

Biweekly 010 Dec/19

Lithium Battery Equipment Industry Enters Into a Golden Age

Dec. 2016



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Shanghai Metals Market

Wuxi Lead Intelligent Equipment: Lithium Battery Equipment Market To Exceed RMB 13 Billion In 2016

Feb. 22, 2016

Source: p5w.net

1

On February 18, Wuxi Lead Intelligent Equipment disclosed in *Investor Relations Activity Record* that demand for power lithium batteries would keep increasing in the next three years, and energy storage batteries tended to develop rapidly with cost reduction. The lithium battery equipment market is expected to reach **RMB 13 billion** in 2016, with demand mainly from domestic market. Currently, the company operates in full capacity, with 70-80% orders from the lithium battery equipment (motive lithium battery equipment accounted for more than 60%). Due to capacity constraints, the company's capacity mainly produces high-margin products. In terms of market share, its **winding products accounted for 50%** of intelligent lithium battery equipment.



Industry 4.0 Becomes Catalyst For Lithium Battery Equipment Industry

Sep. 9, 2016

Source: dldcw.cn

2

"Industry 4.0" is a subversive transformation and upgrading of intelligent production capitalizing that is based on traditional industrialization but involves the Internet of Things.

With development of large-scale and power lithium batteries production, its equipment industry will develop towards the trend of high-precision, full automation and intelligence in line with "Industry 4.0". Industry 4.0 will not only greatly improve the level of intelligent production of battery manufacturers, but also improve the quality and performance of lithium battery production equipment. **Automation and intelligence** level will be the **core competitiveness** of lithium battery equipment manufacturers.



Yinhe Acquires 100% Stake In Areconn For RMB 438 Mln

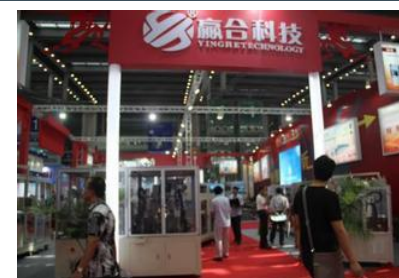
Nov. 6, 2016

Source: dldcw.cn

3

Yinhe acquired Areconn on December 1, 2016. Audited by China Securities Regulatory Commission, Yinhe was approved to buy the asset by issuing shares and paying cash, and to raise corresponding funds.

The two companies can complement each other's advantages, and share resources, to give full play to synergies in terms of brand, technology, R&D, channel and customers and to form economies of scale by combing the focus of development so as to avoid vicious competition and efficiently manage capacity and asset allocation of both parties. It will help provide a more solid foundation for creating **the strongest lithium-ion battery intelligent production line in China.**



Highlights

1

Lithium battery production equipment can be classified into front-end, equipment and back-end equipment. lithium battery equipment production in China has entered into maturity stage.

- Lithium battery production equipment can be classified into **front-end equipment, mid-range equipment and back-end equipment**, applied in chip production, cell assembly, cell activation detection and battery packaging, respectively.
- Lithium battery equipment production in China has entered into **maturity stage**, and the technology improves to international level.

2

Cost per KWh of lithium battery drops. Power battery will become the future growth point of lithium battery market, which will benefit lithium battery equipment industry.

- The cost of Ni-MH and nickel-cadmium batteries per kWh fell slightly, while that of lead-acid battery rose. **Cost of Li-ion battery per kWh dropped by 40% YoY**, boosting its economic efficiency.
- China's lithium battery capacity is estimated to reach 25GWh in 2016, **up 49.8% YoY, accounting for 45% in all applications**. Moreover, it will maintain rapid growth afterwards, and be **a major growth point**, which will benefit lithium battery equipment industry.

3

Despite decentralized competition in domestic lithium battery market, concentration rate of stand-alone machine is high. Potential market size of lithium battery manufacturing equipment is to reach 50 billion during 13th 5-Year Plan

- Domestic lithium battery market competition pattern is decentralized but the concentration ratio of stand-alone machine equipment is high. Specifically, market share of the top **3 producers** amounts to **50%**.
- Investment cost of lithium battery equipment is about **RMB 400 million/GWh**. Lithium battery capacity plan during 13th Five-Year Plan will bring RMB 80 billion in lithium battery equipment investment, and the investment stemmed from the demand for lithium battery is **conservatively estimated** to be at least **RMB 50 billion**.
- Power lithium battery equipment market tends to keep in the lead, with **RMB 10 billion estimate** and **RMB 12 billion estimate** in 2016 and 2017 respectively. 3C digital lithium battery equipment has entered into the replacement cycle, and the replacement market size will reach **RMB 2.88 billion in 2016** and **RMB 3.97 billion in 2017**. Energy storage lithium battery equipment market is expected to expand after 2018.
- Coater, winder and activation capacity testing equipment account for 70% of the cost of lithium battery production line equipment. With the improvement of domestic coating machine and winding machine, China is expected to achieve import substitution.

4

Development trend of lithium production equipment industry is integration, automation and whole-line mode.

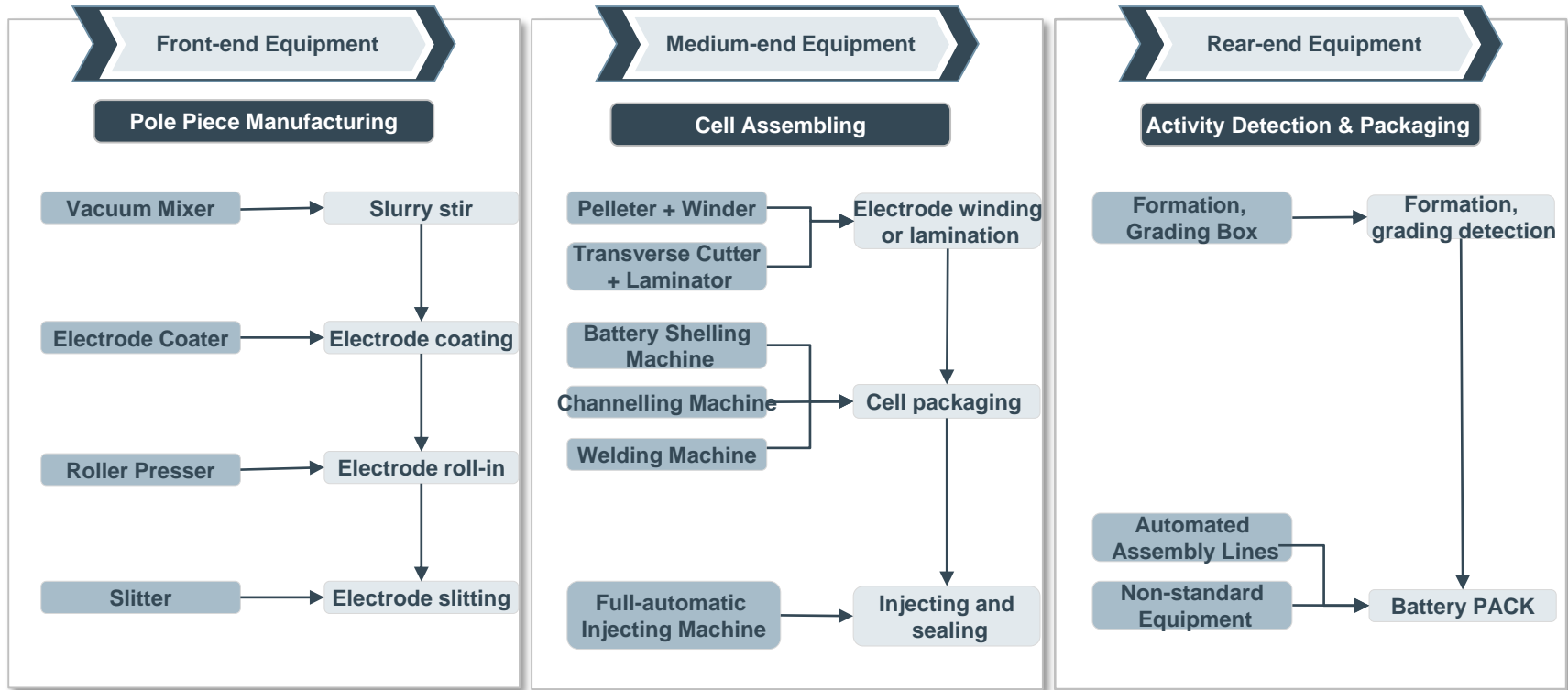
- As enterprises consolidation in lithium battery equipment industry is accelerated, listed companies with good financing channels expand rapidly, **thus market share tends to centralized in listed companies**.
- Lithium battery equipment **automation** will help enhance the uniformity of lithium battery products while reduce labor costs, and improve product qualification rate.
- **Whole-line mode** of lithium battery equipment can reduce the construction time cost and realize equipment modularization, increasing production efficiency and gross margin.

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Highlight the Lithium Battery Equipment in Steps of Coating, Winding and PACK

Lithium battery production process can be divided into pole piece manufacturing, cell assembly, cell activation detection and battery packaging



Front-end equipment: highlight coater

- Front-end equipment has a vital impact on the performance of cell. Domestic equipment still needs improvement in efficiency, accuracy, stability and other aspects compared to that of foreign countries'.
- Coater is in the upgrade stage. **Extrusion coater is more preferred** due to a higher accuracy, thinner coating and lower energy consumption.

Medium-end Equipment: highlight winder and laminator

- Market size is small and domestic equipment is in import substitution stage. Some domestic equipment are capable to compete against imported products.
- Winder is of high efficiency in battery production and is promising in the near term under tightened **lithium battery capacity**; batteries produced by laminator have better performance, **promising in the long run**.

Rear-end equipment: highlight PACK (battery assembly)

- higher degree of localization; the gap between domestic and foreign equipment is small; large market size for test equipment
- PACK does not belong to lithium battery production process in theory. Artificial assembly line is insufficient due to the outbreak of new energy vehicles, so **automated battery assembly line** is the development trend.

China's lithium battery equipment industry entered a mature stage, and technology moved toward international level

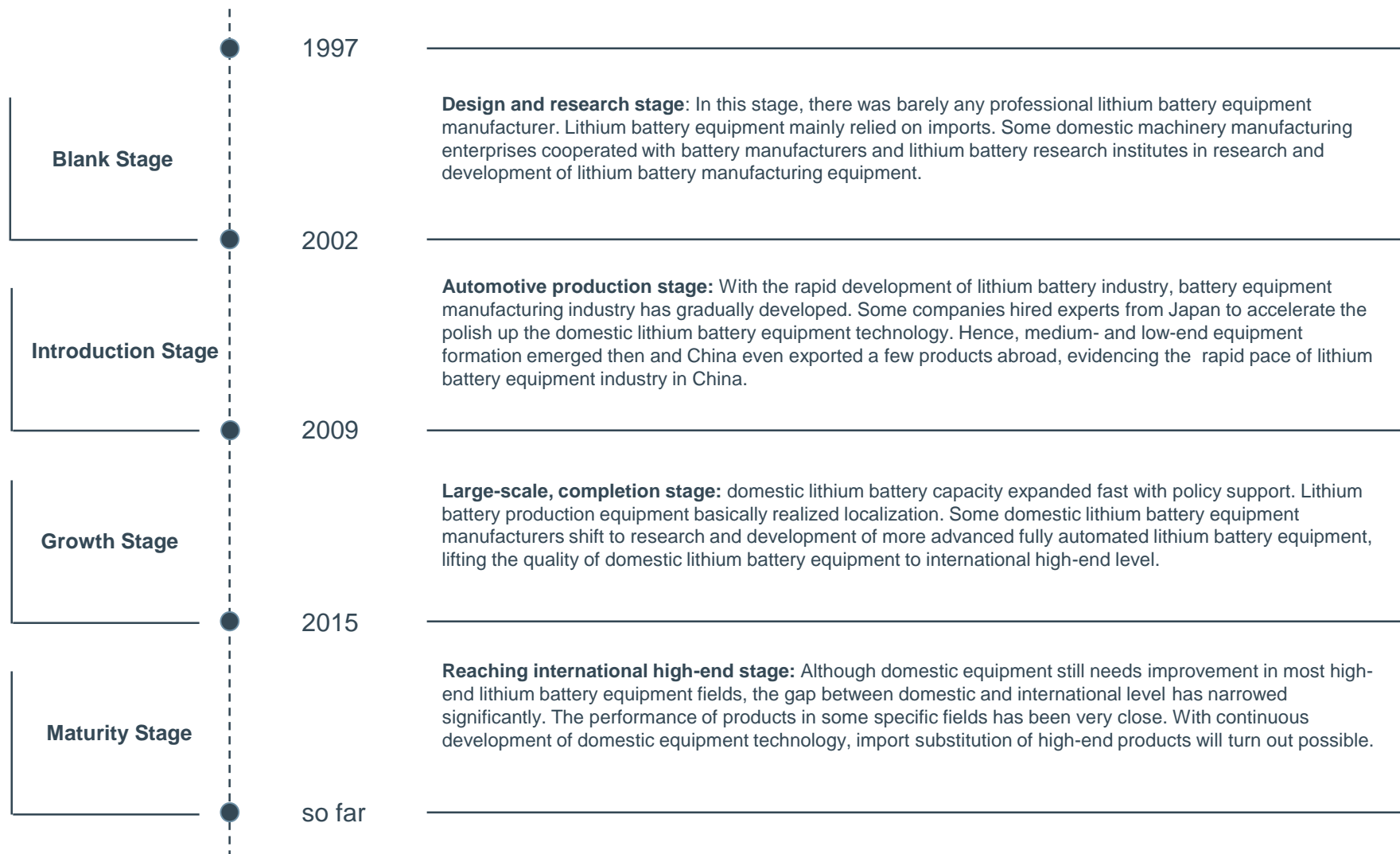


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Cost per KWh of Li-ion battery dropped apparently; power battery is the main growth point in the future, benefiting lithium battery equipment industry

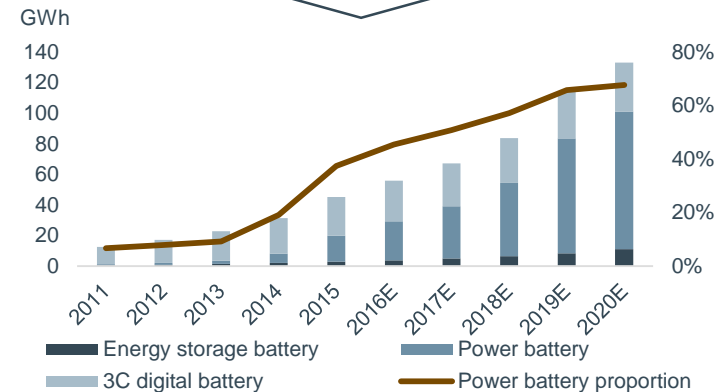
Changes in Battery Cost per kWh of Various Battery Types in China

Electric cost (RMB/KWh)	Lead-acid battery	NI-MH battery	Nickel-cadmium battery	Lithium-ion battery
2015	800	1800	1400	3000
2016	1060	1650	1300	1800

Sources: Zheshang Securities, public data, SMM

- Cost of lead-acid batteries **rose over 30%** in 2016 due to rising lead prices, with electric cost up RMB 260/KWh.
- Electricity cost of Ni-MH, nickel-cadmium batteries **decreased slightly** as raw material costs declined due to oversupply.
- Electricity cost of lithium-ion battery fell 40% YoY in 2016 thanks to technological progress and industrial scale, and this **greatly enhanced its market competitiveness.**

Li-ion Battery End-user Demand Forecast in China

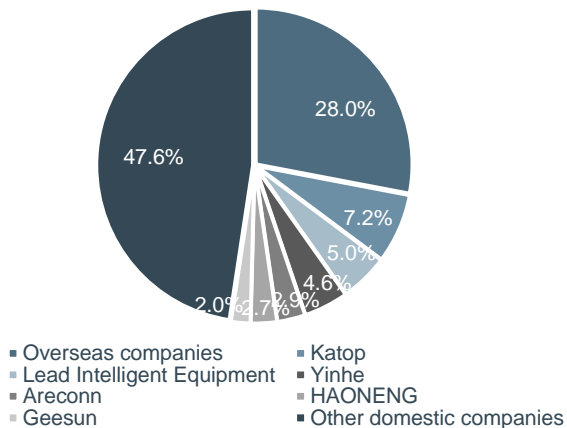


Sources: qd-lib.com, SMM

- Lithium-ion battery is mainly used in three fields: **power, energy storage, 3C products**
- Power lithium-ion battery capacity in China is expected to reach 25GWh in 2016, **up 49.8% YoY**, and will maintain rapid growth in the future.
- The proportion of motive lithium-ion battery rose from less than 10% in 2011, to 45% in 2016, and is expected to expand further in the future and become the **main growth point of lithium-ion battery market**. This will benefit li-ion battery equipment industry.

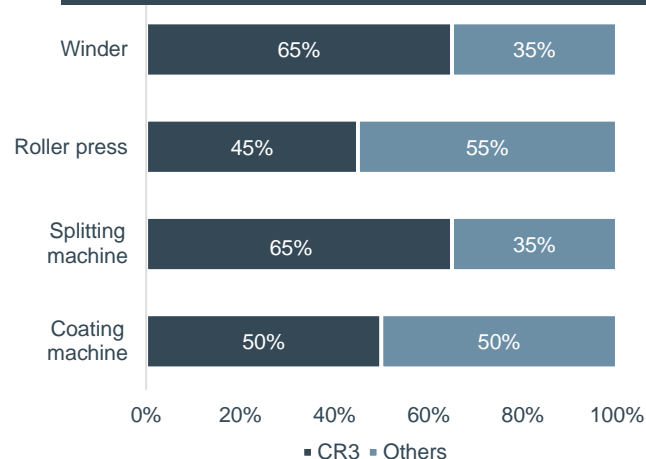
Domestic lithium battery equipment market competition pattern is dispersed, and enterprises focus on classified equipment market

Market Share of China Lithium Battery Equipment, 2016



Sources: CICC, Guotai Junan Securities, public data, SMM

Market concentration of Lithium Battery Equipment in China, 2016



Sources: CICC, Guotai Junan Securities, public data, SMM

Note: CR3 denotes the concentration degree of three enterprises in the market. For the above-mentioned different production equipment market, the corresponding enterprises vary

- Lithium-ion battery equipment has almost realized production localization. Domestic market competition pattern is dispersed. The number of enterprises is large, but that with the core technology and of large scale is limited. Market competition focused on **classified production equipment**.
- Market concentration of stand-alone lithium battery equipment is high. **The market share of the top 3 companies amounted to 50%**. Whilst, different companies produce different lithium battery equipment. For instance, coating machines are mainly produced by Katop, HAONENG and Areconn while winders are mainly produced by Lead Intelligent Equipment, Yinhe and Areconn.
- Profitability at lithium-ion battery equipment industry has been considerable since 2014. With supply surplus and higher entry barrier for the lithium-ion battery industry in 2016, low-end battery capacity hampers or suspends expanding. It will affect some SMEs with weak technology, which is less likely to approach to first-tier products. **SMEs are expected to be merged or forced out of the market from 2017, with Li-ion battery of the lithium-ion battery equipment on the rise.**

Conservative estimation on potential incremental size of lithium battery production equipment is RMB 50 billion during 13th 5-Year Plan

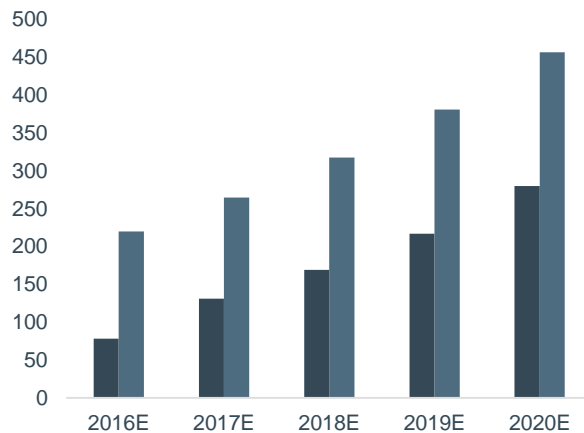
Unit Investment Cost of Lithium Battery Equipment

Power Li-ion battery producer	Planned annual capacity	Total investment	Unit investment (RMB 100 mil/GWh)
Do-Fluoride		5.4	3.2
Dynavolt	6.0	30.0	3.0
Optimum Nano	10.0	50.0	3.0
Chengdhu-Aircraft.	12.0	125.0	6.3
BYD	6.0	60.2	6.0
Boston Power	10.0	50.0	3.0

Conservative cost 4

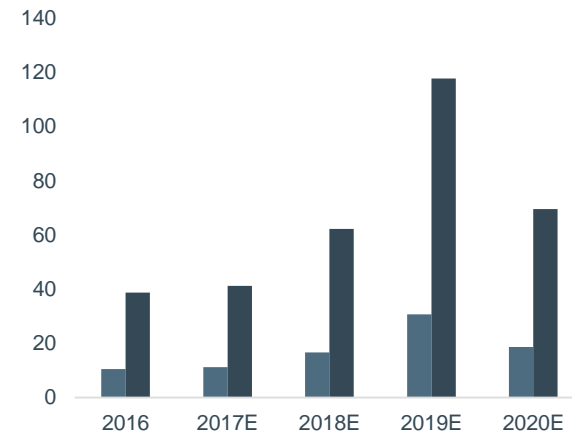
Sources: company announcements, CICC, SMM

Lithium Battery Capacity Plan & Equipment Scale during 13th 5-year Plan



■ Capacity plan (GWh)
■ Lithium battery equipment investment (RMB 100 million)
Sources: MIIT, CICC, SMM

Incremental Lithium Battery Demand & Equipment Scale during 13th 5-year Plan



■ Incremental lithium battery demand (GWh)
■ Lithium battery equipment investment (RMB 100 million)
Source: SMM

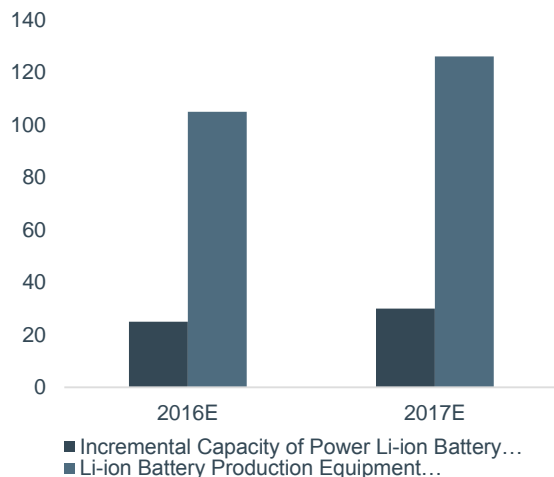
- Power lithium battery equipment: equipment cost and installation will account for 60% of total investment according to project investment in 2015, falling technical cost and domestic equipment ratio. According to conservative estimation, **1GWh capacity will need RMB 400 million investment.**
- 3C digital equipment: **1GWh capacity will need RMB 200 million investment** due to high degree of equipment standardization, low technology and cheap price.

- Expansion will be mainly in power lithium battery capacity in the short term, while in energy storage lithium battery capacity in medium and long term. Based on the 280 GWh capacity plan by 2020, lithium battery capacity will **increase by 235GWh** by the end of 13th Five-Year Plan, bring in **RMB 80 billion** to lithium battery equipment investment.

- In terms of end-user demand for lithium-ion battery, the incremental demand amount will be at **least 85GWh** during 13th Five-Year Plan, and the corresponding lithium battery equipment investment will **exceed RMB 30 billion.**
- In actual investment, increment of lithium battery capacity may be more than the demand for lithium battery. Besides, regarding of the upgrading of some equipment, **conservative estimation on the potential incremental market size will be RMB 50 billion or more.**

Li-ion Power battery production equipment keeps in the lead and 3C digital Li-ion battery enters update cycle

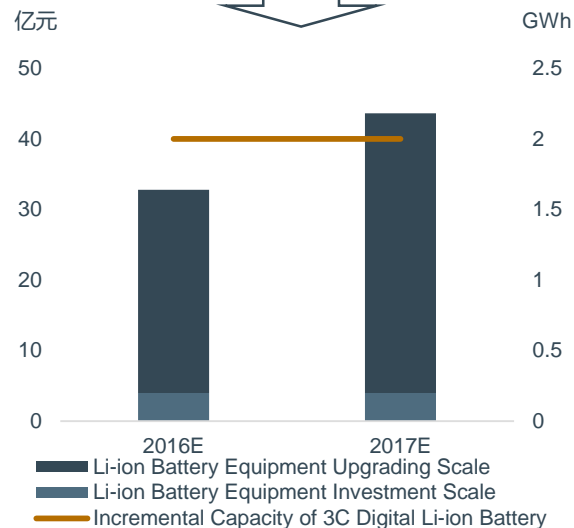
Power Li-Battery Production Equipment Market, 2016-2017



Data Source: Company announcements, CICC, SMM

- Incremental capacity of power Li-ion battery is **25GWh** and **30GWh** in 2016 and 2017 respectively, according to statistics, and the market size of power Li-ion battery production equipment is RMB 10billion and 1.2 billion respectively, measured by unit investment cost of 400 million per GWh.
- Power Li-ion battery has larger potential than 3C digital and energy storage battery, as is expected to expand rapidly.

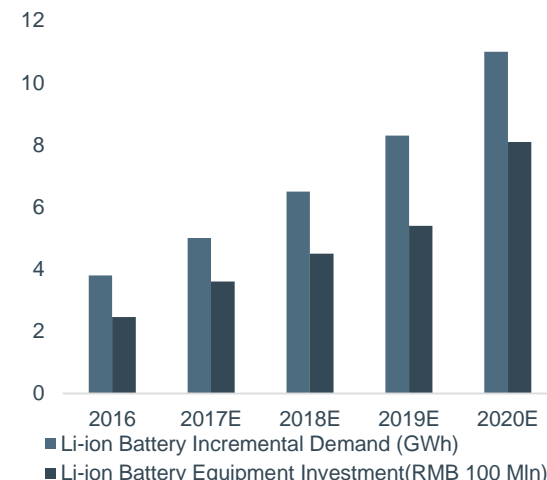
3C Digital Li-Battery Market, 2016-2017



Data Source: CICC, SMM

- With shipments of 3C digital products entering **low-speed growth tunnel**, the incremental capacity sees **2GWh** per year with equipment investment at **RMB 400 million**.
- 3C digital Li-ion battery enters **update cycle**. Replace demand for 3C digital Li-battery production equipment will be **2.88 billion** in 2016 and **3.97 billion** in 2017, at the replacement rate of 20%.

Incremental Energy Storage Market during 13th Five-Year Plan



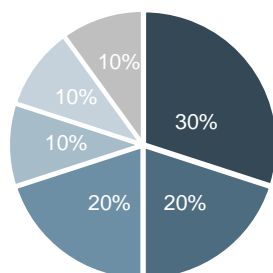
Data Source: SMM

- Lithium battery energy storage is widely applied in business and household. Despite the slow pace at present, with the **national power price reform** and the **improvement in cost performance of energy storage equipment**, energy storage commercialization growth will see acceleration and **will be a new growth point** in demand for lithium battery.
- Energy storage demand is expected to **release after 2018** and to reach **11GWh** by 2020. Corresponding demand for lithium battery production equipment will be during 13th Five-Year Plan. **RMB 2.4 billion**

Coater, Winder and Activate Grading & Testing Equipment Accounts for 70% of Total Cost of Lithium Battery Production Equipment

Coater, Winder and Activate Grading & Testing Equipment Occupies Large Market Share

Cost Breakdown of Domestic Lithium Battery Production Equipment



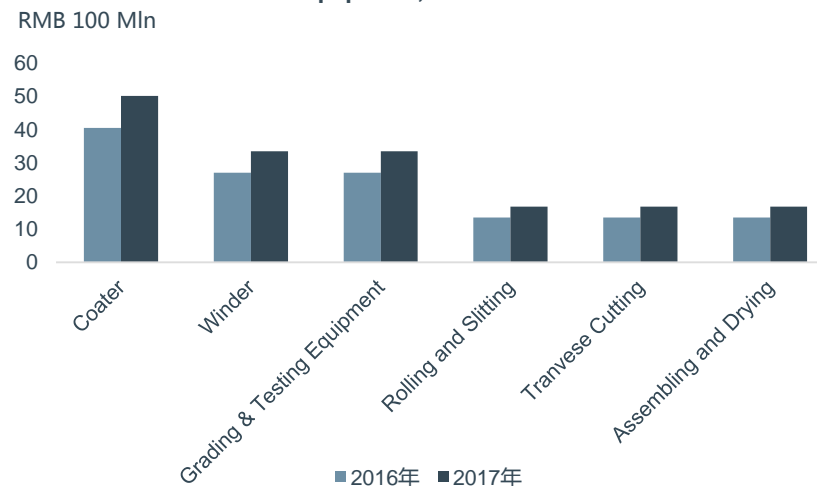
- Coater
- Winder
- Grading & Testing Equipment
- Rolling and Slitting
- Transverse Cutting
- Assembling and Drying

Data Source: Guotai Junan Securities, SMM

- In the domestic lithium battery production line, equipment cost takes up a high proportion. Specifically, coater, winder and activate grading & testing equipment accounting for 30%, 20% and 20% of total cost respectively, **amounting to 70% of total production equipment cost.**
- Localization rate** of coater and winder is **merely 50%** at present, while imported equipment price is several times higher than domestic equipment. Domestic equipment performance has approached to international level, which will **lower the import substitution cost afterwards.**

Coater and Winder to Realize Import Substitution

Estimated Market Potential on Lithium Battery Production Equipment, 2016 -2017



Data Source: SMM

- RMB 13.53 billion** in 2016 and **RMB 16.73 billion** in 2017 (see the previous content) as the basis, market potential for coater will be **RMB 4.06 billion** and **RMB 5.02 billion** in 2016 and 2017 respectively, and that for winder will be RMB 2.7 billion and 3.3 billion in 2016 and 2017 respectively, and activate grading & testing equipment RMB 2.7 billion and RMB 3.3 billion in 2016 and 2017 respectively.
- Most high-end coaters and winders used in China are **imported from Japan and South Korea**. Whilst, domestic equipment can compete against importers by better service and lower prices in similar performance. However, localization rate of grading & testing equipment has already exceeded 90%, with domestic brands competing against each other.

Integration

- **Market Share To Centralized In Listed Companies:** Around 300 producers involve in lithium battery production equipment in China, but most of them earn revenues under RMB 100 million. Listed companies, having good financing channels, are easy to gain market shares though expansion.

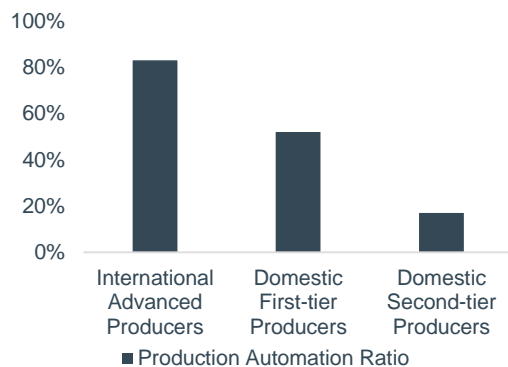
Time	Buyer	Acquired Company	Share
April 2015	Zhiyun Automation	Geesun	54%
March 2016	Han's Laser	Dongguan Junzhuo	51%
April 2016	Kanhoo Industry	Haoneng Technology	100%
May 2016	Yinghe Technology	Areconn Precision Machine	100%

Data Source: Company Announcement, CICC, SMM

Automation

- **Promoting Product Uniformity:** Producers should use fully-automatic equipment to ensure product consistency as power lithium battery is required to possess high uniformity.
- **Reducing Labor Cost and Increasing qualification ratio:** Automatic lithium battery production equipment will increase uniformity, reduce labor costs and promote qualification ratio.

Automation Level of Lithium Battery Production Line



Data Source: Essence Securities, SMM

Whole Line

- **Reducing Construction Time:** The complete line will help reduce equipment purchase, installment and testing time.
- **Benefiting Equipment Modularization:** whole-line mode will help realize the modularization, substantially increasing production efficiency and gross margin.

Time	Event	Effect
Dec. 2015	Its 1 st phase of Li-battery production equipment base started trial operation, the equipment provide by Yinghe Technology.	It took only 4 months from contract signed to installation adjusted, but if adopted imported segmented equipment, it would take a year and half.
May 2016	Approving to set up team to formulate standardization for complete line of lithium battery production.	To promote standardizations on lithium battery production equipment, and this will help complete line to open market.

Data Source: Essence Securities, SMM

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Mainstream Companies at Home and Broad

Company	Country	Main Products	Major Client
Kaido Manufacturing	Japan	Winder, Double-layer Capacitor Winder	Hitachi
CKD	Japan	Automatic machinery, Air-actuated Control, Fluid And Labor-saving System, Lithium-ion Battery Winding Machine	Nissan, Toyota
Koem	South Korea	Winder, Capacitor Winder, Electrolytic Capacitor Winder, Li-ion Primary Battery Winder, Primary Assembly Machine	-
Yinghe Technology	China	Coater, Winder, Coater, Pelleter, Slitting Machine, Die-cutting Machine and Lamination Stacking Machine	Shandong Wina, OptimumNano, Forster New Energy, Zhuoneng New Energy, Phenix New Energy
Lead Intelligent Equipment	China	Splitting Machine, Filling Machine, AIO Machine Of Soldering and Winding	Contemporary Amperex Technology, Boston-Power (Jiangsu), Coslight Battery, Maxell, Henan Best New Energy
Areconn Precision Machine	China	Coater, Roller Press, Pelleter, Slitting Machine, Winder, AIO Machine Of Soldering and Winding	ATL, BYD, Coslight Battery
Sevenstar Electronics	China	Agitator, Coater, Roller Press and Filling Machine	Panasonic, China Aviation Lithium Battery, Shandong Wina, Tianjin Lishen, Guoxuan High-Tech
Zhiyun Automation	China	Semi-automatic Winder, Full-automatic Winder, Electrodes and Stick Adhesive Tape Machine, Sorting Equipment, Lamination Stacking Machine, Die-cutting Machine, Punching and Rolling Machine	-
Katop Automation Technology	China	Coater	ATL, CATL, BYD, BIC
HangKe Technologies	China	Sorting and Testing Machine, Digital Products Formation and Testing, Motive Li-battery Formation and Testing	Sony (Wuxi), LG (Nanjing), SDI (Tianjin, Tianjin Lishen, ATL, China Aviation Lithium Battery



Note:

- Japanese and South Korean Producers pay more attention on industry subdivision and expand business in high-end market with **advanced technology and clear direction**.
- Most domestic enterprises produce low- and mid-end equipment and eye on **integration of production line** afterwards, with technology awaiting improvement

Chinese Representative Enterprise: Yinghe Technology

Company Profile

- **Headquarter:** Shenzhen, Guangdong
- **Market Value:** RMB 7 billion
- **Main Business:** Kernel equipment for Li-battery production, including winder, coater and pelleter
- **Partnership:** Guoxuan High-Tech, OptimumNano Energy, BYD, ATL and other Chinese mainstream Li-battery producers

Development Process

- Established in 2006, focus on the R&D, production and sales of automatic equipment
- During 2007-2008, successfully developed the first batch of automatic Li-battery equipment and was awarded as Shenzhen High-Tech Enterprise.
- During 2009-2010, pelleter, lamination machine, coater and cutter came into the market successively; provide complete set of automatic Li battery production equipment
- In 2015, officially listed on GEM
- In 2016, announced to acquire Dongguan Areconn Precision Machine (Li-battery equipment producer) with RMB 438 million.

Bellwether of Chinese New Energy Equipment Industry: Yinghe Technology

Complete Set of Li-ion Battery Production Equipment Line

- Branched in Jiangxi and Huizhou take charge of front-end and mid-equipment
- Shenzhen HuiHe Intelligent Tech focuses on the development of MES and BMS
- Sinpo involves in **liquid filling machine and cylindrical winding.**
- DongGuan Areconn Pml Precision Mechanism focuses on development of **high-end facilities**
- **Automation of Li-ion battery production equipment (robots + software control):**
 - Huizhou DingHe Intelligent Equipment involves in R&D of automatic production line of rear-end Li-ion battery and PACK

- **Company Status:** experts in Li-ion battery production equipment and has attained achievements. It acquired Areconn Precision Machine via horizontal expansion recently to reinforce the advantages in Li-ion battery facilities.

Profits Source:

- **Sectional Li-Battery Production Equipment:** winder and coater, high output, despite fierce competition
- **Complete Set of Li-Battery Production Equipment:** including a set of front-end, mid- and rear-end equipment, high superiority and profitability
- **Equipment Upgrade:** helping Li-battery production equipment be automatic and enhancing productivity

Industrial Distribution

Business Operation

Chinese Representative Enterprise: Lead Intelligent Equipment

Company Profile

- **Headquarter:** Wuxi, Jiangsu Province
- **Market Value:** RMB 14 billion
- **Main Business:** Kernel equipment for Li-battery operation, including coater, pelleter, agitator, PV automatic equipment and thin film capacitor automatic equipment
- **Partnership:** Samsung, ATL and BYD

Development Process

- Established in 2002, successfully designed AC capacitor auto testing equipment.
- During 2004-2006, designed various supporting equipment for capacitors.
- Successfully designed WHC500 high voltage auto winding M/C to substitute imported equipment
- In 2008, expanded business into Li-ion battery industry and set up Li-ion battery division, with winder exporting to US
- During 2008-2013, reinforced R&D, developed various kinds of Li-ion battery production equipment and was rewarded “Jiangsu pilot small and medium-sized IT enterprise”
- The company listed on the Shenzhen Stock Exchange in 2015

Superior Li-ion Battery Manufacturing Equipment Producer: Lead Intelligent Equipment

- **Lead Intelligent Equipment—Superior Capacitor Producer**
 - **Automatic Capacitor Equipment:** film slitting machine and winder
 - **Automatic Li-Battery Production Equipment:** winder and coater
 - **Automatic PV Production Equipment:** high-speed tabber and stringer and capacitor testing equipment
- Company’s core product is **winder**, whose performance approaches to imported equipment’s level. The company will expand R&D on other core equipment, and **coater** and **testing equipment** will be the major objectives

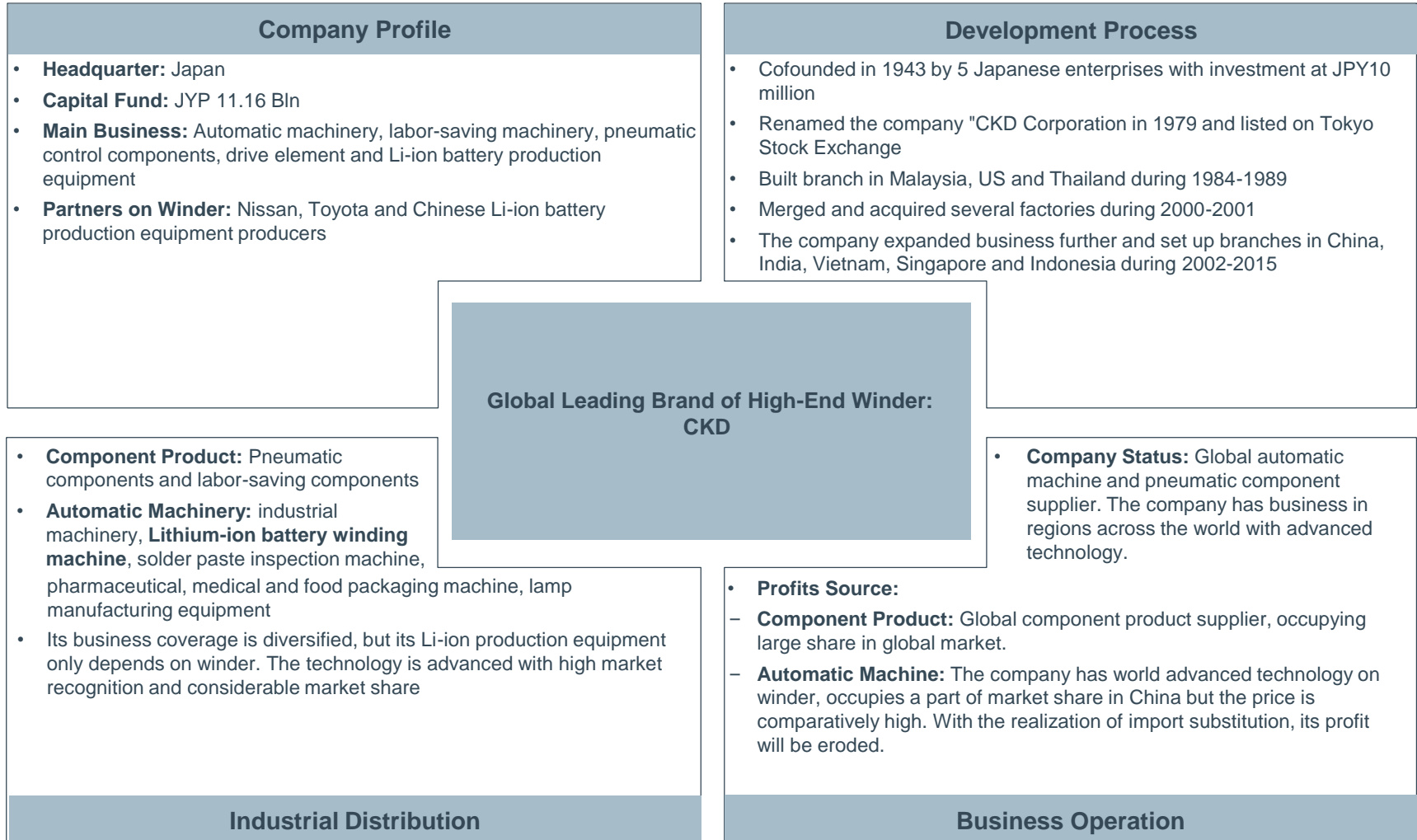
- **Company Status:** It started up with film capacitor equipment and then expanded business into Li-ion battery and PV automotive production equipment with income increased to RMB 1 billion in 2016 from RMB 130 million in 2013.

- **Profits Source:**
 - **Automatic Capacitor Equipment:** already developed, the market is small but income flows are stable
 - **Li-ion Battery Production Equipment:** The fifth generation of **winder** has high cost-performance ratio and enables **import substitution**; coater and other rear-end equipment contribute to part of revenue
 - **Automatic Photovoltaic Production Equipment:** Supply automatic products and will benefit from the development of photovoltaic industry

Industrial Distribution

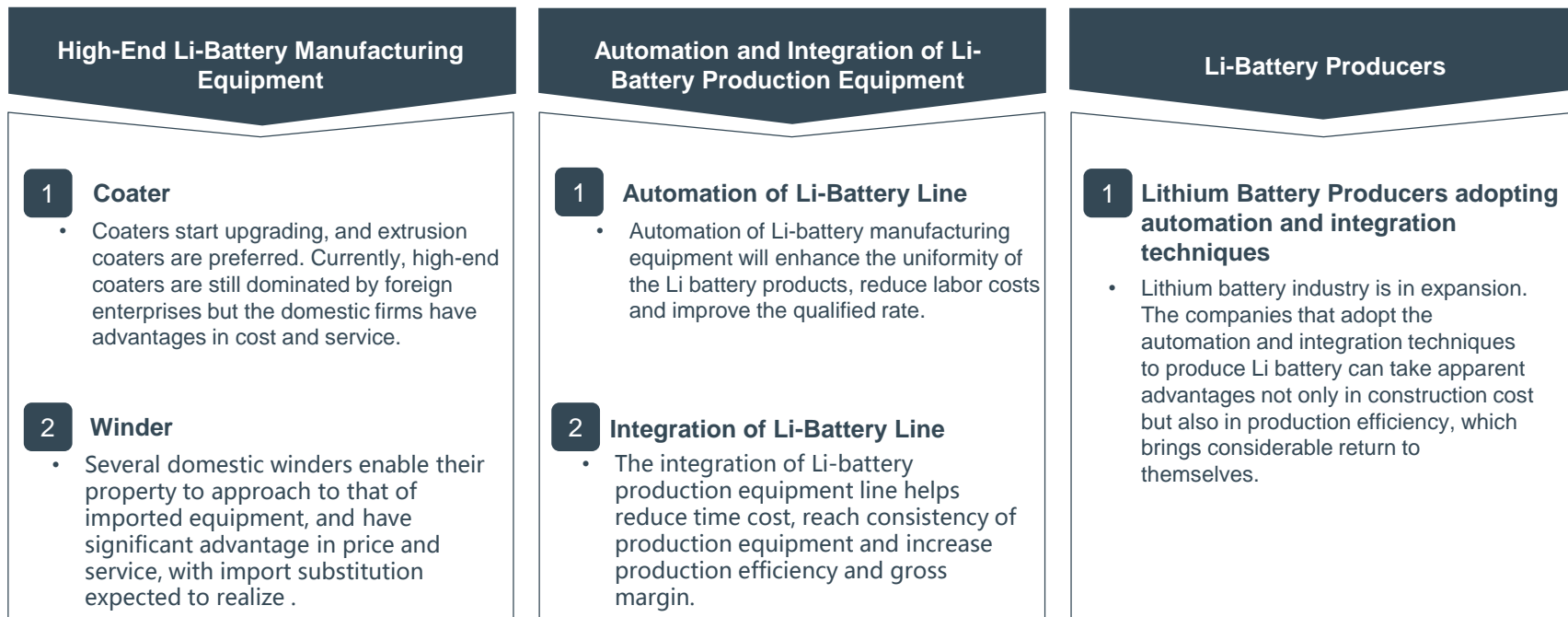
Business Operation

Chinese Representative Enterprise: CKD



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Investment Opportunity and Superior Enterprises



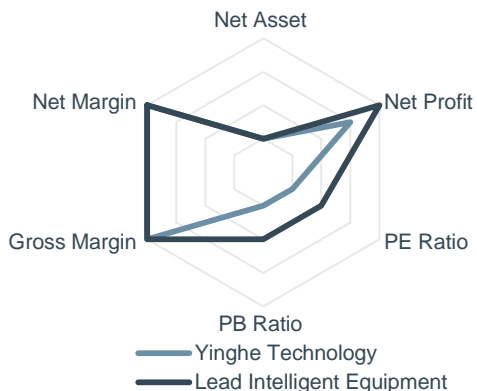
Superior Enterprises:

- **Yinghe Technology:** a leader of high-end Li-battery production equipment and supplier for integrated production line, acquired 100% stake of Dongguan Areconn Precision Machine, forming complementary advantages in product lines and strong synergy effect in clients channels, procurement and production. The alliance between giants will foster the integrated production line project conducted successfully.
- **Lead Intelligent Equipment:** involves in R&D and sales of automatic complete production line and has a serious of core technology. The company's products, including automatic winder, approach to international advanced level with high market recognition. Lead plans to acquire JOT with EUR 52.04 million to expand business of automatic equipment further.
- **Lihe Group:** its subsidiary Zhuhai Higrand is planning to list on New OTC Market. The company is in the lead in sectors such as including winder and pelleter, and has large room for import and low-end substitution.
- **Kanhoo Industry:** is planning to acquire Haoneng Technology ,to expand business into field of Li-battery production equipment and material so that it will realize a reverse in operation performance. Haoneng Technology' s coater ranks the top two in China. After completion of acquisition, Kanhoo Industry will become a first-tier Li-battery production equipment producer in China.
- **Guoxuan High-Tech:** mainly engages in R&D, production and sales of new material battery, battery cell, power battery, electric bicycle, wind/solar green lighting systems, electric vehicles, etc.. Its output capacity keeps expanding and it cooperates with Yinghe Technology to study the solution for integrated production line, moving towards the target of automation and integration. The company will thus drastically increase production efficiency and reduce producing costs.

Financial Analysis: Yinghe Technology vs. Lead Intelligent Equipment

1. Current Financial Index Analysis

Financial Index Comparison



Data Source: Q3 Report, SMM

Financial Index Details

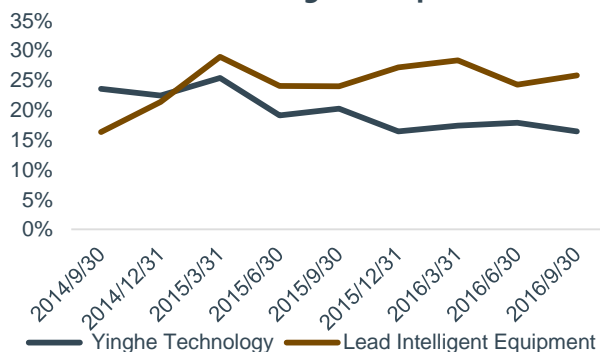
Company	Net Asset	Net Profit	PE Ratio	PB Ratio	Gross Margin	Net Margin
Yinghe	606 Mln	93 Mln	56.17	11.63	39.71%	16.42%
Lead	806 Mln	153 Mln	67.96	17.2	42.20%	25.81%

Data Source: Enterprises' Q3 Report, SMM

- Yinghe and Lead are both outstanding enterprises regarding of current financial index. P/E ratio is slightly high but still in a reasonable range. The most noteworthy part is their **strong profitability** and their performance are expected to be better in the future with the development of Li-battery market.

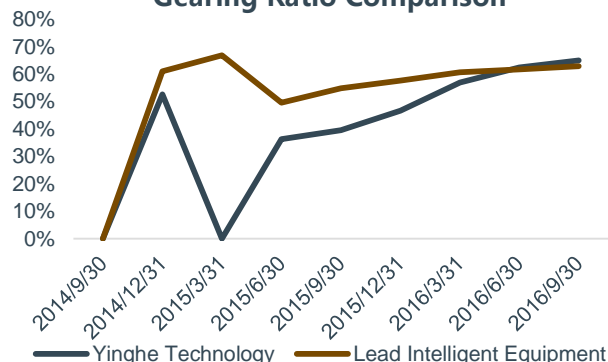
2. Historical Financial Index Analysis

Net Margin Comparison



Data Source: Annual report, semi-annual report, quarter report, SMM

Gearing Ratio Comparison



Data Source: Annual report, semi-annual report, quarter report, SMM

- Net margin ratio of Yinghe reveals a downward trend while the gearing ratio increases, indicating that **the high-speed expansion** impacts the company's financial status. Nevertheless, it still sees a bullish forecast due to large development room in Li-battery market.
- Lead **develops robustly** with stable profitability and reasonable gearing ratio. Similarly, regarding of the flourish Li-battery market, this company can see a positive development trend in the future.

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