第三节 管理层讨论与分析

一、报告期内公司所处行业情况

公司需遵守《深圳证券交易所上市公司自律监管指引第 3 号——行业信息披露》中的“化工行业相关业务”中的“橡胶和塑料制品制造”的披露要求。

1、行业情况及公司所处的行业地位

随着全球对绿色低碳和可持续发展的日益关注，迄今为止已有超过 150 个国家设立了碳中和的宏伟目标。 而在联合国气候变化大会上，近 200 个国家共同达成了具有里程碑意义的“阿联酋共识”，这标志着各国在近三十年来首 次就推动能源系统从化石燃料向清洁能源的转型达成共识，各国均在推进新能源产业建设。在中国碳中和、碳达峰的国家战略目标指引下，新能源汽车及储能产 业保持增长态势，但增速有所放缓，各细分行业产能不断释放，竞争加剧。锂电池隔膜作为锂电池的四大关键材料之一，广泛应用于电动汽车、消费类电子产品、 储能电池等领域，在推动中国乃至全球新能源产业的发展中扮演着举足轻重的角色。

根据 EV TANK《中国锂离子电池隔膜行业发展白皮书(2025 年)》的统计，截至 2024 年末，公司的市场份额已连续七年处于市场首位。公司作为锂电池隔膜行业的龙头企业，在全球产能规模、产品品质、成本效益以及技术研发等方面具备显著竞争力，已成功进入全球绝大多数主流锂电池生产企业的供应链体系，覆盖动力电池、消费电池和储能电池三大领域，应用场景丰富。2024 年，公司仍保持行业龙头地位，隔膜产品的产能与出货量水平均居行业首位。

2、行业发展趋势

全球新能源汽车行业和储能市场仍在增长，其中动力类锂电池增速阶段性有所放缓，整个产业竞争激烈，但储能市场规模和需求均有大幅增长，SNE Research 显示，2024 年全球动力电池装机 894.4GWh，同比增长 27.2%；根据 ICC 鑫椤的统计，2024 年全球储能电池出货量达 314.7GWh，同比增长 60%。锂电池产业市场规模的持续扩大带动锂电池隔离膜的发展，但锂电池隔膜行业供给近年来集中释放，行业竞争激烈，叠加下游锂电池企业加大成本管控力度，进而导致隔膜产品价格下行，整个行业盈利承压。EV Tank《中国锂离子电池隔膜行业发展白皮书（2025 年）》显示，中国 2024 年锂离子电池隔膜出货量达 228 亿平方米，同比增长 28.6%。

（1）隔膜行业市场空间广阔，规模化和本地化配套要求高

从全球视角看，中国汽车电动化、智能化发展已走在前列，而欧美等海外地区也正布局跟进。鉴于新能源汽车和锂电池市场尤其是储能市场的巨大增长空间，GGII 数据显示，到 2030 年，全球新能源乘用车、商用车、储能电池出货规模预计分别超过 2000GWh、近 700GWh 和 1400GWh。新兴应用领域，如工程机械、船舶、航空器以及“智能化驱动的应用场景”，到 2030 年也将带来超过百 GWh 的需求。海外新能源汽车的 渗透率相较于国内仍然较低，因此，其未来市场的增长速度预计将超过国内市场。锂电池隔膜作为锂电池制造中不可 或缺的关键原材料，其稳定可靠的本地化产能配套能力和产品品质是隔膜企业承接下游客户大规模订单的重要基石。公司不断深化与全球头部客户的合作关系，凭借公司全球产能规模、产品品质和全球服务能力、行业领先的技术研发和专利优势等，有助于进一步提高全球市场份额，巩固全球行业领先的地位。

（2）提升创新能力，积极优化产品及客户结构

锂电池作为新能源汽车的核心组件，随着市场由政策导向逐渐过渡为市场驱动，厂商对锂电池的安全性、续航能力和使用寿命等关键性能的要求日益严苛，锂电池技术的不断进步对隔膜产品的性能提升和技术迭代提出了更高的要求，因此，掌握核心技术，具备自主研发及创新能力的隔膜企业将迎来更好的发展前景与空间。此外，锂电池的应用场景不断拓宽，未来低空经济、机器人等，将进一步增大对锂电池和锂电池隔离膜的市场规模。

隔膜行业竞争日益激烈，技术创新、开发新产品和迭代升级产品是隔膜企业发展的趋势之一。通过在基膜上涂覆无机陶瓷材料、PVDF、芳纶等材料能有效提升锂电池隔膜的抗穿刺和耐热等性能，增强电池的安全性和使用寿命，相较于基膜，涂覆膜更能满足锂电池对于隔膜关键性能的需求，产品附加值也更高，因此掌握高品质涂覆膜核心技术的隔膜企业更具有发展前景，加大涂覆膜出货量有助于综合盈利水平的提升；同时，不断开发新产品如超薄隔膜产品、快充隔

Section 3 Management Discussion and Analysis

1. Industry Overview of the Company During the Reporting Period

The company must comply with the disclosure requirements for "Rubber and Plastic Products Manufacturing" under "Chemical Industry-Related Business" as outlined in the "Self-Regulatory Guidelines for Listed Companies No. 3 - Industry Information Disclosure" of the Shenzhen Stock Exchange.

1. Industry Overview and the Company's Position within the Sector

With the growing global focus on green, low-carbon, and sustainable development, more than 150 countries have set ambitious carbon neutrality goals to date. At the United Nations Climate Change Conference, nearly 200 nations jointly reached the landmark "UAE Consensus," marking the first time in nearly three decades that countries have agreed on transitioning energy systems from fossil fuels to clean energy. Nations worldwide are advancing the construction of new energy industries. Under China's national strategic goals of carbon neutrality and peaking carbon emissions, the new energy vehicle and energy storage industries continue to grow, albeit at a slower pace, with expanding production capacities across various sub-sectors intensifying competition. As one of the four key materials in lithium batteries, lithium battery separators are widely used in electric vehicles, consumer electronics, energy storage batteries, and other fields, playing a pivotal role in driving the development of the new energy industry in China and globally.

According to EV TANK's *China Lithium-ion Battery Separator Industry Development White Paper (2025)*, by the end of 2024, the company's market share had remained the highest for seven consecutive years. As a leading enterprise in the lithium battery separator industry, the company possesses significant competitiveness in global production capacity, product quality, cost efficiency, and technological R&D. It has successfully entered the supply chain systems of the vast majority of global mainstream lithium battery manufacturers, covering the three major fields of power batteries, consumer batteries, and energy storage batteries, with diverse application scenarios. In 2024, the company maintained its leading position in the industry, ranking first in both production capacity and shipment volume of separator products.

2. Industry Development Trends

The global new energy vehicle industry and energy storage market continue to grow, although the growth rate of power lithium batteries has slowed down temporarily, with intense competition across the sector. However, the scale and demand of the energy storage market have seen significant increases. According to SNE Research, global power battery installations reached 894.4 GWh in 2024, a year-on-year increase of 27.2%. Statistics from ICC Xinluo indicate that global energy storage battery shipments hit 314.7 GWh in 2024, up 60% year-on-year. The continuous expansion of the lithium battery market has driven the development of lithium battery separators. Yet, the supply in the separator industry has been concentrated in recent years, leading to fierce competition. Coupled with downstream lithium battery companies tightening cost controls, separator product prices have declined, putting pressure on the profitability of the entire industry. EV Tank's "China Lithium-ion Battery Separator Industry Development White Paper (2025)" shows that China's lithium-ion battery separator shipments reached 22.8 billion square meters in 2024, a 28.6% increase year-on-year.

(1) The diaphragm industry has a vast market space, with high requirements for scale and localized support

From a global perspective, China has taken a leading position in the electrification and intelligent development of automobiles, while overseas regions such as Europe and America are also following suit with their own plans. Given the vast growth potential in the new energy vehicle and lithium battery markets, particularly in energy storage, GGII data indicates that by 2030, global shipments of new energy passenger vehicles, commercial vehicles, and energy storage batteries are expected to exceed 2000GWh, nearly 700GWh, and 1400GWh, respectively. Emerging application areas, such as construction machinery, ships, aircraft, and "intelligence-driven application scenarios," will also generate demand exceeding hundreds of GWh by 2030. The penetration rate of new energy vehicles overseas remains relatively low compared to the domestic market, suggesting that their future market growth is projected to outpace that of the domestic market. As an indispensable key raw material in lithium battery manufacturing, lithium battery separators rely on stable and reliable localized production capacity and product quality as the cornerstone for separator companies to secure large-scale orders from downstream customers. By continuously deepening partnerships with global leading clients and leveraging its global production capacity, product quality, worldwide service capabilities, and industry-leading technological R&D and patent advantages, the company is well-positioned to further increase its global market share and solidify its leading position in the global industry.

(2) Enhance innovation capabilities and actively optimize product and customer structures

As the core component of new energy vehicles, lithium batteries are seeing increasingly stringent requirements from manufacturers regarding key performance aspects such as safety, range, and lifespan, as the market shifts from policy-driven to market-driven. The continuous advancement of lithium battery technology has raised higher demands for the performance enhancement and technological iteration of separator products. Therefore, separator companies that master core technologies and possess independent R&D and innovation capabilities will enjoy better development prospects and opportunities. Additionally, the application scenarios for lithium batteries are continuously expanding, with future sectors like the low-altitude economy and robotics expected to further increase the market size for lithium batteries and lithium battery separators.

The competition in the separator industry is becoming increasingly fierce, with technological innovation, the development of new products, and iterative product upgrades being one of the trends for separator companies. Coating inorganic ceramic materials, PVDF, aramid, and other materials onto the base film can effectively enhance the puncture resistance, heat resistance, and other properties of lithium battery separators, improving battery safety and lifespan. Compared to base films, coated films better meet the critical performance requirements of lithium batteries for separators and offer higher product value-added. Therefore, separator companies that master the core technology of high-quality coated films have greater development prospects, and increasing the shipment volume of coated films contributes to the improvement of overall profitability. At the same time, continuous development of new products, such as ultra-thin separators and fast-charging separators, is essential.