electronics market has applied titanium alloy in smartphones, laptops, and smartwatches, enhancing product durability and light weight characteristics. In the automotive industry, titanium alloy is widely used in the exhaust systems of high performance sports cars and new energy vehicles, as well as in light weight car bodies and battery enclosures, optimizing vehicle performance and reducing energy consumption.

Broader downstream applications will drive the demand for high performance titanium alloys, accelerate the layout of the high-end market, and promote industrial upgrading.

## **OUR MISSION**

The Group has always strived for innovation and advancements in competitiveness to consolidate its leading market position. The Group re-affirms its mission to maximise shareholder value, uphold high corporate governance standards and lead the industry to move forward.

#### FORWARD LOOKING STATEMENTS

This management discussion and analysis contains certain forward looking statements with respect to the financial condition, results of operations and business of the Group. These forward looking statements represent the Company's expectations or beliefs concerning future events and involve known and unknown risks and uncertainty that could cause actual results, performance or events to differ materially from those expressed or implied in such statements.

Forward looking statements involve inherent risks and uncertainties. Readers including shareholders and investors should be cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward looking statement.

## LIQUIDITY AND FINANCIAL RESOURCES

As at 31 December 2024, the Group's current assets included cash and cash equivalents of RMB1,068,922,000, inventories of RMB2,524,870,000, trade and other receivables of RMB3,543,048,000, pledged deposits of RMB134,494,000 and time deposits of RMB605,231,000. As at 31 December 2024, the interest-bearing borrowings of the Group were RMB3,284,666,000 (2023: RMB2,895,021,000), RMB1,827,473,000 of which was repayable within one year and RMB1,457,193,000 of which was repayable after one year. The Group's adjusted net debt-to-equity ratio, which is calculated based on adjusted net debt (defined as total interest-bearing borrowings plus other financial liabilities and unaccrued proposed dividends, less time deposits and cash and cash equivalents) divided by adjusted capital (comprising all components of equity, less unaccrued proposed dividends) as at 31 December 2024, was 36% (2023: 35%).

As at 31 December 2024, borrowings of RMB2,794,255,000 were in RMB, none were in USD, EUR50,435,000 were in EUR and HKD119,709,000 were in HKD. The borrowings of the Group were subject to interest payable at rates ranging from 2.60%–6.14% per annum. Approximately 54.9% (2023: 34.1%) of the interest-bearing borrowings was at fixed interest rates. There is no seasonality in borrowing requirements of the Group. The Group did not enter into any financial instruments to hedge itself against risks associated with interest rates and foreign currency exchange fluctuations.

During the year, net cash generated from operating activities was RMB501,762,000 (2023: RMB55,129,000). The increase was mainly due to stricter controls implemented throughout the year to manage accounts receivable and reduce their occupation of working capital.

#### **CASH CONVERSION CYCLE**

The cash conversion cycle, calculated as turnover days over inventory, plus turnover days over trade receivables, minus turnover days of trade payables, attempts to measure the amount of time each net input dollar is tied up in the production and sales process before it is converted into cash through sales to customers. It is important to manufacturers because it measures the efficiency of their capital chain management.

The Group's turnover days of inventory for 2024 was 237 days (2023: 230 days). The increase in turnover days of inventory was mainly due to the inventory increase at Thailand's cutting tools production base primarily served to prepare for upcoming export orders. The Group maintained an effective and efficient balance between the stock level and sales forecasts.

The Group's turnover days of trade receivables for 2024 was 216 days (2023: 184 days) while the turnover days of trade payables for 2024 was 116 days (2023: 114 days).

Accordingly, the Group's cash conversion cycle for 2024 was 337 days (2023: 300 days). The increase in cash conversion cycle was mainly driven by export business, unstable shipping capacity required higher inventory level and the longer credit periods for overseas customers. The management will continue to monitor closely the operations in view of the changing business environment.

Caution: It should be noted that the calculation of the aforesaid indexes may not be consistent with those measurement indexes published by other issuers.

## CAPITAL EXPENDITURE AND CAPITAL COMMITMENTS

For 2024, the Group's net decrease in property, plant and equipment amounted to RMB114,057,000. Major capital expenditures were completed in previous years and net depreciation began to reflect. As at 31 December 2024, capital commitments were RMB734,949,000 (2023: RMB591,863,000), of which RMB129,633,000 (2023: RMB46,122,000) were contracted for and RMB605,316,000 (2023: RMB545,741,000) were authorised but not contracted for. The majority of capital commitments related to expansion of titanium rod and wire production line, etc..

#### FOREIGN EXCHANGE EXPOSURE

The Group's revenues were denominated in RMB, USD, EUR and THB, with RMB accounting for the largest portion of 52%. 48% of total sales and operating profit were subject to exchange rate fluctuations. The Group has put in place measures such as monthly review of product pricing in the light of foreign exchange fluctuations and incentivising overseas customers to settle balances on a more timely basis to minimise the financial impact of exchange rate exposures.

#### PLEDGE OF ASSETS

As at 31 December 2024, the Group pledged certain bank deposits amounting to RMB134,494,000 (2023: RMB129,288,000) and certain trade receivables amounting to RMB137,751,000 (2023: RMB161,843,000). The increase in pledged bank deposits was mainly due to the increase in the outstanding balance of bank acceptance bills.

#### EMPLOYEES' REMUNERATION AND TRAINING

As at 31 December 2024, the Group employed 3,565 employees (2023: 3,517 employees). Total staff costs for the year amounted to RMB421,605,000 (2023: RMB397,116,000). The increase was mainly resulted from increase in headcount and regular market rate adjustment on employees remuneration. The Group provided employees with remuneration packages comparable to market rates and employees are further rewarded based on their performance according to the framework of the Group's salary, incentives and bonus scheme. In order to enhance the Group's productivity, and further improve the quality of the Group's human resources, the Group provides compulsory continuous training for all of its staff on a regular basis.

## **CONTINGENT LIABILITIES**

Neither the Group, nor the Company, had any significant contingent liabilities at the end of the reporting period.

#### FINAL DIVIDEND AND CLOSURE OF REGISTER OF MEMBERS

The register of members of the Company will be closed for transfer from 14 June 2025 to 19 June 2025 (both days inclusive), for the purpose of determining shareholders' entitlement to attend and vote at the forthcoming annual general meeting of the Company (the "Annual General Meeting") on 19 June 2025, during which period no transfer of issued shares of the Company will be registered. In order to qualify for attending and voting at the Annual General Meeting, shareholders should ensure that all transfer documents, accompanied by the relevant share certificates, are lodged with the Company's branch share registrar, Computershare Hong Kong Investor Services Limited, at Shops 1712–1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong, for registration by no later than 4:30 p.m. on 13 June 2025.

The Board has resolved on 31 March 2025 to recommend the payment of a final dividend of RMB0.0263 per share for the year ended 31 December 2024 (2023: RMB0.0400) to shareholders of the Company whose names appear on the register of members of the Company on 30 June 2025. The register of members will be closed from 2 July 2025 to 4 July 2025, both days inclusive, and the proposed final dividend is expected to be paid on or before 11 July 2025. The payment of dividends shall be subject to the approval of the shareholders of the Company at the Annual General Meeting expected to be held on 19 June 2025. In order to qualify for the proposed dividend, shareholders of the Company should ensure that all transfer documents, accompanied by the relevant share certificates, are lodged with the Company's branch share registrar, Computershare Hong Kong Investor Services Limited, at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong, for registration by no later than 4:30 p.m. on 30 June 2025.

#### **SHARE SCHEME**

The current share option scheme of the Company was approved by the Company in the Annual General Meeting held on 26 May 2017.

No share options were granted under the current share option scheme in the financial year ended 31 December 2024 and there were no outstanding share options as at 31 December 2024.

Save as disclosed above, during the year ended 31 December 2024, the Company did not have any other share scheme in place.

#### PURCHASE, SALES OR REDEMPTION OF LISTED SECURITIES

During the year ended 31 December 2024, the Company repurchased 50,000,000 ordinary shares in total, at an aggregate consideration of HKD86,829,400 (equivalent to approximately RMB78,830,000) on the Stock Exchange of Hong Kong Limited (the "Stock Exchange"). The shares repurchased were cancelled on 2 July 2024 and 1 November 2024. Details of the repurchases of such ordinary shares were as follows:

	No. of ordinary shares	Price per ordinary shares		Aggregate consideration
Month of repurchase	repurchased	Highest	Lowest	paid
		(HKD)	(HKD)	(HKD)
March 2024	1,664,000	1.53	1.37	2,415,900
April 2024	24,950,000	1.87	1.56	42,674,200
May 2024	7,660,000	1.92	1.74	13,962,640
June 2024	13,870,000	1.84	1.53	23,738,640
October 2025	1,856,000	2.23	2.13	4,038,020
	50,000,000			86,829,400

Save as disclosed, during the year ended 31 December 2024, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of its listed securities (including sale of treasury shares). As at 31 December 2024, the Company did not hold any treasury shares.

#### **CORPORATE GOVERNANCE**

The Company has, so far where applicable, adopted and complied with the principles and code provisions set out Part 2 of Appendix C1 (the Corporate Governance Code) of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules") during the year ended 31 December 2024.

### **AUDIT COMMITTEE**

The Audit Committee comprises three independent non-executive directors. The Audit Committee held a meeting on 27 March 2025 to consider and review the 2024 annual report and annual financial statements of the Group and to give their opinion and recommendation to the Board. The Audit Committee considered that the 2024 annual report and annual financial statements of the Company have complied with the applicable accounting standards and the Company has made appropriate disclosure thereof.

# THE MODEL CODE FOR SECURITIES TRANSACTIONS BY DIRECTORS OF LISTED ISSUERS

The Group has adopted a code of conduct governing securities transactions by Directors in compliance with the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix C3 of the Listing Rules (the "Model Code"). All of the Directors have confirmed, following specific enquiry by the Company, that they have complied with the required standard set out in the Model Code and the Group's code of conduct governing securities transactions by Directors and employees who may possess or have access to price sensitive information or inside information during the year ended 31 December 2024.

## PUBLICATION OF ANNUAL REPORT ON THE STOCK EXCHANGE WEBSITE

The Company's 2024 annual report will be submitted to the Stock Exchange for uploading onto the Stock Exchange's website (www.hkexnews.hk) as well as the Company's website (www.tggj.cn) in due course.

#### **APPRECIATION**

The Board would like to take this opportunity to express gratitude to our shareholders, customers, the management and employees for their unreserved support to the Group.

By Order of the Board

Tiangong International Company Limited

Zhu Xiaokun

Chairman

Hong Kong, 31 March 2025

As at the date of this announcement, the directors of the Company are:

Executive Directors: ZHU Xiaokun, ZHU Zefeng, WU Suojun and JIANG Guangqing

Independent Non-executive Directors: LEE Cheuk Yin, Dannis, WANG Xuesong, QIN Ke

\* For identification purpose