



# 2024

## Sustainability Report

### 可持续发展报告

### (中英文对照版)



凯丰新材  
Kaifeng's new material

浙江凯恩特种材料股份有限公司

Zhejiang Kan Specialities Material Co., Ltd.



**Li Renfu**  
6# Unit  
Operator



**Zhou Ya**  
Processed Paper  
Operator



**Deng Xueying**  
No. 1 Branch  
Packer



**Liu Li**  
Processed Paper  
Operator



**Shu Jianzhu**  
Quality Control Department  
Quality Inspector



**Cao Limei**  
General Warehouse  
Warehouse Keeper



**Qian Lifang**  
No. 2 Branch  
Deputy Director



**Wu Hongming**  
No. 1 Branch  
Deputy Director



**Liu Jiawei**  
Processed Paper  
Deputy Director

**Unsung Front-line Workers  
Carve Out A Glorious World**

# 关于本报告

## 报告简介

本报告是凯恩股份正式发布的“第五份”可持续发展报告，同步发布“首份”英文版可持续发展报告。此前公司分别于2021年3月30日、2022年3月29日、2023年3月28日、2024年3月28日连续发布四份可持续发展类报告。报告本着客观、规范、透明和全面的原则，详细披露了公司2024年在环境、社会、公司治理等领域的实践绩效。

## 时间范围

2024年1月1日至2024年12月31日。为增强报告可比性和完整性，部分内容适当溯及以往年份。

## 报告范围

为了便于表述和阅读，本报告中“浙江凯恩特种材料股份有限公司”也以“凯恩股份”“公司”或“我们”表述。本报告范围为凯恩股份及凯恩股份在中华人民共和国运营的子公司“浙江凯丰新材料股份有限公司”的业务，子公司简称“凯丰新材”。

## 编制依据

本报告参照《深圳证券交易所上市公司自律监管指引第1号——主板上市公司规范运作》《深圳证券交易所上市公司自律监管指引第17号——可持续发展报告（试行）》、中国企业改革与发展研究会《中国企业可持续发展报告指南》（CASS-ESG 6.0）等文件要求；参考联合国2030可持续发展目标（SDGs）、全球报告倡议组织《可持续发展报告标准》（GRI Standards）、国际可持续准则理事会（ISSB）等标准进行编制。

## 数据保证

本报告所有数据均来自公司相关统计报告、正式文件或有关公开信息，符合国家颁布的《企业会计准则》等相关规定，遵循重要性、量化、平衡和一致性原则。

## 质量保障

本报告经公司董事会审核通过后发布，公司保证本报告内容的客观性、准确性和完整性，不存在任何虚假记载、误导性陈述或重大遗漏。希望通过报告的发布，加强利益相关方沟通，提高公司可持续发展治理影响，促进公司高质量可持续发展。

## 阅读延伸

凯恩股份已形成社会责任信息披露体系，除纸质版报告以外，本报告还通过电子版形式发布，您可通过深圳证券交易所网站（[www.szse.cn](http://www.szse.cn)）、巨潮资讯网（[www.cninfo.com.cn](http://www.cninfo.com.cn)）、凯恩股份官方网站社会责任专区（<http://www.kangufen.com/social.html>）、凯恩股份投资者关系专区（<https://002012.ir-online.com.cn>）、同花顺凯恩股份官方号、东方财富凯恩股份官方号、雪球凯恩股份官方号等渠道阅读此报告。

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# About the Report

## Overview

The Report is the fifth sustainability report released by Zhejiang Kan Specialities Material Co., Ltd., following the previous four reports on March 30, 2021, March 29, 2022, March 28, 2023, and March 28, 2024 respectively. This year, we are also releasing the first-ever English version of the Report. The Report provides the detailed disclosure of our key environmental, social and governance practices in 2024, following the principles of objectivity, standardization, transparency and comprehensiveness.

## Time frame

January 1, 2024 ~ December 31, 2024. For the purpose of better comparability and integrity, some content herein may be traced back to previous years.

## Coverage

For the convenience of expression and reading, Zhejiang Kan Specialities Material Co., Ltd. is hereinafter referred to as “KAN”, “Company” or “we”. The Report covers KAN and its domestic subsidiary, Zhejiang Kaifeng New Material Co., Ltd. (“Kaifeng New Material”).

## References

*Shenzhen Stock Exchange Guidelines for Self-discipline Regulation of Listed Companies No. 1 - Standardized Operation of the Companies Listed on the Main Board*; *Shenzhen Stock Exchange Guidelines for Self-discipline Regulation of Listed Companies No. 17 - Sustainability Report (Trial)*; *China Corporate Sustainable Development Report Guide (CASS-ESG 6.0)* issued by China Enterprise Reform and Development Society; 2030 Sustainable Development Goals of UN (UN SDGs); *GRI Standards*; *ISSB Standards*.

## Data

All data herein come from our statistical reports, official documents and public information, and are subject to the applicable provisions of the national *Accounting Standards for Business Enterprises*, and the principles of materiality, quantization, balance and consistency.

## Quality assurance

The Report is released upon the review by the Board of Directors. The Company guarantees that the Report is the objective, accurate and complete disclosure of its ESG practices, and remains free from any false records, misleading statements or material omissions. The Report aims to strengthen communication with stakeholders, enhance the impact of our sustainability governance, and advance our high-quality and sustainable development.

## Access to the Report

KAN has its social responsibility information disclosure system including both paper and electronic reporting. The Report is available at [www.szse.cn](http://www.szse.cn), [www.cninfo.com.cn](http://www.cninfo.com.cn), <http://www.kangufen.com/social.html>, <https://002012.ir-online.com.cn/>, <https://stockpage.10jq-ka.com.cn/002012/>, <http://quote.eastmoney.com/sz002012.html>, and <https://xueqiu.com/snowman/S/SZ002012>.

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## 董事长致辞

### 擦亮责任底色, 迈入新质时代

凯恩股份的核心产品“原纸”是特种纸和包装等行业的基础材料,在纸产品的碳链条中属于碳生态底层,对于产业链降碳和产业创新转型有着重要影响。

随着在可持续发展事业中的动态积累和持续学习,我们更加注重对公司业务和利益相关方最为重要的实质性议题,今年董事会派驻专业团队组织开展了范围更广、程度更深的尽职调查,以财务和气候两个影响因素为核心,动态识别可持续发展领域的风险与机遇。

### 构建价值生态, 铸造凯恩样本

我们从应对气候变化出发,通过科学碳管理推进绿色治理,生产基地已全面实现污水“零排放”,自建绿电使用在生产能源消耗的比例超过30%,三年间温室气体排放总量降幅接近70%,原材料利用率、产品能耗等指标均处于行业领先水平。

可持续发展的竞争一定程度上倾斜了我国特种纸行业原有的竞争平衡。凯恩股份相继获得“国家级绿色工厂”、浙江省“隐形冠军企业”、浙江省“专精特新中小企业”、浙江省“智能工厂”等荣誉称号;连续三年获得中国上市公司协会可持续发展“优秀实践案例”,并作为中小企业样本斩获“最佳实践案例”;在Wind ESG的评级从BB升至AA、评分升至8.3,高居行业第一,国内和国际间合作伙伴信任度大幅提升,国际市场打开有利新局面。

如今我们面对的是一个更加相互依赖的世界,作为凯恩股份每年的“第二份年报”,我们希望以此报告打开一扇窗口,欢迎更多的伙伴和朋友了解我们、关注我们、与我们建立沟通。凯恩股份将全面推进高质量可持续发展,携手伙伴、拥抱世界,迈向美好未来!

凯恩股份董事长、总经理  
刘溪女士



## Message from the Chairperson

### Fulfill Our Responsibility to Embrace the New Quality Era

Base paper, our core product, is the fundamental material for specialty paper and packaging. Playing an underlying role in the carbon chain of the paper products, our base paper significantly facilitates the carbon reduction of the industrial chain and the innovation-driven industry transformation.

With increasing experience and continuous learning of sustainability, we have paid more attention to material topics that are most important to our businesses and our stakeholders. As a response, the Board of Directors has assigned a professional panel to undertake more extensive and in-depth due diligence, especially on finance and climate change, so as to actively identify risks and opportunities in sustainable development.

### Build Our Value Ecosystem to Set An Example of Sustainability

To combat climate change, we have pushed ahead with green governance by scientific carbon management, and have made great achievements. Specifically, our production bases have achieved zero sewage discharge; our self-generated green electricity has accounted for over 30% of our energy mix for production; the total greenhouse gas emissions have reduced by nearly 70% within three years; our utilization efficiency of raw materials, energy consumption for production and other indicators have remained ahead of industry standards.

The competition in sustainable development has disrupted the existing competitive balance in China's specialty paper industry to some extent. Apart from being a "National Green Factory", KAN has been honored as the "Hidden Champion", the "Specialized and Sophisticated SME" and the "Smart Factory" in Zhejiang Province. In addition, the Company has been awarded the "Excellent Practice Case" in Sustainable Development by China Association for Public Companies for three consecutive years, and the "Best Practice Case" as a model SME. In Wind ESG rating, we have been upgraded from BB to AA, ranking the first place in the industry with a score of 8.3. Thanks to our efforts and honors, we have gained enhancing trust among our domestic and foreign partners, and unlocked new prospects in the international market.

In an increasingly interdependent world, we welcome more stakeholders to know us, follow us and engage with us through the Report. KAN stays committed to advancing high-quality and sustainable development on all fronts, and joining hands with our partners to usher in a brighter future!

**Ms. Liu Xi, KAN Chairperson and General Manager**



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国家高新技术企业

国家绿色工厂

# 凯恩品牌力

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- 1.2 战略与文化
- 1.3 董事与董事会
- 1.4 业务产品
- 1.5 发展历程
- 1.6 凯恩荣誉
- 1.7 年度经营数据



精工制造 金朱蚌藤高家园



# KAN Brand Value

- 1.1 Company Profile
- 1.2 Corporate Culture
- 1.3 Board of Directors
- 1.4 Product Lines
- 1.5 Development Milestones
- 1.6 KAN Honors
- 1.7 Annual Operating Data



## 1.1 公司简介

浙江凯恩特种材料股份有限公司(英文名称:Zhejiang Kan Specialities Material Co., Ltd.;英文简称:KAN)成立于1998年,2004年登陆深交所(股票代码:002012),系浙江省丽水市第一家上市公司。公司是以高附加值纸基功能材料为主业的国家高新技术企业、国家级绿色工厂。公司总部位于北京市朝阳区,生产基地为浙江凯丰新材料股份有限公司。

凯丰新材成立于2003年,地处浙江省衢州市龙游经济开发区,2016年在新三板挂牌(证券代码:835427),主要为肯德基、麦当劳、星巴克等跨国连锁餐饮巨头提供高端特种食品包装纸,为中国烟草提供烟用配套用纸,为宝武、酒钢、柯达等企业提供工业配套用纸等。公司先后获得中国电子元件百强企业、浙江省隐形冠军企业、浙江省专精特新中小企业、浙江省智能工厂等荣誉称号。

## 1.2 战略与文化

企业  
宗旨

以人为本、服务客户、回报股东、  
利益员工、奉献社会

事业  
愿景

成为最具价值的一流企业

企业  
精神

自强不息、传承进取

组织  
氛围

灵活高效、真诚包容、团结用心

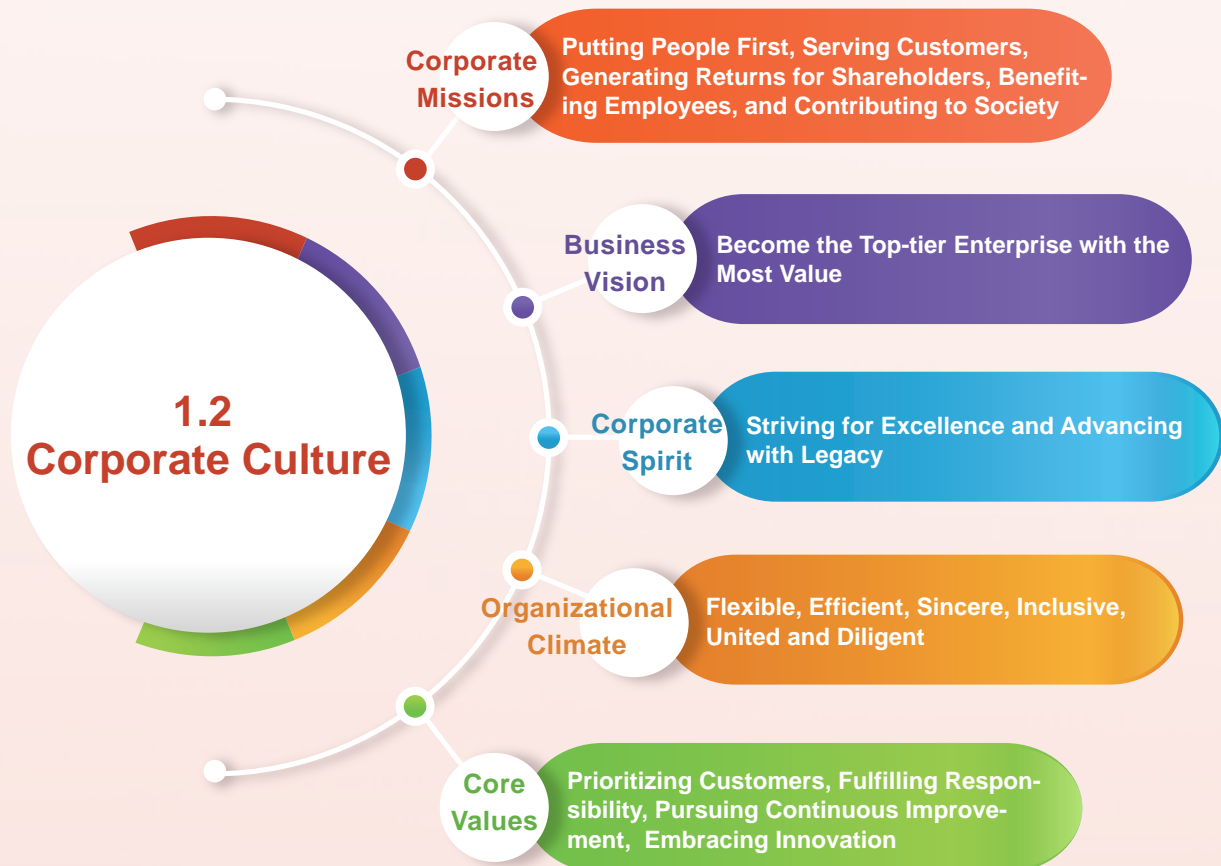
核心  
价值观

客户第一、勇于担当、持续改善、  
开放创新

## 1.1 Company Profile

Zhejiang Kan Specialities Material Co., Ltd. (hereinafter referred to as “KAN”) was founded in 1998, and went public on Shenzhen Stock Exchange in 2004 (Stock Code: 002012) as the first listed company in Lishui, Zhejiang Province. KAN is a National High-tech Enterprise and a National Green Factory mainly engaged in high value-added base paper materials. The Company is headquartered in Chaoyang District, Beijing, and takes Zhejiang Kaifeng New Material Co., Ltd. as its production base.

Kaifeng New Material was founded at Quzhou Longyou Economic Development Zone in 2003, and was listed on the New Third Board (Stock Code: 835427) in 2016. It mainly supplies food wrapping paper to multinational catering giants such as KFC, McDonald’s and Starbucks, rolling paper to China Tobacco, and industrial paper to multiple enterprises such as Baowu, JISCO, and Kodak. Kaifeng New Material is one of the “Top 100 Enterprises of Electronic Components in China”, and has been titled as the “Hidden Champion”, the “Specialized and Sophisticated SME” and the “Smart Factory” in Zhejiang Province.



## 1.3 董事与董事会

公司第十届董事会设董事5名(包括1名女性董事),其中独立董事2名。



### 刘 溪:

女,中国致公党党员,本科毕业于北京大学,研究生毕业于伦敦政治经济学院。曾任职于新时代证券有限责任公司等。2019年起任凯恩股份董事长、总经理,浙江凯丰新材料股份有限公司董事。荣获中国上市公司金圆桌奖之“最具战略眼光董事长”。



### 杨照宇:

男,毕业于香港中文大学,硕士研究生。曾先后供职于中信证券股份有限公司等。2019年1月入职凯恩股份,现任凯恩股份董事、党委副书记、副总经理、董事会秘书、财务总监。曾荣获“浙江省上市公司优秀董秘”、中国上市公司协会5A级董秘、多届新浪财经金牌董秘、上海证券报金质量优秀董秘奖等。



### 孙志超:

男,生于1983年4月,获吉林大学法学学士学位、英国杜伦大学法学硕士学位、法律职业资格证书。曾任北京市浩天信和律师事务所实习律师,财富中国(香港)控股有限公司资本业务部投资总监,恒大集团资本运营中心副总监,中国电信集团投资有限公司业务总监。现任凯恩股份董事、副总经理。



### 胡小龙:

男,生于1957年7月,湖南大学EMBA,高级会计师,注册会计师。曾任湖南财信金融控股集团有限公司党委副书记、董事、总经理,湖南省国有资产投资经营有限公司董事长、总经理,财富证券有限责任公司党委书记、董事。现任凯恩股份独立董事。



### 王跃生:

男,生于1960年7月,教授,博士生导师。曾任北京大学经济学院助教、讲师、副教授等职,现任北京大学经济学院教授、系主任、浙江凯恩特种材料股份有限公司独立董事、华电国际电力股份有限公司独立董事、环宇建筑科技股份有限公司独立董事。

## 子公司管理团队



### 计 皓:

男,生于1961年4月,毕业于嘉兴民丰工业大学,高级工程师。凯丰新材创始人,曾任凯丰新材董事长兼总经理,现任凯丰新材董事长。先后荣获浙江省151人才,衢州市、龙游县专业技术拔尖人才,全国轻工系统及浙江省、衢州市、龙游县科技进步奖等荣誉称号;任中国特种纸产业发展战略研究会专家、浙江省造纸学会常务理事。



### 计 磊:

男,毕业于悉尼大学,硕士研究生。曾供职于浙江大学建筑设计研究院,历任凯丰新材市场部经理、总经理助理、副总经理。现任凯丰新材总经理。

## 1.3 Board of Directors

The Tenth Board of Directors consists of 5 directors (1 female director), including 2 independent directors.



**Liu Xi:**

female, graduated from Peking University with a bachelor degree and from London School of Economics and Political Science with a master degree. Ms. Liu used to work for New Times Securities Co., Ltd. Since 2019, Ms. Liu has served as the Chairperson and General Manager of KAN, and a director of Zhejiang Kaifeng New Material. She was awarded the “Chairperson with Outstanding Strategic Insight” for the Gold Prize of Round Table of Chinese Boards of Listed Companies in China.



**Yang Zhaoyu:**

male, graduated from the Chinese University of Hong Kong with a master degree. Mr. Yang used to work for Shenzhen Stock Exchange, China Securities Regulatory Commission, and CITIC Securities Co., Ltd. He joined KAN in January 2019, and now serves as a director, Vice General Manager, Secretary of the Board and CFO of KAN. Mr. Yang was honored as the “Excellent Board Secretary of the Listed Company” in Zhejiang Province, the “5A Secretary” by China Association for Public Companies, and the “Gold Board Secretary Prize” by Sina Finance.



**Sun Zhichao:**

male, born in April 1983, graduated from Jilin University with a bachelor degree in law and from Durham University with a master degree in law, having the Legal Professional Qualification Certificate. Mr. Sun used to work as an apprentice lawyer in several law firms, the Investment Director of the Capital Business Department in Fortune China (Hong Kong) Holdings Co., Ltd., the Deputy Director of the Capital Operation Center in Evergrande Group, and the Business Director in China Telecom Group Investment Co., Ltd. He is now a director and Vice General Manager of KAN.



**Hu Xiaolong:**

male, born in July 1957, EMBA of Hunan University, a senior accountant and certified public accountant. Mr. Hu used to work as a director and General Manager of Hunan Chasing Financial Holdings Group Co., Ltd., the Chairman and General Manager of Hunan State-owned Assets Investment and Management Co., Ltd., a director of Fortune Securities Co., Ltd. Now, he serves as an independent director of KAN.



**Wang Yuesheng:**

male, born in July 1960, a professor and doctoral supervisor. Mr. Wang successively held the positions of Teaching Assistant, Lecturer and Associate Professor at the School of Economics, Peking University. Now, he is a professor and the chair of a department at the School of Economics, Peking University, an independent director of Zhejiang Kan Specialities Material Co., Ltd., an independent director of Huadian Power International Corporation Ltd., and an independent director of Huanyu Construction Co., Ltd.

## Management Team of the Subsidiary



**Ji Hao:**

male, born in April 1961, graduated from Jiaying Minfeng College of Technology, a senior engineer. Mr. Ji is a founder of Kaifeng New Material, and used to work as the Chairman and General Manager of Kaifeng New Material. Now, he serves as the Chairman of Kaifeng New Material. He has been listed in the 151 Talent Program of Zhejiang Province. In addition, he won the Science and Technology Progress Awards in the national light industry, municipal and provincial levels. He serves an expert of the Strategic Research Institute for the Development of China's Specialty Paper Industry, and an executive member of Zhejiang Technical Association of Paper Industry.



**Ji Lei:**

male, graduated from the University of Sydney with a master degree. He used to work for the Architectural Design and Research Institute of Zhejiang University. Mr. Ji used to serve as the Manager of the Marketing Department, the General Manager Assistant and the Vice General Manager of Kaifeng New Material. Now, he is the General Manager of Kaifeng New Material.

## 1.4 业务产品

目前公司主要有烟用配套用纸、特种食品包装纸、工业配套用纸和医用包装材料等产品，产品质量水平高，替代进口同类产品。其中烟用接装纸原纸和高光热敏原纸获得省高新技术产品称号，不锈钢垫纸获得省名牌产品称号，烟用接装纸原纸获得市名牌产品称号。

### 1. 烟用配套用纸

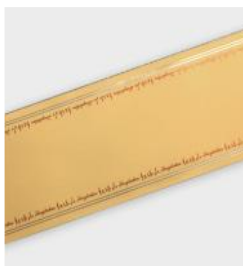
烟用配套用纸主要是用作滤嘴香烟滤棒外包装的卷烟包装材料，把滤棒粘接到烟条末端，因外观类似松木纹也叫“水松纸”。烟用接装纸的印刷油墨和涂层必须无毒，符合食品卫生标准，并且具备一定的抗水性和湿强度。

公司主要产品种类有普通类(单面光型、双面光型)，特殊类(高不透型、自然透气型、高透气度型、防渗透型)。产品具有较高的抗张强度、一定的不透明度、较高的平滑度及防油墨渗透等印刷适性，适于印刷、套印及激光打孔，烫金工艺加工，专供大型卷烟企业。

#### 普通类



单面光型



双面光型

#### 特殊类



高不透型



自然透气型



高透气度型



防渗透型(爆珠)



## 1.4 Product Lines

The Company currently offers a diverse range of high-quality products including rolling paper, food wrapping paper, industrial paper and medical packaging materials. Notably, the cigarette tipping base paper and high gloss thermal base paper are recognized as provincial high-tech products. In addition, the stainless-steel interleaving paper is recognized as a provincial famous brand product, while the cigarette tipping base paper is also acknowledged as a municipal famous brand product.

### 1. Tipping base paper series

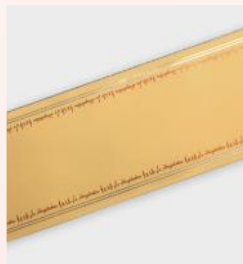
The tipping base paper series are mainly used as the outer packaging materials to bond filter tips and cigarette ends together. The printing ink and coating of products shall be non-toxic, comply with food hygiene standards, and have certain resistance to water and wet strength.

The series are divided into common and special classes. The common class includes MG and MF products, while the special class includes highly opaque products, natural breathable products, high permeability products, and anti-penetration products. These products boast high tensile strength, certain opaqueness, favorable smoothness, and anti-ink penetration for printing adaptability. Thus, they are applicable to printing, overprinting, laser punching, and hot stamping. These products are widely used by large-scale cigarette factories.

#### Common class



MG product



MF product

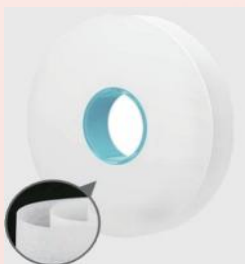
#### Special class



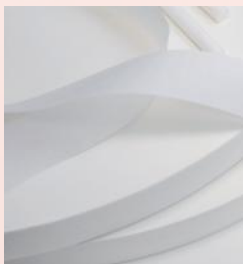
Highly opaque product



Natural breathable product



High permeability product



Anti-penetration product (bursting bead)





## 2. 特种食品包装纸

特种食品包装纸是以纸浆及纸板为主要原料的包装纸品，需要满足无毒、抗油、防水防潮、密封等要求，且符合食品包装安全。公司技术创新主要集中在包装材料的功能化与新型化学品的开发上。公司相关产品种类主要有包装类(本色牛皮纸、白色牛皮纸、糖果扭结纸、高强包装纸)，烘焙类(硅油原纸、蒸笼纸)，防油防水类(含氟防油型、无氟防油型、水基纸、涂蜡原纸)，过滤类(茶叶袋纸、干燥剂包装纸)。该品类产品现已实现品类全覆盖，主要下游客户为跨国连锁餐饮巨头。

### 食品包装类



白色牛皮纸



本色牛皮纸



糖果扭结纸



高强包装纸

### 防油防水类



含氟防油型



无氟防油型



水基纸



涂蜡原纸

### 烘焙类



烘焙原纸(硅油纸)



蒸笼纸

### 过滤类



热封茶叶袋纸  
非热封茶叶袋纸



干燥剂包装纸



## 2. Food Wrapping Paper Series

The food wrapping paper series are mainly made of pulp and cardboards, meet non-toxic, oil-resistant, waterproof, moisture-proof and sealing requirements, and comply with food packaging safety standards. We have placed our technological innovation priorities on the functions and new chemicals of packaging materials. The series are classified as packaging paper (brown kraft paper, white kraft paper, candy knot paper, and high strength wrapping paper), bakery paper (silicone coated base paper, and steamer paper), oil and water-proof paper (fluorinated oil-proof paper, flouride-free oil-proof paper, water-based packaging paper, and waxed base paper), and filter paper (tea bag paper, and desiccant wrapping paper). These products are mainly supplied to multinational catering giants.

### Food packaging paper



White kraft paper



Brown kraft paper



Candy knotpaper



High strength wrapping paper

### Oil and water proof paper



Fluorinated oil-proof paper



Flouride-free oil-proof paper



Water-based packaging paper



Waxed base paper

### Bakery paper



Baking base paper (Silicone coated paper)



Steamer paper



### Filter paper



Heat seal tea bag paper  
Non heat seal tea bag paper



Desiccant wrapping paper

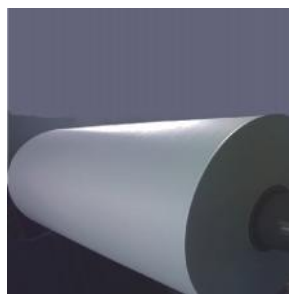
### 3.工业配套用纸

工业配套用纸是指应用于工业领域中的各种纸制品,广泛应用于机械制造、工业包装、科研实验等各个领域。公司主要产品种类有不锈钢衬纸、CTP衬纸、PS版衬纸、光电玻璃衬纸、液晶玻璃基板保护纸等产品。该品类产品下游客户为各大钢厂。

#### 材料间隔类



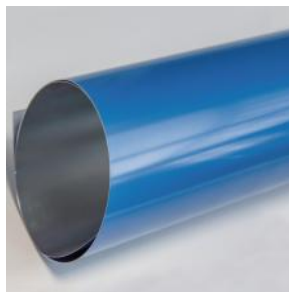
不锈钢垫纸



光电玻璃垫纸/  
液晶玻璃基板保护纸



PS版衬纸



CTP版衬纸

### 4.医用包装材料

公司主要产品种类有医用包装纸、PE自粘型纸、高温自粘性纸、涂胶型纸等。

可以满足医疗器械的特性、预期灭菌方法、使用效果、失效日期以及运输与贮存过程的不同要求。



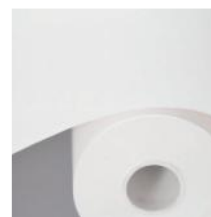
医用包装纸



PE自粘型



涂胶型

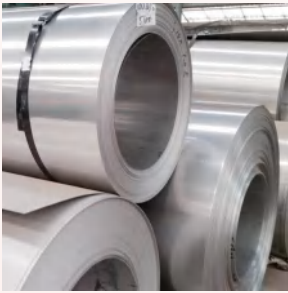


高温自粘型

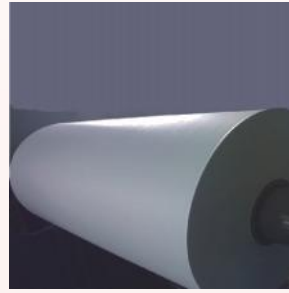
### 3. Industrial Paper Series

The series refer to paper products used for industrial purposes, and are widely adopted in machinery manufacturing, industrial packaging, as well as scientific research and experiment. The series mainly include stainless steel interleaving paper, CTP interleaving paper, PS interleaving paper, photoelectric glass interleaving paper, and substrate protection paper of liquid crystal glass. These products are mainly supplied to steel makers.

#### Interleaving paper



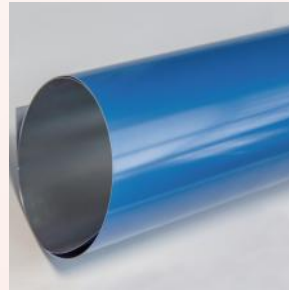
Stainless steel interleaving paper



Photoelectric glass interleaving paper/Substrate protection paper of liquid crystal glass



PS interleaving paper



CTP interleaving paper

### 4. Medical Packaging Materials

The medical packaging materials include products for medical packaging, PE self-adhesive products, high-temperature self-adhesive products, and glue-coated products. These products can meet various requirements related to medical device properties, expected sterilization methods, use effects, expiry dates, as well as transportation and storage.



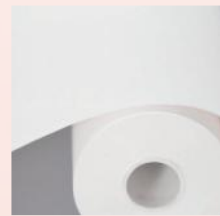
Medical packaging



PE self-adhesive products



Glue-coated products



High temperature selfadhesive product

## 1.5 发展历程

|   |  |  |
|---|--|--|
| <p><b>1940</b><br/>公司前身“开成纸厂”设立经营</p>               |     |  |
| <p><b>1958</b><br/>公司合并改制为“地方国营遂昌造纸厂”</p>           |     |  |
| <p><b>1978</b><br/>公司获第一届全国科学大会奖</p>                |    | <p><b>2003</b><br/>子公司凯丰新材成立，落户省级经济开发区衢州龙游工业园</p>      |
| <p><b>1996</b><br/>公司正式关停草浆制浆生产线、改用商品浆，彻底消除制浆污染</p> |    | <p><b>2004</b><br/>1月时任浙江省委书记习近平来公司考察指导</p>            |
| <p><b>1998</b><br/>完成股份制改造，正式成立浙江凯恩纸业股份有限公司</p>     |   | <p><b>2004</b><br/>7月公司成功登陆深交所上市 (股票代码:002012)</p>     |
| <p><b>2002</b><br/>公司更名为“浙江凯恩特种材料股份有限公司”沿用至今</p>    |  | <p><b>2015</b><br/>子公司凯丰新材成功在新三板挂牌上市 (股票代码:835427)</p> |
|   |  | <p><b>2019</b><br/>新一届董事会及管理团队带领公司迈入新发展阶段</p>          |
|   |  | <p><b>2020</b><br/>公司升级为国家级绿色工厂，引领地区绿色转型</p>           |
|   |  | <p><b>2023</b><br/>完成丽水基地资产处置，成功迈出战略过渡的历史性一步</p>       |

## 1.5 Development Milestones

**In 1940**

Kaicheng Paper Factory, the predecessor of the Company, was established.



**In 1958**

The factory was merged and restructured into the State-run Suichang Paper Factory.



**In 1978**

The product won the "First National Science Congress Award".



**In January 2004**

Kaifeng New Material Co., Ltd., the subsidiary of KAN, was established at the provincial-level Quzhou Longyou Economic Development Zone.

**In 1996**

The straw pulp production line was shut down. Instead, the commercial pulp was adopted, eliminating pulp production pollution.

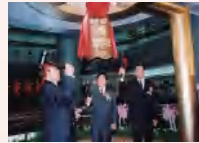


**In 2003**

Xi Jinping, then Secretary of the CPC Zhejiang Provincial Committee, visited the Company.

**In 1998**

The shareholding reform was completed, and Zhejiang Kan Paper Co., Ltd. was founded.



**In July 2004**

The Company went public on Shenzhen Stock Exchange (Stock Code: 002012).

**In 2002**

Zhejiang Kan Paper Co., Ltd. was renamed Zhejiang Kan Specialties Material Co., Ltd.

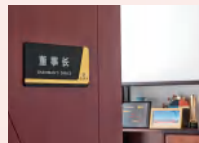


**In 2015**

Kaifeng New Material was listed on the New Third Board (Stock Code: 835427).

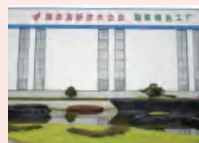
**In 2019**

The new Board of Directors and the Management steered the Company to embark on a new stage of development.



**In 2020**

The Company was upgraded to a National Green Factory, leading the regional green transition.



**In 2023**

The Company disposed of some traditional assets, taking a landmark step in strategic transition.

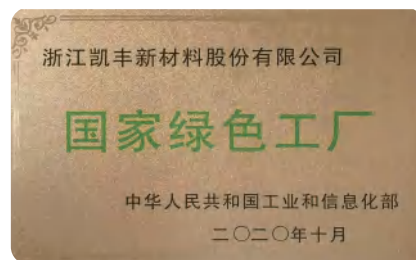


## 1.6 凯恩荣誉

### 1. 实业耕耘类

#### 国家级

高新技术企业、国家级绿色工厂等。



#### 省部级

浙江省“隐形冠军”企业、浙江省“专精特新”中小企业、浙江省“智能工厂”、浙江省“创新型”中小企业、浙江省制造业“单项冠军”培育企业、浙江省“绿色企业”、浙江省“专利示范”企业、浙江省级高新技术企业“研究开发中心”、浙江省级“企业研究院”、浙江省级“企业技术中心”、浙江省“博士后工作站”等。



#### 产品类

浙江省“优秀工业新产品”（防油型食品级绿色包装纸）、“浙江制造精品”（高精度多功能防护衬纸）等。

#### 浙江省经济和信息化厅文件

浙经信技术〔2024〕90号

浙江省经济和信息化厅关于公布  
2023年度“浙江制造精品”名单的通知

#### 其他类

中国电子元件“百强”企业、浙商“500强”、衢州市“政府质量奖”、环保纸产业年度创新“产业合作奖”、衢州市“专家工作站”、龙游县五大产业链“链主企业”、南京林业大学“研究生工作站”等。



#### 个人类

全国五一劳动奖章、全国轻工行业劳动模范、浙江省青年工匠、龙游县“优秀共产党员”、“浙江工匠”培养人员、浙江省工业领域绿色发展专家库专家、中国特种纸产业发展战略研究会专家、制浆造纸教授级高级工程师、机电制造高级工程师等。



## 1.6 KAN Honors

### 1. Business

#### National Honors

The High-tech Enterprise  
The National Green Factory

#### Provincial and Ministerial Honors

1. "The Hidden Champion"
2. "The Specialized and Sophisticated SME"
3. "The Smart Factory"
4. "The Innovation-driven SME"
5. "The Enterprise Leading an Individual Field of the Manufacturing Industry"
6. "The Green Enterprise"
7. "The Patent Demonstration Enterprise"
8. "The Provincial High-tech Enterprise R&D Center"
9. "The Provincial Enterprise Research Institute"
10. "The Provincial Enterprise Technology Center"
11. "The Postdoctoral Workstation" in Zhejiang Province

#### Product Honors

1. "The New Excellent Industrial Product" (food-grade oil-proof green packaging paper)
2. "The Premium Manufacturing Product" (high-precision multi-functional interleaving paper) in Zhejiang Province

#### Other Honors

1. "The Top 100" Enterprises of Electronic Components in China
2. "The Top 500" Zhejiang Merchants
3. "The Government Quality Prize" in Quzhou City
4. "The Annual Innovation Award" of Environmentally-friendly Paper Industry -- Industry Cooperation
5. "The Expert Workstation" in Quzhou City
6. "The Leading Enterprise" in the Five Major Industry Chains of Longyou County
7. "The Postgraduate Workstation" of Nanjing Forestry University

#### Individual Honors

1. The National May 1 Labor Medal (the first medal of this kind in this county over the last decade)
2. The National Light Industry Model Worker
3. The Young Craftsman in Zhejiang Province
4. "The Outstanding CPC Member" of Longyou County
5. "The Potential Craftsman" in Zhejiang Province
6. The Expert in Green Industry Development of Zhejiang Province
7. The Expert of Strategic Research Institute for the Development of China's Specialty Paper Industry
8. Professor-level Senior Engineer in Pulp and Paper Making
9. The Senior Engineer in Electromechanical Manufacturing



## 2. 市场影响类

### 合规方面

第十一届中国上市公司投资者关系  
“天马奖”之“优秀董事会奖”

第六届“金桔奖”之  
“高质量发展上市公司奖”

浙江上市公司协会“规范运作优秀  
典型案例”(浙江TOP22)

中国上市公司协会2022  
“董办最佳实践案例”(A股TOP150)

第十八届中国上市公司董事会  
“金圆桌奖”之“优秀董事会”

中国上市公司协会2023上市公司  
“ESG最佳实践案例”及“ESG优秀实践案例”  
(民营企业TOP1%)

中国上市公司协会2024上市公司  
“ESG优秀实践案例”(连续三届)

证券市场周刊首届“ESG金曙光奖”之  
“环境责任奖”&2024“十大ESG 领先  
企业榜单”之“最佳低碳和谐发展力”榜单

第十八届“水晶球奖”之  
“最佳ESG管理上市公司”

第八届卓越IR年度评选之“最佳ESG奖”

### IR方面

第四届中国卓越IR年度评选之“最佳信批奖”

第五届中国卓越IR年度评选之“最佳信批奖”

同花顺企业号“2020年度榜单”之“  
最佳新媒体奖20强”

同花顺企业号“2021年度榜单”  
之“投关先锋奖”

2021年度“全景投资者关系金奖”之“中小企业  
投资者关系互动奖”、“IR进取奖”

第十四届中国上市公司投资者关系“天马奖”  
之“投资者关系新媒体奖”



## 3. ESG评价类

截至2024年12月31日,凯恩股份在Wind ESG和秩鼎保持AA评级,在中诚信绿金、商道融绿、同花顺等平台保持A评级。根据Wind ESG数据显示,凯恩股份在AA评级基础上获得8.4评分,在A股上市公司中排名56/5377,在民营上市公司中排名28/3404,在深市主板中排名13/1481,在材料板块中排名5/837,在浙江省上市公司中排名7/713,在50亿元市值以下上市公司中排名8/2654,在特种纸行业上市公司中排名1/50。



## 2. Market influence

### Compliance Honors

- 1.The Award for the “Excellent Board of Directors” granted by the 11<sup>th</sup> “Tianma Awards” for Investor Relations Management of Chinese Listed Companies
- 2.The Award for “Listed Company with High-quality Development” granted by the 6<sup>th</sup> “Golden Tangerine Awards”
- 3.The Award for the “Excellent Board of Directors” granted by the 17<sup>th</sup> “Gold Prize of Round Table” of Chinese Boards of Directors of Listed Companies
- 4.The “Exemplary Case for Standard-based Operation” (Top 22 in Zhejiang) awarded by the Listed Company Association of Zhejiang
- 5.The 2022 “Excellent ESG Case” awarded by China Association for Public Companies (the only honor of this kind in the paper sector, and one of the only two honors of this kind in the light industry)
- 6.The 2022 “Best Office of the Board of Directors” awarded by China Association for Public Companies (Top 150 in Class A Shares)
- 7.The Award for the “Excellent Board of Directors” granted by the 18<sup>th</sup> “Gold Prize of Round Table” of Chinese Boards of Directors of Listed Companies
- 8.The 2023 “Best ESG Case” and “Excellent ESG Case” awarded by China Association for Public Companies (Top 1% among private enterprises)
- 9.The 2024 “Excellent ESG Case” awarded by China Association for Public Companies
- 10.The “Environmental Responsibility Award” granted by the “First ESG Golden Dawn Awards” organized by Weekly On Stocks
- 11.The “Best Low-carbon and Harmonious Development Enterprise” among 2024 “Top 10 ESG Leaders” organized by Weekly On Stocks
- 12.The “Best Listed Company in ESG Management” granted by the 18<sup>th</sup> “Crystal Ball Awards”
- 13.The “Best ESG Award” granted by the 8<sup>th</sup> China IR Annual Awards

### IR Honors

- 1.The “Best Information Disclosure Award” granted at the 4<sup>th</sup> China IR Annual Awards
- 2.The “Best Information Disclosure Award” granted at the 5<sup>th</sup> China IR Annual Awards
- 3.Ranked among the “Top 20 Best New Media Awards” in the “2020 Annual List” from ROYALFLUSH INFO
- 4.The “Investor Relations Pioneer Award” in the “2021 Annual List” from ROYALFLUSH INFO
- 5.The Investor Relations Gold Award issued by Panorama Network in 2021
- 6.The “New Media Award of Investor Relations” granted by the 14<sup>th</sup> “Investor Relations Management of Chinese Listed Companies”

## 3. ESG rating

As of December 31, 2024, KAN has maintained its AA position in Wind ESG and QuantData ESG ratings, and Grade A in CCXGF, SynTao Green Finance and Flush Info ESG ratings. As shown by Wind ESG data, KAN scored 8.4 at Grade AA, ranked 56/5377 among the listed companies of Class A shares, 28/3404 among the listed private companies, 13/1481 among the main-board companies on Shenzhen Stock Exchange, 5/837 among the listed companies in the material sector, 7/713 among the listed companies of Zhejiang Province, 8/2654 among the listed companies with the market value less than RMB 5 billion, and 1/50 among the listed companies in the specialty paper industry.



## 1.7 年度经营数据



环保总投入**25892**万元, 同比降低**42%**

绿色采购投入**25423**万元, 同比降低**41%**

节能降耗技术投入**207**万元, 同比降低**16%**

技术改造投入**1175**万元, 同比降低**1%**

研发费用**2901**万元, 同比降低**35%**

其中: 知识产权保护投入**11**万元, 同比增长**10%**

数字化转型投入**191**万元, 同比增长**110%**

安全生产投入**136**万元, 同比增长**1%**

员工福利投入**161**万元, 同比增长**31%**



## 1.7 Annual Operating Data



Total assets

**1799** million

Net assets

**1700** million

Asset-liability ratio

**5.5%**

Total revenue

**591** million

Net profit

**22** million

Net cash flow from operating activities

**71** million



Total investment in environmental protection:

RMB 258.92 million, down 42% from the previous year

Investment in green procurement:

RMB 254.23 million, down 41% from the previous year

Investment in energy conservation and consumption reduction technologies:

RMB 2.07 million, down 16% from the previous year

Investment in technological transformation:

RMB 11.75 million, down 1% from the previous year

Investment in R&D:

RMB 29.01 million, down 35% from the previous year

Including: investment in intellectual property protection:

RMB 110,000, up 10% from the previous year

Investment in digital transformation:

RMB 1.91 million, up 110% from the previous year

Investment in work safety:

RMB 1.36 million, up 1% from the previous year

Investment in employee benefits:

RMB 1.61 million, up 31% from the previous year

废水(工业用水)密度**21**(吨/吨纸消耗),同比**降低8%**

硫化物排放密度**0.2**(克/吨纸消耗),同比**降低7%**

氨氮化合物排放密度**6.3**(克/吨纸消耗),同比**增加72%**

化学需氧量(COD)**471**(克/吨纸消耗),同比**降低7%**

危险废弃物密度**13**(克/吨纸消耗),同比**降低42%**

一般废弃物密度**0.03**(吨/吨纸消耗),同比**增加55%**



直接、间接范围总碳排放量**48797**吨,同比**降低27%**

总用水量**128**万吨,同比**降低10%**

中水回用率**98%**,同比**提升1个百分点**

能源消耗总量**575933**百万千焦,同比**降低37%**

天然气使用量**187**万立方米,同比**降低9%**

蒸汽消耗量**11**万吨,同比**增加0%**

总用电量**6532**万千瓦时,同比**增加15%**

太阳能发电总量**1132**万千瓦时,同比**增加19%**

外购绿电量**650**万千瓦时,同比**增加100%**

清洁绿电占总用电量**27%**,同比**增加10个百分点**



Waste water (industrial water) density:

21 (ton/ton of paper consumed), down 8% from the previous year

Sulfide emission density:

0.2 (g/ton of paper consumed), down 7% from the previous year

Ammonia-nitrogen compound emission density:

6.3 (g/ton of paper consumed), up 72% from the previous year

Chemical oxygen demand (COD):

471 (g/ton of paper consumed), down 7% from the previous year

Hazardous waste density:

13 (g/ton of paper consumed), down 42% from the previous year

General waste density:

0.03 (ton/ton of paper consumed), up 55% from the previous year



Total direct and indirect carbon emissions:

48,797 tons, down 27% from the previous year

Total water consumption:

1.28 million tons, down 10% from the previous year

Reuse rate of reclaimed water:

98%, up 1% from the previous year

Total energy consumption:

575,933 MkJ, down 37% from the previous year

Total natural gas consumption:

1.87 million cubic meters, down 9% from the previous year

Steam consumption:

110,000 tons, up 0% from the previous year

Total electricity consumption:

65.32 GWh, up 15% from the previous year

Total solar energy generated:

11.32 GWh, up 19% from the previous year

Purchased green electricity:

6.5 GWh, up 100% from the previous year

Proportion of green electricity consumption in total electricity consumption:

27%, up 10% from the previous year



# 环境守护力

- 2.1 应对气候变化
- 2.2 污染防治与生态系统保护
- 2.3 资源利用与循环经济





# Environmental Protection

2.1 Response to Climate Change

2.2 Pollution Control and Ecological Conservation

2.3 Resource Utilization and Circular Economy





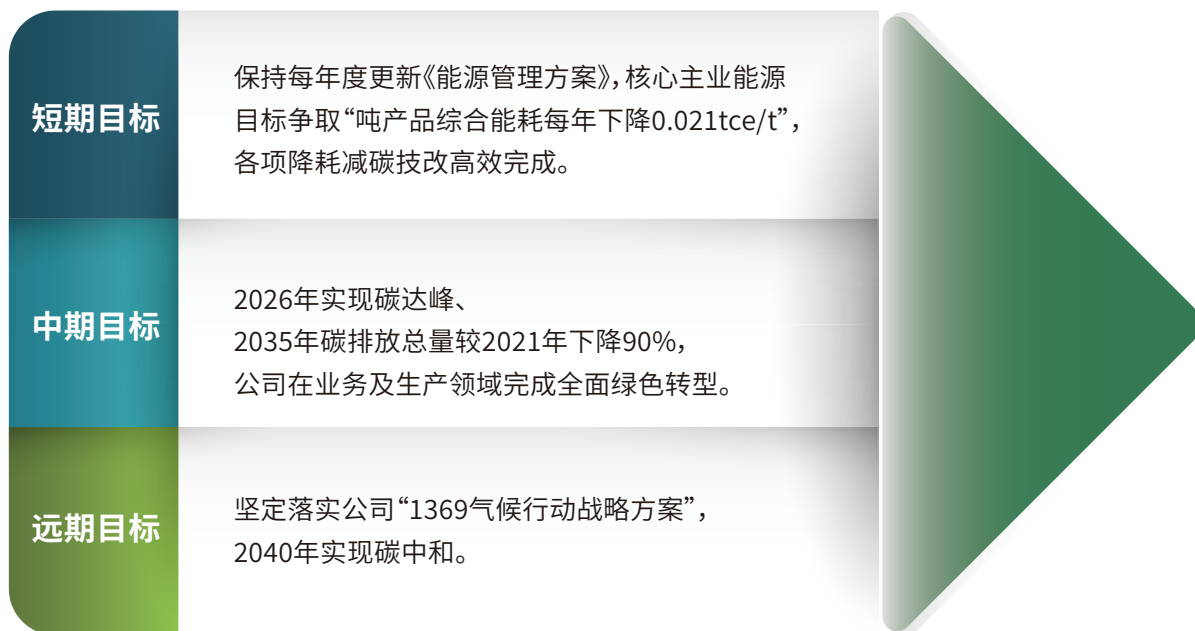
## 2.1 应对气候变化

### 2.1.1 气候行动

#### 气候行动战略方案



#### 气候行动目标与计划



## 2.1 Response to Climate Change

### 2.1.1 Climate Actions

#### Strategic framework for climate actions

**Vision:**  
Become a pioneer of green transition in the specialty paper industry

**Measures:**  
Advance clean production, upgrade production lines, and facilitate smart transformation; cling to life cycle design, adhere to responsible marketing, and stick to collaborative transformation; reinforce steady capital, promote service quality, and enhance performance



**Dimensions:**  
production, market and brand

**Approaches:**  
green raw materials, green production lines; green design, green supply chain; green capital, green services

#### Goals of climate actions

|                         |  |
|-------------------------|--|
| <b>Short-term goal</b>  | Update the <i>Energy Management Plan</i> annually, strive to drop the comprehensive energy consumption per ton of products by 0.021 tce/t every year for the core business sectors, and deliver the technical reform tasks efficiently for the purpose of energy consumption and carbon emission reduction |
| <b>Medium-term goal</b> | Realize carbon peaking by 2026, reduce carbon emission intensity by 90% in 2035 relative to 2021 benchmark, and complete the overall green transition in production and business management  |
| <b>Long-term goal</b>   | Remain steadfast in implementing the “Strategic Framework for Climate Actions” of the Company (1369: One Vision, Three Dimensions, Six Approaches, and Nine Specific Measures), and achieve carbon neutrality by 2040  |

## 气候风险与机遇识别

| 风险因子 | 风险判定 | 风险类型 | 产生影响  | 应对措施   |
|------|------|------|---|--|
| 自然灾害 | 短期   | 实体   | 台风、海啸等自然灾害，导致的生产及纸浆原材料供应受阻                          | 优化数字化生产系统，选择风险控制更好的运输方案，减少对全球运输造成的影响；成立应急管理小组，编制气候变化应急预案 |
| 气候变化 | 长期   | 实体   | 持续性高温、水资源短缺、海平面上升以及极端天气频发等趋势，对公司可能造成的影响             | 在产品创新和生产设计方面，考虑生产属地的气候变化长期趋势；加强水资源的风险管理，积极布局前瞻性的取水水策略    |
| 市场变化 | 短期   | 潜在   | 国际间市场波动和下游需求萎缩导致的行业激烈内卷                             | 提高自身生产效率、提高产品核心竞争力，依靠生产力创新降低成本，多渠道拓展市场                   |
| 技术变化 | 中期   | 潜在   | 时代进步带来生活方式的转变，智慧化、数字化产品功能的需求不断改变                    | 紧跟需求变化、积极调整技术，吸引技术人才                                     |
| 品牌声誉 | 中期   | 潜在   | 各利益相关方多方面的关注和公司舆情增加，导致声誉风险                          | 积极响应市场和客户对公司发展的期待，踏实稳定现存业务，审慎研判新机遇                       |
| 合规经营 | 长期   | 转型   | 不遵守法律法规而造成的合规风险及未达生产要求所造成的罚款损失                      | 严格遵守各项法律法规要求，建立完善的制度体系及保障机制，确保达到合规运营和安全环境等合规要求           |
| 政策调整 | 长期   | 转型   | 造纸行业属于碳排放量大行业，碳定价机制下，公司可能产生因达到减排目标购买碳排放配额，导致成本上升的风险 | 在生产管理过程中，加强技术改造降低能耗，扩大自建绿电规模，加强对温室气体排放控制                 |

公司主要由“可持续发展与气候行动办公室”牵头，按照TCFD“气候相关风险、机遇和财务影响”框架来进行气候风险的识别和分析，通过资料查阅、外部论坛、内部审计等渠道，结合国内外形势以及各利益相关方的反馈，开展气候风险识别工作。

通过研讨会组织凯丰新材和相关职能部门，结合风险因子、政策要求、行业趋势、内控流程、业务动态等多角度分析审查，依照重要性评估结果和模拟情境对气候风险清单进行评估排序，形成有优先排序的气候变化风险清单，确定风险清单并交由董事会进行审核。董事会审核通过后，可持续发展与气候行动办公室将组织各职能部门和业务部门进行气候风险应对，包括建立完备的环境气候风险防控措施、应急管理系统等。

## Identification of climate risks and opportunities

| Risk factor            | Risk duration | Risk type       | Influences   | Countermeasures  |
|------------------------|---------------|-----------------|--|--|
| Natural disaster       | Short term    | Physical risk   | Natural disasters, such as typhoon and tsunami, interrupt production and supply of raw materials for paper and pulp  | Optimize the digital production system, and adopt transportation solutions for better control of risks so as to minimize negative influence on global transportation; set up an emergency response team, and prepare the climate change emergency response plan          |
| Climate change         | Long term     | Physical risk   | Persistent high temperature, water stress, sea level rise and frequent extreme weather may impair the development of the Company   | Take into account the long-term tendency of climate change in the places of production during product innovation and production design; strengthen risk management of water resources, and implement the forward-looking strategies for water withdrawal and consumption |
| Market change          | Short term    | Potential risk  | International market volatility and shrinking downstream demand cause rat race in the industry   | Raise production efficiency and core competitiveness of products, strive for productivity innovation to reduce costs, and expand market channels   |
| Technical change       | Medium term   | Potential risk  | Technological advancement drives lifestyle changes and ever-shifting demands for smart and digital products  | Actively adjust technologies to satisfy changed demands, and attract technical talents   |
| Brand reputation       | Medium term   | Potential risk  | Multifaceted concerns of stakeholders and increased public opinions about the Company give rise to reputation risks  | Actively respond to expectations of the market and customers on the Company, stabilize existing business portfolio, and prudently assess emerging opportunities  |
| Operational compliance | Long term     | Transition risk | Violation of laws and regulations leads to compliance risks, and failure to meet production requirements results in penalties  | Strictly observe laws and regulations, establish a well-performing institutional system and an oversight mechanism to ensure operational compliance and safe environment   |
| Policy realignment     | Long term     | Transition risk | Introduction of the carbon pricing mechanism due to huge carbon emissions in the papermaking industry may increase the Company's cost for purchasing carbon emission allowances to achieve carbon emission goals | Intensify technological improvement to decrease energy consumption and expand self-generated green electricity to control greenhouse gas emissions in the process of production management   |

The Sustainable Development and Climate Action Office is tasked with climate risk identification and analysis under the TCFD's Framework of Climate-Related Risks, Opportunities, and Financial Impacts. To fulfill this task, the Office takes various measures such as looking up data, attending forums, conducting internal audit, keeping on top of domestic and international developments, and collecting insights from stakeholders.

Kaifeng New Material and functional departments are invited to seminars for assessment of climate risks in terms of risk factors, policy requirements, industry tendency, internal control procedures and business dynamics, so as to develop a risk list that prioritizes risks according to the materiality assessment results and simulation scenarios. Once the list is approved by the Board of Directors, the Sustainable Development and Climate Action Office will coordinate functional departments and business departments to respond to climate risks by working out effective risk prevention and control measures and establishing a robust emergency management system.

## 2.1.2 科学碳管理

### 科学碳目标及进展

参照科学碳目标SBTi的设定方法，我们制定“1369气候行动战略方案”，更新设立了“2026年实现碳达峰、2035年碳排放总量较2021年下降90%、2040年实现碳中和”的碳管理目标。

|                     | 2024年 | 2023年 | 2022年  | 2021年  |
|---------------------|-------|-------|--------|--------|
| 直接（范围1）温室气体排放量（吨）   | 4048  | 4487  | 75051  | 64730  |
| 间接（范围2）温室气体排放量（吨）   | 44749 | 62210 | 84552  | 102891 |
| 范围1、范围2合计温室气体排放量（吨） | 48797 | 66697 | 159603 | 167621 |
| 年产纸产品总量（吨）          | 60367 | 61681 | /      | /      |
| 每吨纸合计温室气体排放量（吨/吨纸）  | 0.8   | 1.1   | /      | /      |

2024年，公司生产范围内的温室气体排放总量同比2023年下降27%，每吨纸合计温室气体排放量下降25%。按照“2035年碳排放总量较2021年下降90%”承诺，公司2024年温室气体排放总量相较于2021年已下降71%，进一步推进了实现科学碳目标的进展。与此同时，公司不断优化绿色生产、提升智能化市场水平，使得每吨纸产品的温室气体排放量有效降低，推动公司整体加速步入低碳治理新阶段。

碳管理目标： **2035年** 碳排放总量较2021年下降90%

**2024** 碳排放总量较2021年下降**71%** **大幅加速进展**



## 2.1.2 Scientific Carbon Management

### Science-based carbon targets and progress

By reference to the SBTi target-setting approach, we have put the “1369 Strategic Framework for Climate Actions” in place, and set the scientific carbon management goals of “carbon peaking by 2026, total carbon emissions drop by 90% in 2035 relative to 2021 benchmark, and carbon neutrality by 2040”.

|   | 2024   | 2023   | 2022    | 2021    |
|---|--------|--------|---------|---------|
| Direct (Scope 1) GHG emissions (ton)                    | 4048   | 4487   | 75,051  | 64,730  |
| Indirect (Scope 2) GHG emissions (ton)                  | 44,749 | 62,210 | 84,552  | 102,891 |
| Total GHG emissions of Scope 1 and Scope 2 (ton)        | 48,797 | 66,697 | 159,603 | 167,621 |
| Annual output of paper products (ton)                   | 60,367 | 61,681 | /       | /       |
| Total GHG emissions per ton of paper (ton/ton of paper) | 0.8    | 1.1    | /       | /       |

In 2024, the total GHG emissions within the company's production scope decreased by 27% on year-on-year basis, and the GHG emissions per ton of paper declined by 25%. Compared to 2021, the total GHG emissions fell by 71% in 2024, a stride toward our ambition of “total carbon emissions drop by 90% in 2035 relative to 2021 benchmark”. Moreover, the Company has continued its efforts to optimize green production and step up intelligent market to effectively cut GHG emissions per ton of paper. This will push the Company to low-carbon governance at a faster pace.

**Carbon targets:** Total carbon emissions drop by 90% **In 2035** relative to 2021 benchmark

Total carbon emissions **drop by 71%** **In 2024** relative to 2021 benchmark



## 碳管理体系

公司参照科学碳目标SBTi的设定方法,模拟未来不同情景下的碳排放趋势,对照《巴黎协定》温室气体排放目标框架,制定了符合经营实际的科学碳目标,配套建立碳管理制度,加强碳排放管理专题培训,全面开展碳盘查工作,通过产品碳足迹在线分析系统(eFootprint)完成申报认证。

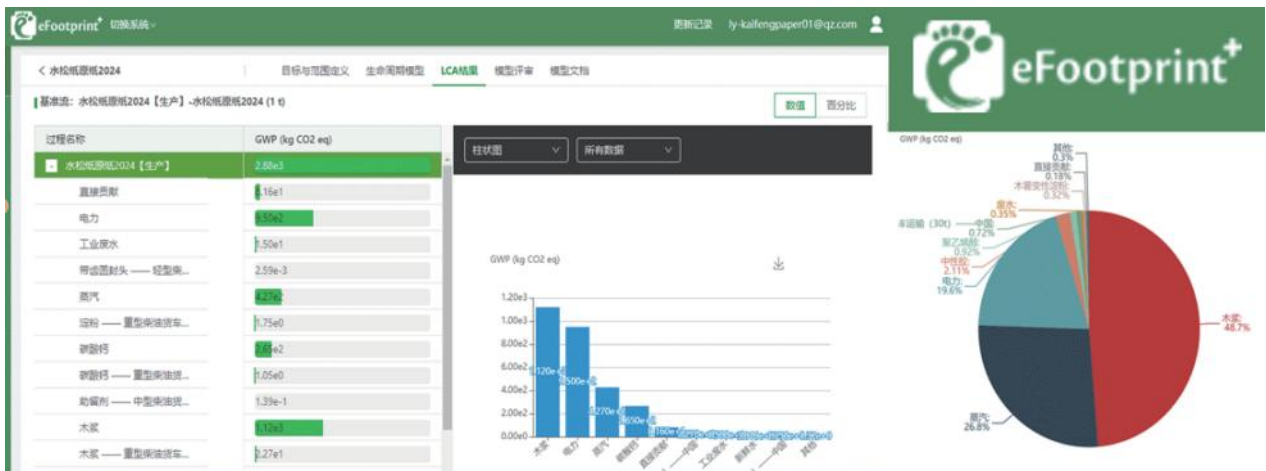
公司与凯丰新材建立了以工作制度为核心的“岗位责任制”碳管理体系,配套建立碳管理制度,严密设置了《温室气体排放核算内部管理制度》,优化完善了《碳管理质量保障体系制度》;不断加强碳排放数据统计,在实践中形成了《温室气体数据内部台账管理制度》;设立数据台账责任,配套设置能源跟踪台账、能源消耗台账、能源计量设备调控台账等与碳排放密切相关管理台账;进一步加强碳排放管理专题培训,提升全体员工“双碳”意识,已完成5期关于气候变化和ESG专题的培训。

## 碳足迹排查

报告期内,公司整体由“能耗双控”向“碳排放双控”完成转型,对产出的主要纸产品进行碳足迹测算,通过产品碳足迹在线分析系统(eFootprint)完成产品碳足迹申报认证。

| 产品分类认证碳足迹         | 2024年 | 2023年 | 同比  |
|-------------------|-------|-------|-----|
| 水松纸 碳足迹 (kg/吨)    | 2884  | 3141  | -8% |
| 防油纸 碳足迹 (kg/吨)    | 4402  | 4732  | -7% |
| 不锈钢衬纸 碳足迹 (kg/吨)  | 3879  | /     | /   |
| 牛皮纸 碳足迹 (kg/吨)    | 4140  | /     | /   |
| 烘焙原纸 碳足迹 (kg/吨)   | 5310  | /     | /   |
| CTP 衬纸 碳足迹 (kg/吨) | 5852  | /     | /   |

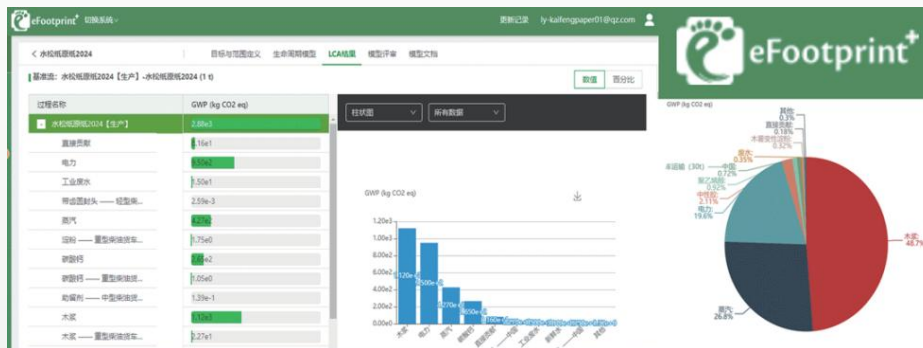
2024年,我们将主要产品的碳足迹认证增加至6类,水松纸、防油纸两类产品每吨碳足迹分别实现降低8%、7%,进一步为公司优化绿色产品全周期管理提供了依据和信心。



## Carbon management system

Aligning with the greenhouse gas emission target framework of the *Paris Agreement*, the Company has developed scientific carbon targets by referring to the SBTi target-setting approach and simulating carbon emission trends under various scenarios in the future. In addition, the Company has pooled efforts to develop carbon management regulations, arrange more carbon emission management training sessions, carry out an all-round carbon audit, and apply for authentication through the online carbon footprint analysis system eFootprint.

The Company and Kaifeng New Material have developed and maintained a carbon management system highlighting respective job duties, and a set of carbon management regulations, such as the *Management Regulations on Greenhouse Gas Emission Accounting*, the *Carbon Management Quality Assurance Regulations*, and the *Management Regulations on Greenhouse Gas Data Recording*. For better carbon emission data statistics, responsibilities have been allocated clearly to record energy tracking data, energy consumption data, energy measuring equipment dispatching data, and carbon emission management data. Besides, an increasing number of carbon emission management training sessions have been arranged to enhance the “dual carbon” awareness among all employees. During the reporting period, 5 climate change and ESG training sessions were conducted.



## Carbon footprint identification

During the reporting period, the company completed the transformation from "dual control of energy consumption" to "dual control of carbon emissions", measured carbon footprint from major paper products, and reported carbon footprint data at eFootprint, an online carbon footprint analysis system.

| Carbon footprint by product categories                          | 2024  | 2023  | Year-on-year |
|---|-------|-------|--------------|
| Carbon footprint of tipping paper (kg/ton)                      | 2,884 | 3,141 | -8%          |
| Carbon footprint of oil-proof paper (kg/ton)                    | 4,402 | 4,732 | -7%          |
| Carbon footprint of stainless steel interleaving paper (kg/ton) | 3,879 | /     | /            |
| Carbon footprint of kraft paper (kg/ton)                        | 4,140 | /     | /            |
| Carbon footprint of bakery base paper (kg/ton)                  | 5,310 | /     | /            |
| Carbon footprint of CTP interleaving paper (kg/ton)             | 5,852 | /     | /            |

In 2024, we increased the number of products receiving carbon footprint certification to six, and the carbon footprint per ton of our tipping paper and oil-proof paper families dropped by 8% and 7% respectively. These advances have laid basis and shored up confidence for optimizing our full-cycle management of green products.



## 2.2 污染防治与生态系统保护

### 2.2.1 污染物排放

#### 污染物排放情况

我们严格遵守相关法律法规，规范环保设施配置及日常运行管理，定期委托第三方监测机构开展废气、噪声、污水等排放监测工作。

| 吨纸排放指标             | 2024年 | 2023年 | 同比   |
|--------------------|-------|-------|------|
| 废水（工业用水）密度（吨/吨纸消耗） | 21    | 23    | -8%  |
| 硫化物排放密度（克/吨纸消耗）    | 0.2   | 0.2   | -7%  |
| 氨氮化合物排放密度（克/吨纸消耗）  | 6.3   | 3.6   | 72%  |
| 化学需氧量（COD）（克/吨纸消耗） | 471   | 504   | -7%  |
| 危险废弃物密度（克/吨纸消耗）    | 13    | 23    | -42% |
| 一般废弃物密度（吨/吨纸消耗）    | 0.03  | 0.02  | 55%  |

2024年，我们继续优化布袋除尘装置、SNCR脱硝装置、SCR脱销处理、湿式电除尘系统等，对废弃处理设备进行优化提升，目前在生产过程中已实现不直接产生废气排放。全年未出现污染物排放超标情况。

#### 污染物减排及措施

日常生产过程中，公司与凯丰新材严格遵守相关法律法规，规范环保设施配置及日常运行管理，在生产运营过程中降低废气、废水和废弃物排放，认真做好排污监测工作，制定年度监测计划，不断完善优化工作流程，定期委托第三方监测机构开展废气、噪声、污水等排放监测工作。2024年，公司未发现污染物排放超标情况。

#### 污染物排放风险监测

公司与凯丰新材持续完善生态监测评估体系和生态监测网络，协同业务所在地环保部门在全部业务运营地开展生态监测，对生产运营地周边区域环境的空气、地表水、土壤、植被等要素进行监测；重点监控应当披露污染物排放对员工、当地社区居民等群体的影响，如是否有可能产生健康影响、导致空气质量下降、水源污染或其他环境问题。生态跟踪监测结果显示，2024年，属地生态功能未受到公司生产经营影响。

## 2.2 Pollution Control and Ecological Conservation

### 2.2.1 Pollutant Discharge

#### Pollutant discharge performance

In line with applicable laws and regulations, we have done more to allocate environmental protection facilities, manage their routine operation, and employ a third-party monitoring agency for discharge of exhaust gas, noise and waste water on a regular basis.

| Discharge data per ton of paper                                      | 2024 | 2023 | Year-on-year |
|--|------|------|--------------|
| Waste water (industrial water) density (ton/ton of paper consumed)   | 21   | 23   | -8%          |
| Sulfide emission density (g/ton of paper consumed)                   | 0.2  | 0.2  | -7%          |
| Ammonia-nitrogen compound emission density (g/ton of paper consumed) | 6.3  | 3.6  | 72%          |
| COD (g/ton of paper consumed)  | 471  | 504  | -7%          |
| Hazardous waste density (g/ton of paper consumed)                    | 13   | 23   | -42%         |
| General waste density (ton/ton of paper consumed)                    | 0.03 | 0.02 | 55%          |

In 2024, we upgraded waste disposal facilities including bag dust collectors, SNCR and SCR denitrification systems and wet electrostatic precipitators, eliminating direct exhaust gas emission during production. In 2024, the Company had no pollutant discharge beyond limits.

#### Pollutant discharge reduction measures

The Company and Kaifeng New Material have taken measures to prevent and control pollutants in line with applicable laws and regulations: allocate environmental protection facilities and manage their routine operation; minimize discharge of exhaust gas, waste water and solid waste in production; monitor pollutant discharge, and develop annual monitoring plans; optimize the work flow; employ a third-party monitoring agency to monitor discharge of exhaust gas, noise and waste water on a regular basis. In 2024, the Company had no pollutant discharge beyond limits.

#### Monitoring of pollutant discharge risks

The Company and Kaifeng New Material keep refining the ecological monitoring and assessment system and the ecological monitoring network, and work with local environmental protection authorities to monitor ecological factors such as air, surface water, soil and plants around production and business premises, focusing on the impacts of pollutants that should be disclosed on employees and local communities, particularly in terms of personal health, air quality and water sources. As shown by ecological monitoring results, the ecological functions in business locations were not impaired by the production and business activities of the Company in 2024.

## 2.2.2 废弃物处理

### 废弃物处理情况

我们不断寻求减少废弃物及综合利用的途径。2024年，公司已全面完成危险废物管理的标准化建设，实现了标准统一、管理规范、严密覆盖。

|                | 2024 年 |
|----------------|--------|
| 产生无害废弃物总量 (吨)  | 1875   |
| 处置无害废弃物总量 (吨)  | 1875   |
| 产生有害废弃物总量 (吨)  | 0.8    |
| 处置有害废弃物总量 (吨)  | 0.8    |
| 回收再利用废弃物总量 (吨) | 1802   |

根据日常生产经验，我们对各环节产生的大部分无害废弃物——纸产品边角料得以充分回收并二次利用。2024年，通过产线调控和工艺升级，纸产品边角料回收再利用比例提升至96%。



### 废弃物减排及措施

我们制定了《废水、废气、噪声管理程序》《固体废弃物管理制度》《环境应急预案》等制度，规范各岗位对废弃物的处置管理工作。对管理员工作开展稽查、考核、排名、评价；大力推行清洁生产，减少一般废弃物与危险废弃物的产生；通过设置分类垃圾收集箱与回收处理程序，妥善处理生产运营中产生的一般固体废弃物；分类处置各项固体废弃物，委托具有处理资质的第三方机构处理危险废弃物，最大限度降低对环境造成的影响，促进公司可持续发展。



## 2.2.2 Waste Disposal

### Waste disposal performance

We never stop our pace to explore approaches for waste reduction and comprehensive utilization. In 2024, we completed the hazardous waste management system that is based on unified standards and covers all types of hazardous waste.

|   | 2024  |
|---|-------|
| Total generated non-hazardous waste (ton) | 1,875 |
| Total disposed non-hazardous waste (ton)  | 1,875 |
| Total generated hazardous waste (ton)     | 0.8   |
| Total disposed hazardous waste (ton)      | 0.8   |
| Total recycled waste (ton)                | 1,802 |

We have recycled most of the non-hazardous waste, namely paper scraps, according to regular production experience. In 2024, the recycling rate of paper scraps raised to 96% due to proper production line control and process upgrading.



### Waste discharge reduction measures

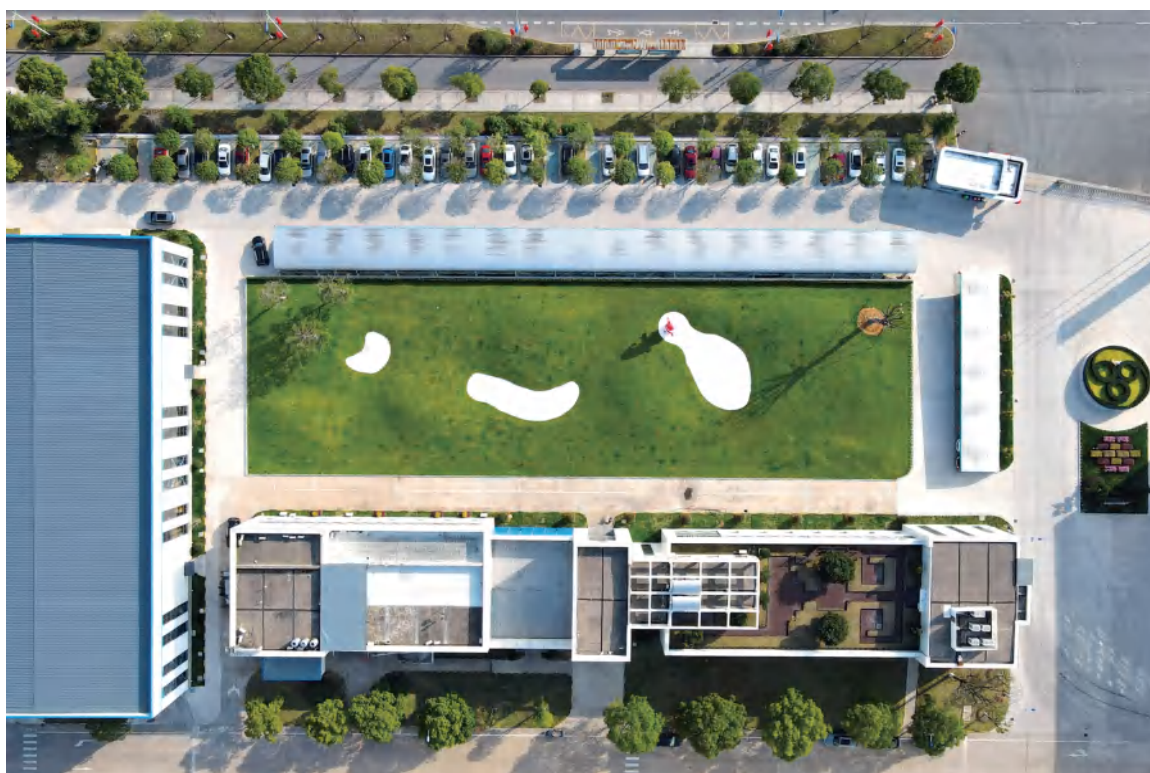
We have developed the *Management Procedures of Waste Water, Exhaust Gas and Noise*, the *Management Regulations on Solid Waste* and the *Environmental Emergency Response Plan* to regulate waste disposal management. To dispose of waste properly, efforts have been made to conduct personnel inspection, examination, ranking and assessment; boost clean production to reduce general waste and hazardous waste; equip separate waste bins and formulate waste collection and disposal procedures so as to dispose of general solid waste generated in production and business activities in a sorted manner; entrust a qualified third party to dispose of hazardous waste. These efforts can minimize impacts on the environment and promote the sustainable development of the Company.



## 2.2.3 生态系统与生物多样性保护

### 生态系统保护和恢复

我们的对于生产基地和新项目的选址严格执行生态保护红线、环境质量底线、资源利用上线和环境准入负面清单要求，避让自然保护地及野生动物重要栖息地、迁徙洄游通道等。我们对现有生产基地积极开展绿地恢复工作，陆续完成了共计14500平方米的土地平整及生态修复治理。



### 生物多样性保护

公司与凯丰新材坚持人与自然和谐共生，严格遵守《野生动物保护法》等相关法律法规，响应联合国《生物多样性公约》呼吁，将生物多样性保护融入企业实践，积极参与生物多样性保护工作。公司长期坚持环境整治，杜绝煤炭能源使用，水资源实现“零排放”；通过在自建绿电区域植草，实现裸地修复养还；合理规划土地使用，提高生产土地使用效率，清拆多余库房，修复养护大面积生态绿地、着力植树种草，为动植物提供清洁水源，赋予生产基地良性生态运营的更多可能性。当前公司生产基地环境优美、厂区环境治理效果显著，吸引了野生白鹭等生物在厂区内筑巢生活，充分践行了对人与自然和谐发展。

## 2.2.3 Ecosystem and Biodiversity Conservation

### Ecosystem conservation and restoration

When selecting sites for production bases and new projects, we champion red lines for ecological conservation, set benchmarks for environmental quality, impose caps on resource utilization and adopt a negative list for environmental access, keeping away from natural reserves as well as important habitats and migration routes for wildlife. In addition, we have made proactive efforts to green space restoration in our existing production bases, achieving remarkable progress in land leveling and ecological remediation of 14,500 m<sup>2</sup>.



### Biodiversity conservation

Recognizing the importance of harmony between humankind and nature, the Company and Kaifeng New Material stay committed to biodiversity conservation in our practices in line with the *Wild Animal Conservation Law of the People's Republic of China*, and the *Convention on Biological Diversity of the United Nations*. To this end, we have taken combined measures such as phasing out coal energy and discharging no sewage for environment improvement, growing grass within the area of self-generated green electricity for revegetation of bare land, making reasonable planning to enhance the use efficiency of production land, demolishing idle warehouses to create big-scale ecological green land, and providing clean water sources for animals and plants, which allow for sound and green operation of production bases. Thanks to remarkable environmental renovation efforts, our production bases enjoy beautiful environment, where wild egrets nest and thrive. This is an exemplary practice that boosts development while protecting nature.

## 产品全周期生态责任



凯恩绿色全周期管理图

### 积极引领以纸代塑

公司优先着力在特种食品包装领域研发可降解的环保纸基产品，致力于研究开发技术含量高、附加值高、无污染、具有世界先进水平的特种材料，积极推广以纸代塑产品，进一步提高环境经济效率，将产品对生态环境的影响降到最低。

### 坚决使用绿色原料

木浆是工厂产品的主要原材料，公司严格履行WWF(世界自然基金会)、全球森林贸易网络(中国)(GFTN-China)保护自然环境的社会责任，从国外进口采购经过FSC森林认证的原材料，真正做到品质、品牌和绿色环保的和谐统一。

### 坚持优化绿色生产

公司在技术研发、设备引进、生产过程环节进行了大量绿色治理实践，严格进行噪声管理、水回用率达到95%、自建绿电使用比例逐年提升，原材料利用率、产品能耗指标等均处于行业领先水平，重点保护鸟类和鱼类生存环境。

### 全面更换绿色包装

公司在产品包装上坚持重复利用性、可回收性、轻量性和可降解性，严格要求产品包装达到可再利用、可再循环、可再回收要求，倡导避免过度包装。消减塑料包装、升级纸箱用纸量工艺、优化产品包装结构，持续减少包装用量、降低碳排放。

### 持续普及绿色运输

公司持续提升新能源车、铁路、海洋运输使用占比，降低车辆运输产生的碳排放。积极沟通选择优质的短距离客户，保证商业效率的同时，有效缩短产品运输里程，降低运输过程中能源耗用及碳排放，积极带动区域内产业链优先实现绿色转型。

### 严格实施绿色回用

公司推行清洁生产，减少一般废弃物与危险废弃物的产生。遵循“节约资源、物尽其用”的原则，不断寻求废物综合利用途径。规范各岗位对废弃物的处置管理工作，落实管理员、安全员责任制，开展稽查、考核、排名、评价，真正让日常管理落地。

## Ecological responsibility throughout the product life cycle



**KAN green management for the whole product life cycle**

**Replacement of plastic with paper**

Prioritizing degradable base paper for food packaging, the Company has focused its efforts on research and development of world-class specialty paper products featuring cutting-edge technology, high added-value and no pollution as substitutes for plastic, actively promoted replacement of plastic with paper, so as to further improve environmental and economic efficiency for harmonious coexistence between human and nature.

**Firmly use of green raw materials**

The Company strictly performs the nature conservation responsibility, aligning with WWF (World Wildlife Fund) and GFTN-China (Global Forest and Trade Network) initiatives. Notably, we import FSC-certified (Forest Stewardship Council) wood pulp, our major raw material, to minimize impacts on the survival of plants and animals. Thus, we strike a balance between our product quality/brand and environmental protection.

**Optimization of green production**

We have pooled a vast number of material and human resources into technology R&D, and introduction of equipment to practice green production robustly. With these efforts, noise has been controlled properly; water reuse rate has reached 95%; the share of self-generated green electricity has increased year by year; the indicators related to utilization efficiency of raw materials and energy consumption for products are both at the leading level of the industry; the habitats of birds and fish have been protected.

**Replacement of green packaging**

The Company has used recyclable, light-weighted and degradable product packaging, reduced plastic packaging and avoided excessive packaging, thus cutting down carbon emissions.

**Promotion of green transportation**

The Company continues to raise the ratio of transportation by new energy vehicles, railway and sea as an effort to lower carbon emissions further.

**Strict implementation of green recycling**

The Company has rolled out clean production to scale down the generation of both general waste and hazardous waste, carried out classified disposal of solid waste, and entrusted qualified third parties to dispose of hazardous waste.



## 2.3 资源利用与循环经济

### 2.3.1 能源利用

#### 能源使用管理

我们的生产过程中全程规避了煤炭的参与使用，建立了以天然气和外购蒸汽为核心的生产系统，在电的使用方面，我们构建了“电力采购+自由绿电+外购绿电”的清洁用电模式，最大限度践行绿色低碳能源转型。

|                    | 2024年  | 2023年  | 同比   |
|--------------------|--------|--------|------|
| 能源消耗总量 (标煤)        | 19651  | 31400  | -37% |
| 能源消耗总量 (百万千焦)      | 575933 | 920259 | -37% |
| 天然气使用量 (万立方米)      | 187    | 206    | -9%  |
| 蒸汽消耗量 (万吨)         | 11     | 11     | 0%   |
| 总用电量 (万千瓦时)        | 6532   | 5680   | 15%  |
| 太阳能发电总量 (万千瓦时)     | 1132   | 954    | 19%  |
| 外购绿电 (万千瓦时)        | 650    | 0      | 100% |
| 年产纸产品总量 (吨)        | 60367  | 61681  | -2%  |
| 吨纸能源消耗总量 (百万千焦/吨纸) | 10     | 15     | -36% |
| 吨纸天然气使用量 (立方米/吨纸)  | 31     | 33     | -7%  |
| 吨纸蒸汽消耗量 (吨/吨纸)     | 2      | 2      | 0%   |
| 吨纸用电量 (万千瓦时/吨纸)    | 0.1    | 0.1    | 0%   |

依托于高效的能源管理机制，节能增效的理念已经嵌入了公司能源使用的全生命周期中。报告期内，我们通过制定节能目标，落实管理节能措施和技术节能措施，持续推进减排降耗。根据《能源管理方案》，我们制定了每年全年吨产品综合能耗下降0.021tce/t的能源目标，2024年已顺利完成目标计划。

全年吨产品综合能耗  
下降0.021tce/t  
2024已完成



## 2.3 Resource Utilization and Circular Economy

### 2.3.1 Energy Utilization

#### Energy utilization management

Our production basically depends on natural gas and purchased steam to replacement of coal. Our electricity sources include purchased electricity, self-generated and purchased green electricity. All these initiatives drive our low-carbon and green energy transition to the fullest extent.

|   | 2024    | 2023    | Year-on-year |
|---|---------|---------|--------------|
| Total energy consumption (coal equivalent)                              | 19,651  | 31,400  | -37%         |
| Total energy consumption (MkJ)  | 575,933 | 920,259 | -37%         |
| Natural gas consumption (10,000 m <sup>3</sup> )                        | 187     | 206     | -9%          |
| Steam consumption (10,000 tons)   | 11      | 11      | 0%           |
| Total electricity consumption (10,000 kWh)                              | 6,532   | 5,680   | 15%          |
| Total PV electricity generated (10,000 kWh)                             | 1,132   | 954     | 19%          |
| Purchased green electricity (10,000 kWh)                                | 650     | 0       | 100%         |
| Annual output of paper products (ton)                                   | 60,367  | 61,681  | -2%          |
| Total energy consumption per ton of paper (MkJ/ton of paper)            | 10      | 15      | -36%         |
| Natural gas consumption per ton of paper (m <sup>3</sup> /ton of paper) | 31      | 33      | -7%          |
| Steam consumption per ton of paper (ton/ton of paper)                   | 2       | 2       | 0%           |
| Electricity consumption per ton of paper (10,000 kWh/ton of paper)      | 0.1     | 0.1     | 0%           |

With an efficient energy management mechanism, we have integrated energy conservation and efficiency enhancement into the whole life cycle of energy utilization. During the reporting period, we set energy conservation goals and implemented managerial and technical energy-saving measures, so as to constantly reduce carbon emission and energy consumption. In line with the *Energy Management Program*, we set the goal of decreasing annual comprehensive energy consumption by 0.021 tce/t per ton of products. In 2024, this goal was successfully achieved.

Annual comprehensive energy consumption per ton of products

**Down 0.021 tce/t  
2024 Completed**



## 清洁能源应用

公司原有一期光伏5.5MW，2023年利用厂区基地空地新增4.5MW、利用办公楼屋顶新增1.3MW，目前总计光伏铺装量11.3MW。公司光伏发电量从2022年的573万kwh增加至2024年的1132万kwh，合计增加了98%；按照全国电网平均排放因子0.5703t CO<sub>2</sub>/MWh计算，相当于全年减少6456吨碳排放。

目前，公司的太阳能发电总量为1132万千瓦时，外购绿电为650万千瓦时，清洁绿电合计总量为1782万千瓦时。在公司全面扩产扩能的情况下，清洁绿电占总用电量的27%，同比去年的17%，提升了10个百分点。

## 能源节约及措施

整体能源节约管治方面，凯丰新材设立了车间负责制，制定各车间节能减排中长期发展战略。在保证生产安全、品质安全的前提下，最大限度地节能减排。公司实行区域用电责任制，用电管控情况与责任人薪酬绩效挂钩，并安排人员每天进行巡查。通过技术和管理手段，制定峰谷用电计划。定期组织开展节能活动、全方面进行节能减排宣传、培训，强化节能意识。



## Clean energy utilization

On the basis of the existing 5.5 MW PV facilities, we installed 4.5 MW and 1.3 MW PV panels in the open space of plants and on the rooftop of buildings respectively, adding the total PV capacity to 11.3 MW in 2023. Thanks to these facilities, our PV electricity generated increased by 98% from 5.73 GWh in 2022 to 11.32 GWh in 2024. They reduced carbon emissions by 6,456 tons according to the average carbon emission factor of 0.5703 t CO<sub>2</sub>/MWh in the national grid.

Up to now, our green electricity has totaled 17.82 GWh, including 11.32 GWh of self-generated PV electricity and 6.5 GWh of purchased green electricity. Considering production and capacity expansion, green electricity consumption has accounted for 27% of the total electricity consumption, up to 10% on year-on-year basis.

## Energy conservation measures

Regarding the overall energy utilization management, Kaifeng New Material has introduced the workshop responsibility system, and implemented the long-term and medium-term energy conservation and carbon emission reduction strategies to minimize energy consumption and carbon emissions while ensuring work safety and product quality. The Company has adopted the responsibility system of regional power supply, linked the electricity consumption control to personal performance and remuneration, and organized daily inspections. In addition, the peak-valley power supply plans have been worked out by leveraging technology and management methods. To heighten the awareness of energy conservation and carbon emission reduction, the education and training activities have been organized among employees.

## 2.3.2 水资源利用

### 水资源使用

我们坚持水足迹全生命周期管理,持续优化生产工艺,致力于实现水资源的高效利用,将水资源耗用管理与节水理念落实到日常工作中。

|                      | 2024年 | 2023年 | 同比    |
|----------------------|-------|-------|-------|
| 总用水量 (万吨)            | 128   | 142   | -10%  |
| 中水回用率                | 98%   | 97%   | 1个百分点 |
| 水循环与再利用的总量 (万吨)      | 44    | 43    | 2%    |
| 工业废水排放总量 (万吨)        | 80    | 87    | -8%   |
| 其中:直接排入环境的工业废水量 (万吨) | 0     | 0     | 0%    |
| 工业废水处理量 (万吨)         | 80    | 87    | -8%   |

2024年,我们在扩产扩能的情况下,实现总用水量下降13%、水循环与再利用总量提升2%、中水回用率提升1个百分点,进一步有效实现废水回收复用、减少浪费。

### 水资源节约及措施

我们珍视水资源,从源头开展技改节能,鼓励并倡导员工节约用水;不断建设中水回用系统,将生产废水重复深度净化处理,再次回用至生产车间。综合吨纸水耗明显的下降,也同步降低了产线浆耗,缩减了生产成本,为公司绿色发展提供了有力反馈。

凯丰新材建设投运有日处理能力10000立方米的废水综合处理系统一套,率先在特种废水处理领域应用大型超滤设施以及引进国际先进的膜处理技术,造纸白水回用率已从40%提高到98%;剩余指标优于国家排放标准的小部分尾水,全部转移给下游的低端造纸工厂重复利用,全面实现工厂污水“零排放”,在特种纸行业具有很好的推广意义。



## 2.3.2 Water Resource Utilization

### Water resource utilization performance

For efficient utilization of water resources, our efforts have been sustained to uphold the full-cycle management of water footprint, upgrade production technology, and implement the management of water resource consumption and the concept of water conservation in our daily work.

|  | 2024 | 2023 | Year-on-year       |
|--|------|------|--------------------|
| Total water consumption (10,000 ton)   | 128  | 142  | -10%               |
| Reuse rate of reclaimed water  | 98%  | 97%  | 1 Percentage Point |
| Total recycled water volume (10,000 ton)   | 44   | 43   | 2%                 |
| Total industrial waste water discharge (10,000 ton)                                      | 80   | 87   | -8%                |
| Including: industrial waste water discharged directly into the environment (10,000 tons) | 0    | 0    | 0%                 |
| Treatment capacity of industrial waste water (10,000 ton)                                | 80   | 87   | -8%                |

In 2024, with production and capacity expansion, we saw a 13% fall in total water consumption, a 2% increase in total volume of recycled water, and a 1% rise in reuse rate of reclaimed water. These fresh achievements have demonstrated our effective recycling of waste water and our endeavor to reduce waste.

### Water recycling

Valuing water resources, we have intensified efforts to upgrade technology for water resource conservation from the source, encouraging employees to save water, refining the reuse system of reclaimed water to supply fully treated production waste water to workshops. The slashing in comprehensive water consumption per ton of paper reduces pulp consumption in production lines, shrinking production costs and significantly contributing to the green development of the Company.

Kaifeng New Material has put into operation a waste water treatment system with daily capacity of 10,000 m<sup>3</sup>, and taken the lead in applying the large-scale ultra-filtration facility and internationally-advanced membrane treatment technology dedicated to specialty paper waste water treatment, increasing the paper-making white water reuse rate from 40% to 98%. A small portion of the tail water better than national emission standards has been completely recycled and supplied to the downstream low-end paper makers. These efforts help realize zero discharge of waste water, and play a demonstration role in the specialty paper making industry.



### 2.3.3 循环经济

#### 绿色生产体系建设

公司与凯丰新材建立健全环保管理体系,连续通过ISO14001环境管理体系认证证书,并严格依照环境管理体系开展环境管理工作。采取综合治理措施,积极应对气候变化、优化绿色供应链、践行环境保护,在提高能效、降低能耗的同时,加强对全员绿色办公、绿色生产、绿色生活的培训宣导,致力成为资源节约型、环境友好型公司。

公司从自身实际出发,以气候行动和碳管理目标为总体目标,在循环经济层面设定了“原材料利用率保持在94%以上、中水回用率保持在96%以上、可再生能源使用比例增加至50%以上”的平均年度目标,旨在保持清洁生产现有水平的基础下,重点增加绿电等可再生能源的建设规模和导入使用比例,以短期工程成本波动抵御工业用电等生产成本上涨风险,最终追求循环经济层面的中长期利益。



#### 清洁生产

木浆是我们生产纸产品的主要原材料,从生产所需的原材料木浆到成品垂直控制每个环节都极其苛刻,力求品质卓越。我们严格履行WWF(世界自然基金会)、全球森林贸易网络(中国)(GFTN-China)保护自然环境的社会责任,采购经过FSC森林认证的原材料,按照《中国森林认证产销监管链》(GB/T 28952-2024)的要求采购CFCC/PEFC认证的纸浆、生产和销售CFCC/PEFC认证的食品包装纸、医用包装原纸和烟用接装原纸等,不断减少包装总量和塑料包装的使用,真正做到了品质、品牌和绿色环保的和谐统一。

2024年,我们使用纸浆总量55010吨,FSC认证纸浆使用量18745吨,占比达到34%。全年总包装材料消耗量为1557吨,包装消耗进一步减少。

### 2.3.3 Circular Economy

#### Green production system establishment

The Company and Kaifeng New Material have established and refined the environmental protection management system, and passed the certification of the ISO 14001 Environmental Management System for the purpose of better environmental management. We have taken comprehensive environmental treatment measures, combated climate change actively, optimized the green supply chain, and adopted environmental protection practices. In addition to highlighting energy efficiency improvement and energy consumption reduction, we have arranged training sessions related to green office, green production and green life for all employees. We are striving to grow into a resource-efficient and environmentally-friendly enterprise.

Rooted in its operational context, the Company has set ambitious annual goals at the level of circular economy with the overall goals of climate action and carbon management.. These goals include: maintaining the raw material utilization rate over 94% and the reclaimed water reuse rate above 96%, and increasing the share of renewable energy to over 50% in the energy mix. Building on the existing clean production capacity, the Company endeavors to expand the construction of green electricity and other renewal energy facilities, and increase the use proportions of renewal energies in the energy mix, and resist the risk of rising production costs such as industrial power supply costs through short-term fluctuations in engineering costs. This approach aims to pursue medium and long-term benefits of the circular economy.



#### Cleaner production

We exert strict control over all process from pulp, our main raw material, to finished products, so as to pursue quality excellence. We strictly perform the nature conservation responsibility, aligning with WWF and GFTN-China initiatives. Notably, we purchase FSC-certified raw materials; we procure CFCC/PEFC-certified pulp as well as produce and sell CFCC/PEFC-certified food wrapping paper, medical packaging base paper and cigarette tipping base paper in accordance with the *Forest Certification in China - Chain of Custody* (GB/T 28952-2012); and we keep slashing total package consumption and phasing out plastic package. Thus, we strike a balance between our product quality/brand and environmental protection.

In 2024, our pulp consumption hit 55,010 tons, including 18,745 tons of FSC-certified pulp with a share of up to 34%; and our consumption of packaging materials was further reduced to 1,557 tons.





# 社会推动力

- 3.1 社会担当
- 3.2 创新驱动
- 3.3 供应商与客户
- 3.4 员工





# Social Momentum

- 3.1 Social Responsibility
- 3.2 Innovation-driven Development
- 3.3 Suppliers and Customers
- 3.4. Employees



## 3.1 社会担当

我们在生产发展的同时,始终回馈自然、回馈社区、回馈社会,坚持积极参与公益事业,扶危济困,履行社会责任,全面助力经济社会发展。公司除少数专业技术人员外,大部份员工均为当地员工,占比达90%左右。公司来自于人民、发展于人民、回馈于人民,多年来参与解决就业近10万人次,近年平均贡献利税约7000万元,始终为地区的生态环境治理和经济发展建设不懈奋进,源源不断贡献着自己的力量。

## 3.2 创新驱动

作为国内特种纸领域的领军企业,公司和凯丰新材长期致力于纸基新材料创新技术的研发,建有独立的科研机构和检测机构,并以雄厚的技术力量投入到特种纸及相关产品的生产与开发。我们现已成立“浙江省博士后工作站”,获颁“省级高新技术企业研究开发中心”、“省级企业技术中心”、“省级企业研究院”、“龙游县重大科技攻关课题揭榜挂帅项目承担单位”等认可,拥有国内先进的试验设备和纸张性能检测设备。



### 3.2.1 技术研发

公司和凯丰新材多年深耕特种纸领域,掌握多类重要产品领先工艺,通过与国内外产、学、研的长期合作,形成拥有自主知识产权的数十项核心技术,在多业务产品板块布局,不断提升核心竞争力,共获国家授权专利近30项。



## 3.1 Social Responsibility

In addition to production and development, we remain committed to fulfilling our social responsibilities to make contributions to nature, communities and society. To achieve this goal, we actively engage in public welfare initiatives, pool poverty alleviation efforts, and do a great job to boost economic and social development.

With the exception of a limited number of professional and technical personnel, local employees comprise up to 90% of our payroll. KAN depends on the people for its development and benefits the people. Over the years, the Company has offered jobs to nearly 100,000 individuals, generated an average of about RMB 70 million annually in profits and taxes, and played its part in ecological governance and regional economic development unwaveringly, demonstrating its commitment to social contribution.

## 3.2 Innovation-driven Development

As the leading player in the domestic specialty paper industry, KAN and Kaifeng New Material have been long devoted to the technology R&D of new base paper materials by leveraging our independent research and testing institutions, robust technical capabilities for product development and production, and state-of-the-art paper performance testing equipment at home. We have established “Zhejiang Postdoctoral Workstation”, and received multiple recognitions such as the “Provincial High-tech Enterprise R&D Center”, the “Provincial Enterprise Technology Center”, the “Provincial Enterprise Research Institute”, and the “Undertaking Enterprise for Major Science and Technology Research Project in Longyou County”.



### 3.2.1 Technology R&D

With years of dedicated focus on the specialty paper field, the Company and Kaifeng New Material have acquired advanced technologies for a number of key products. Through long-term collaboration with domestic and international peers as well as academic and research institutes, we have developed dozens of core technologies with independent intellectual property rights. These technological efforts have spanned multiple business segments, enhancing our core competitiveness and resulted in nearly 30 national patents.



凯丰新材博士后工作站于2021年12月建站, 现有在站博士1名。目前研发团队的核心技术人员来自造纸、化学工程、质量管理、市场开发、自动化控制、设备机械管理等专业领域, 具有较强的研发实力, 为项目研发提供有力人才保证。2024年, 我们进一步提升研发能力、积极推动行业进步, 开发了7个新研发项目, 新参与了9个行业标准的制定。

| 新研发项目 |                    |           |
|-------|--------------------|-----------|
| 1     | 水基包装纸              | 浙江省级新产品   |
| 2     | 自粘型高温蒸汽消毒医用包装纸     | 浙江省级新产品   |
| 3     | 燃料电池用碳基纸基新材料关键技术开发 | 衢州市揭榜挂帅项目 |
| 4     | 烘焙硅油纸              | 新产品企业自主立项 |
| 5     | L型乳胶纸              | 新产品企业自主立项 |
| 6     | 代塑型食品包装纸           | 新产品企业自主立项 |
| 7     | 节约型上腊包纸            | 新产品企业自主立项 |

| 新参与标准 |   |                   |
|-------|---|-------------------|
| 1     | GBT 451.2-2023 纸和纸板定量的测定                              | 中国国家标准            |
| 2     | GBT 35594—2023 医药包装用纸和纸板                              | 中国国家标准            |
| 3     | GBT 44834—2024 食品包装用水性涂布纸和纸板                          | 中国国家标准            |
| 4     | T CIET 379-2024 食品接触用可降解材料及其制品                        | 中国国际经济技术合作促进会团体标准 |
| 5     | T CNFIA 189-2024 食品接触用纸、纸板及纸制品中可提取有机氟含量的测定 在线燃烧-离子色谱法 | 中国食品工业协会团体标准      |
| 6     | T CNFIA 190-2024 食品接触用纸、纸板及纸制品中总有机氟含量的测定 离子色谱法        | 中国食品工业协会团体标准      |
| 7     | T CNFIA 191-2024 食品接触用纸、纸板及纸制品中总氟含量的测定 在线燃烧-离子色谱法     | 中国食品工业协会团体标准      |
| 8     | TCTAPI 001—2023 玻璃间隔纸                                 | 中国造纸学会团体标准        |
| 9     | TGDPPA 0004-2024 食品接触用纸及制品产品质量分级标准                    | 广东省造纸行业协会团体标准     |



Established in December 2021, the Postdoctoral Workstation of Kaifeng New Material currently hosts 1 doctoral researchers. Our R&D team consists of experts in paper-making, chemical engineering, quality management, market development, automation control, and machinery management. Their strong R&D capabilities provide a solid foundation for technology R&D. We always devote energy to boosting R&D and industry advancement. In 2024, we launched 7 new R&D projects and involved in drawing up 9 industrial standards.

| New R&D projects |   |  |
|------------------|---|--|
| 1                | Water-based packaging paper   | Zhejiang Provincial New Product                          |
| 2                | Self-adhesive medical packaging paper with high-temperature steam sterilization       | Zhejiang Provincial New Product                          |
| 3                | Development of key technology for new carbon-based paper materials used in fuel cells | Open Bidding and Leadership Assignment Project in Quzhou |
| 4                | Silicone coated paper for bakery purpose  | Enterprise-initiated Project for New Product Development |
| 5                | L-shaped latex paper  | Enterprise-initiated Project for New Product Development |
| 6                | Food wrapping paper as a substitute to plastic  | Enterprise-initiated Project for New Product Development |
| 7                | Resource-saving waxed wrapping paper  | Enterprise-initiated Project for New Product Development |

| New industrial standards involved |  |  |
|-----------------------------------|--|--|
| 1                                 | GBT 451.2-2023 Paper and Board - Part 2: Determination of Grammage   | China National Standard  |
| 2                                 | GBT 35594-2023 Paper and Board for Pharmaceutical Packaging  | China National Standard  |
| 3                                 | GBT 44834-2024 Water-based Coated Paper and Board for Food Packaging   | China National Standard  |
| 4                                 | T CIET 379-2024 Degradable Materials and Products for Food Contact   | Group Standard of China Association for Promoting International Economic & Technical Cooperation |
| 5                                 | T CNFIA 189-2024 Determination of Extractable Organic Fluorine in Paper, Paperboard and Paper Products Intended to Contact with Food - Online Combustion - Ion Chromatography Method | Group Standard of China National Food Industry Association                                       |
| 6                                 | T CNFIA 190-2024 Determination of Total Organic Fluorine in Paper, Paperboard and Paper Products Intended to Contact with Food - Ion Chromatography Method                           | Group Standard of China National Food Industry Association                                       |
| 7                                 | T CNFIA 191-2024 Determination of Total Fluorine in Paper, Paperboard and Paper Products Intended to Contact with Food - Online Combustion - Ion Chromatography Method               | Group Standard of China National Food Industry Association                                       |
| 8                                 | TCTAPI 001-2023 Glass Spacer Paper   | Group Standard of China Technical Association of Paper Industry                                  |
| 9                                 | TGDPPA 0004-2024 Classification Standard of Product Quality for Food Contact Paper and Products  | Group Standard of Guangdong Paper Association  |



### 3.2.2 智慧生产

凯丰新材创新监督和考核流程,以全面建成的数字化智能车间为基础,介入AI算法,实现“ESG+AI”的生产责任体系。先后从德国、美国、意大利、法国等地区引进了具有国际先进水平的关键生产设备及在线检测设备,如德国BELLMER摇震器、德国西门子传动控制系统、美国霍尼韦尔定量水分控制系统(QCS)等,建成了国内具有领先技术的一流特种纸生产线。结合分布式控制系统(DCS)、定量水分控制系统(QCS)、制造执行系统(MES)和ERP等系统,建立自动化流水线,提高生产效率和柔性制造能力。最终实现高效、高质、绿色、低成本的生产模式。凯丰新材获得浙江省经济和信息化厅颁发的“浙江省智能工厂”荣誉称号。



2024年,我们斥资约数百万元完成智能化改造二期项目。引入智能控制系统,实现生产过程全自动化监控与调节,如根据纸张定量、水分等参数实时调整设备运行参数;安装智能检测设备,在线检测纸张厚度、白度等指标。技改后,原本一条生产线需20名工人,现在仅需12人,人力成本相应降低约40%;生产稳定性大幅提升,产品质量更加稳定,进一步增强国际市场竞争力,深度打入高端特种纸市场。

### 3.2.2 Smart Production

Kaifeng New Material has innovated its supervision and assessment process, and fostered the “ESG+AI” production responsibility system based on AI algorithm in its well-established digital and smart workshop. To upgrade the production line, Kaifeng New Material has introduced internationally-advanced key production equipment and online testing equipment from Germany, US, Italy and France, such as German BELLMER shaker, German Siemens drive control system and American Honeywell quantitative moisture control system (QCS). The combination of the distributed control system (DCS), the quantitative moisture control system (QCS), the manufacturing execution system (MES) and the ERP system leads to the domestically-advanced automatic specialty paper production line that features better production efficiency and flexible production capacity. This will form an efficient, high-quality, green and low-cost production model. Due to its technological achievement, Kaifeng New Material has been titled as “Zhejiang Smart Factory” by the Department of Economy and Information Technology of Zhejiang Province.

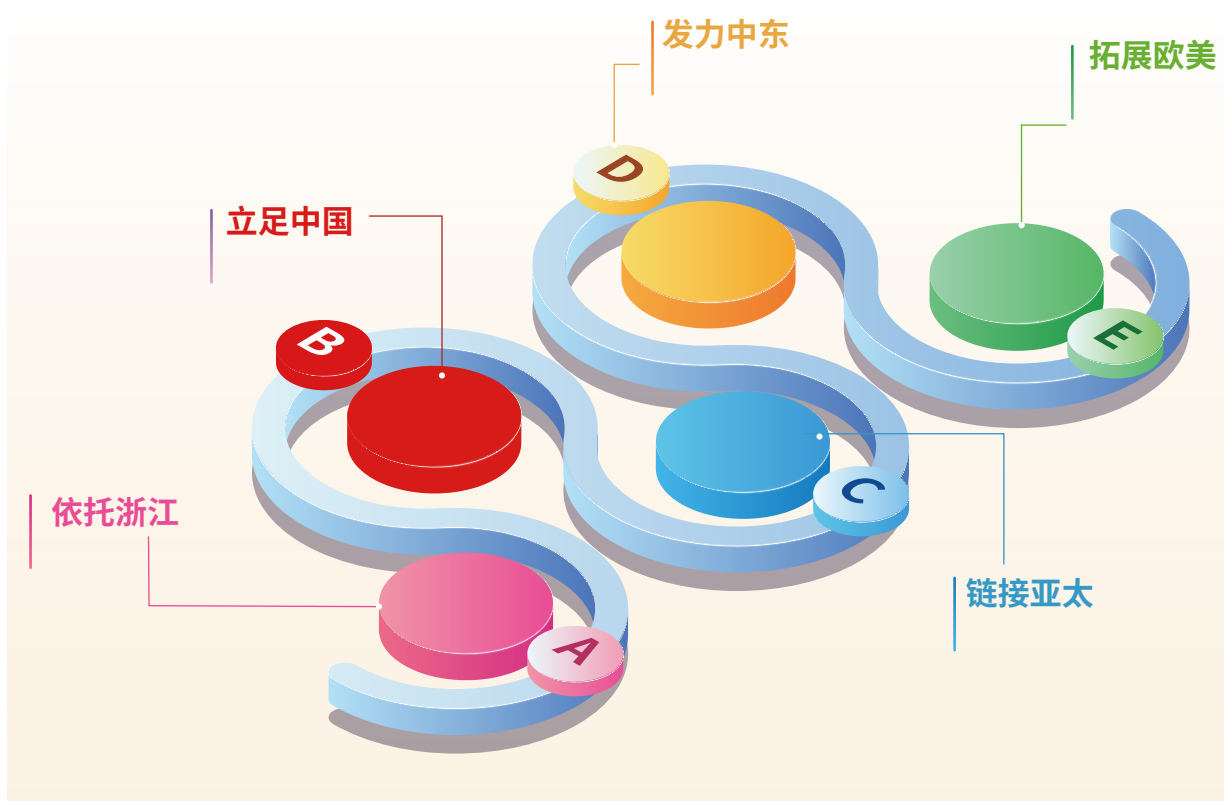


In 2024, we spend millions of RMB and completed Phase II of our Intelligent Upgrade Project. To be specific, the project introduced the intelligent control system, allowing for automatic monitoring and adjustment throughout production process, such as real-time tuning of running parameters for equipment according to paper grammage, moisture and other parameters; the project also adopted the intelligent inspection unit, enabling online inspection of paper thickness, whiteness and other indicators. The technical upgrading axes workforce in a production line from 20 to 12, cutting labor costs by approximately 40%; enhances production stability substantially, leading to more reliable product quality. These efforts have reinforced our competitive strength globally, and gained a stronger foothold in the high-end specialty paper market.



## 3.3 供应商与客户

### 3.3.1 客户



#### 全球化布局

##### 国外：

美国、日本、印度、马来西亚、泰国、越南、新加坡、意大利、英国、德国、阿联酋、澳大利亚、巴西、南非、乌拉圭、印度尼西亚、比利时、瑞典、芬兰、亚美尼亚、墨西哥、伊朗等国家。

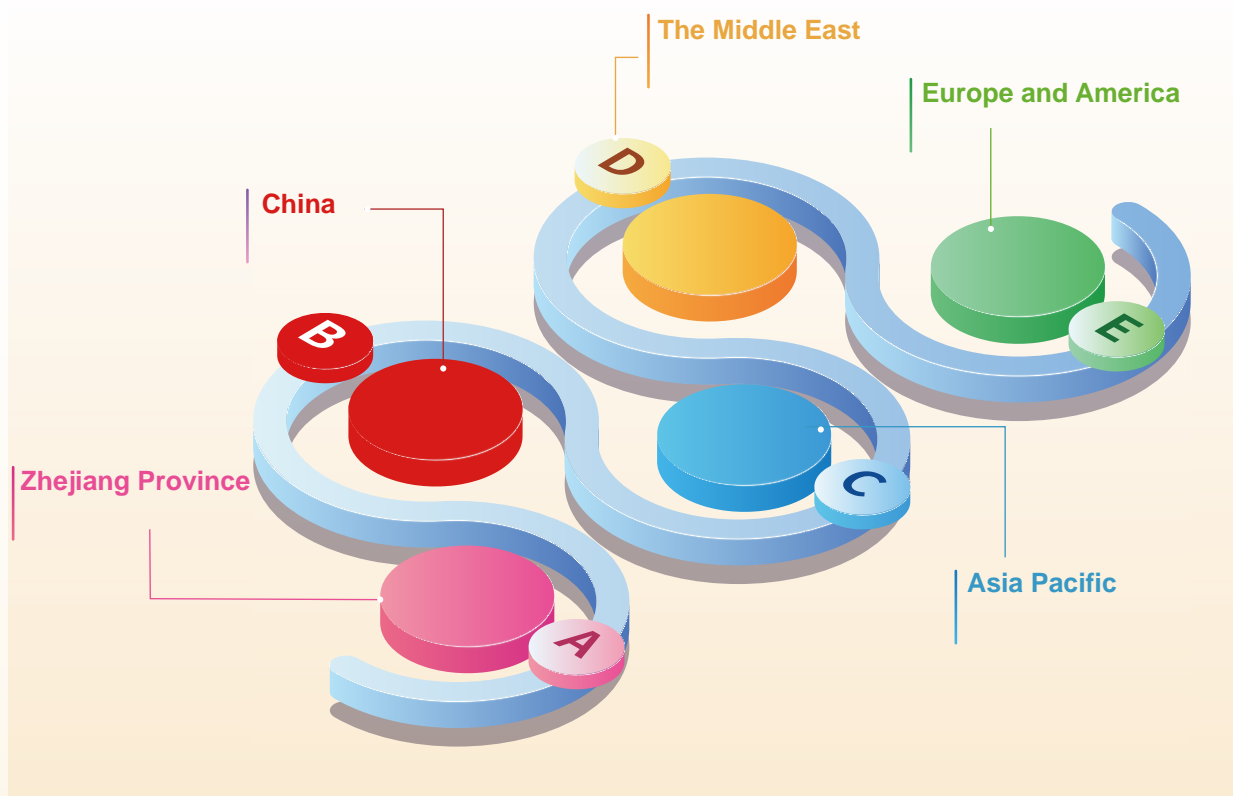
##### 国内：

云南、安徽、河南、湖南、四川、浙江、上海、北京、广东、甘肃、江苏、广西、山东、湖北、新疆、陕西、黑龙江、吉林、贵州、福建、山西、深圳、天津、重庆等地区。

凯丰新材销售总部设立在浙江杭州。为全方位满足客户需求，推动品牌全球化战略，我们已形成了立足中国、链接亚太、发力中东、拓展欧美的国际营销网络。积极布局海外，拓展国际市场，一方面探寻全新市场与客户群体，重新链接国际化市场、客户与产品；另一方面，扩大吸纳人才及客户的范围，吸收各国在全球化进程中推出的政策福利，实现行业竞争优势与公司收益的双丰收。

## 3.3 Suppliers and Customers

### 3.3.1 Customers



#### Global layout

##### Overseas markets:

US, Japan, India, Malaysia, Thailand, Vietnam, Singapore, Italy, UK, Germany, UAE, Australia, Brazil, South Africa, Uruguay, Indonesia, Belgium, Sweden, Finland, etc.

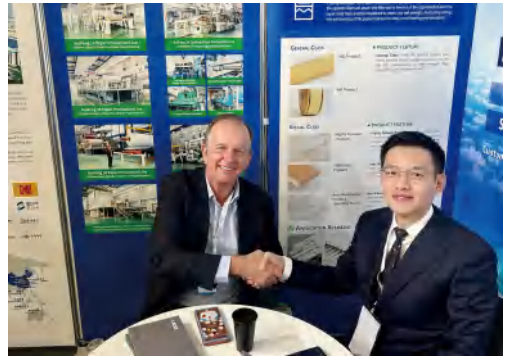
##### Domestic markets:

Yunnan, Anhui, Henan, Hunan, Sichuan, Zhejiang, Shanghai, Beijing, Guangdong, Gansu, Jiangsu, Guangxi, Shandong, Hubei, Xinjiang, Shaanxi, Heilongjiang, Jilin, Guizhou, Fujian, Shanxi, Shenzhen, Tianjin, Chongqing, etc.

Headquartered in Hangzhou, Zhejiang Province, Kaifeng New Material has forged an international sales network covering domestic markets, and overseas markets in Asia Pacific, the Middle East, Europe and America, so as to meet the needs of customers and to fully bolster the global brand strategy. To expand our global presence, we dig into new markets and customer groups, as well as extend our talent and customer outreach and draw on welfare policies released by various countries in the process of globalization. All these efforts will enhance industry competitive advantages, and increase corporate earnings.

## 销售模式

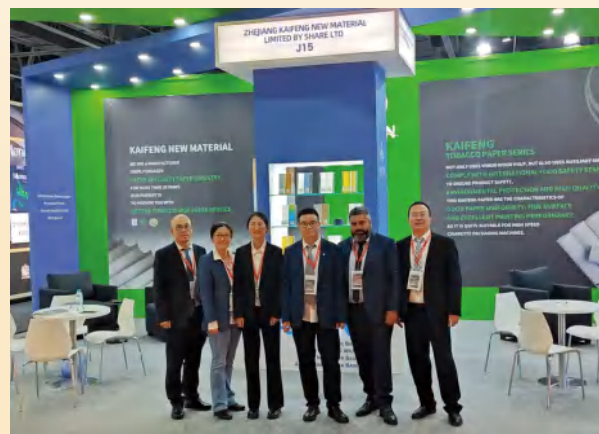
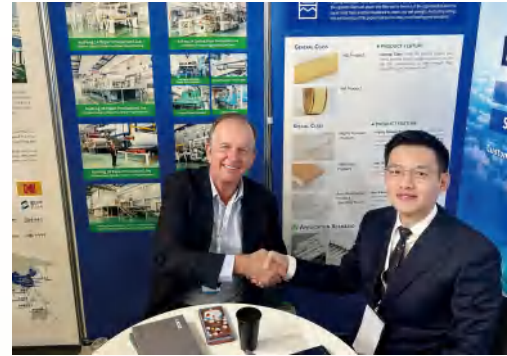
我们采用直接销售和经销商销售相结合的销售方式，其中直接销售为主要销售方式。在出口市场上我们采取直接销售、经销商销售和代理商销售相结合的销售方式。通过选择资金实力较为雄厚、市场信誉较好、销售能力较强、销售网络较广的经销商或代理商，加大拓展国外市场的力度。自2023年起，为进一步抢抓市场机遇，我们应邀走出国门，连续参加泰国曼谷纸业展览会、德国多特蒙德国际烟草展会、印尼泗水烟草展览会、阿联酋迪拜国际烟草展会和俄罗斯纸浆及造纸、生活用纸展览会等境外大型纸品展会，成功新增了马来西亚、印尼、越南、印度、巴西、亚美尼亚、墨西哥、迪拜、伊朗、新加坡等地区的合作客户，陆续增加了数千万元销售额。未来，我们将持续拓宽国际市场、挖掘国际特种纸产业潜力。



## Sales strategy

Our marketing channels at home include direct marketing and marketing by dealers, with direct marketing as the core. Facing the export market, we adopt a combination of direct marketing, marketing by dealers and marketing by commercial agents. Notably, dealers or commercial agents boasting strong financial strength, positive reputation, competitive marketing capacity and diverse marketing channels are employed to help us expand international market outreach.

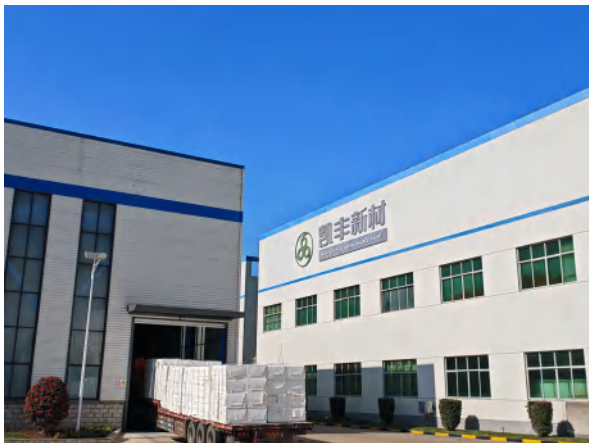
Since 2023, we have actively attended a number of large-scale international paper exhibitions to seize more market opportunities, include Asian Paper Bangkok, Inter-Tabac, WT ASIA, WT Middle East, and PulpForExpo. Though these exhibitions, we have built ties with potential customers in Malaysia, Indonesia, Vietnam, India, Brazil, Armenia, Mexico, Dubai, Iran and Singapore, elevating our sales by tens of millions. Looking ahead, we will continue to develop a broader international market, and tap into the potential of the global specialty paper industry.



### 3.3.2 供应链

#### 供应链管理体系

供应商是我们长期的合作伙伴,公司和凯丰新材制定《供应商管理程序》《供应商绩效管理规范》等内部制度文件,由凯丰新材负责人牵头成立“供应链风控委员会”。我们致力于与供应商保持互惠互利、合作共赢的良性关系,共同加强和完善供应链的社会责任管理体系,以实现供应链的可持续发展。



#### 采购模式

我们制定《采购控制程序》,建立量化的评价指标,对供应商进行ABC三级划分,确定供货比例、付款时间等。按质量、环境及安全生产标准化的要求,形成了一套完善、有效的供应商调查、选择、评价、控制的供方评定体系,与一批稳定、可靠的合格供方建立了稳定的合作关系,确保供方在质量、成本、交期等方面符合公司要求。

受国际市场综合影响,2024年上半年木浆价格飙升,下半年回落后依然维持在高位,加剧了木浆采购节奏和成本控制的难度。我们冷静对市场进行分析、及时预判,优化原料结构、拓展原材料的供应渠道,充分把握灵活的采购策略,全年通过差价避险有效降低了木浆的平均成本。



### 3.3.2 Supply Chain

#### Supply chain management system

To effectively manage suppliers, our long-term partners, the Company and Kaifeng New Material have developed internal regulations such as the *Supplier Management Procedures* and the *Management Regulations on Supplier Performance*, and set up the Supply Chain Risk Control Committee. We are committed to maintaining mutually beneficial and win-win relationship with suppliers, and jointly strengthening and refining the social responsibility management system of the supply chain, so as to achieve sustainable development of the supply chain.



#### Procurement control

Our *Procurement Control Procedures* has outlined measurable evaluation criteria, classified suppliers into A, B and C grades, and specified provisions concerning supply proportions and time of payment. Besides, we have developed a well-performing supplier assessment system covering supplier investigation, selection, evaluation and control according to the quality, environment and work safety standard requirements. As a result, we have forged trustworthy cooperation with a series of reliable suppliers meeting our requirements on quality, cost and delivery.

Due to the combined factors of the international market, the pulp price soared in the first half of 2024, and stayed high even after a decline in the second half. This made it more challenging to manage pulp purchase frequency and cost. In response, we made rational analysis and judgment of the market situation, and offset the increased pulp cost by leveraging price differences effectively. This is attributed to our efforts to optimize the structure of raw materials, seek more supply channels, and apply a flexible procurement strategy.



### 3.3.3 产品与服务

#### 产品质量管理

凯丰新材负责人牵头组织“质量管理小组”，形成了以精益3T管理为核心的全过程质量管理体系，产品持续获得ISO9001质量管理体系、ISO14001环境管理体系、ISO22000食品安全管理体系、ISO45001职业健康安全管理体系、FSC森林管理委员会、PEFC森林认证认可计划体系、BRCGS食品安全全球标准、FDA美国食品和药物管理局、能源管理和知识产权管理等多项体系认证，支持定制化特种纸产品的批量化大生产，获得了德柏、紫丹、宝武、柯达等合作伙伴的满意认可，为公司产品的品质提升打下了坚实的保证。



### 3.3.3 Products and Services

#### Product quality management

Recognizing quality as the cornerstone, Kaifeng New Material emphasizes on responsible products, services and business practices. To this end, efforts have been made to set up the Quality Management Team led by the person in charge, establish a stable quality control team, and execute quality management tasks orderly. The products have been granted a series of system certificates, including ISO9001 Quality Management System, ISO14001 Environmental Management System, ISO22000 Food Safety Management System, ISO45001 Occupational Health and Safety Management System, FSC Certification, PEFC (Programme for the Endorsement of Forest Certification) System, BRCGS Global Standards for Food Safety, FDA (Food and Drug Administration) Certification, Energy Management System, and Intellectual Property Management System. Kaifeng New Material is able to undertake bulk production of customized specialty paper products, and has been well recognized by its partners such as Detpak, Zidan, Baowu and Kodak, laying a solid guarantee for improving product quality. We have been honored with the "Hidden Champion", the "Specialized and Sophisticated SME" and the "AAA Enterprise Observing Contract and Value Credit" in Zhejiang Province, and the "Government Quality Prize" in Quzhou City.





## 服务投诉管理

公司和凯丰新材开通了客户咨询、投诉、建议提供的便捷渠道，制定了《客户投诉管理规定》，确保客户投诉信息的快速传递与妥善处理。公司设定了年度“客户满意度”和“投诉回访度”的考核指标，建立了完善的售后客服系统，不定期组织技术、服务人员对客户进行回访。2024年度，公司产品品质稳定且满足各项标准要求，未发生重大品质争议；保持售后回访度100%，客户满意度达到99%，未收到客户关于质量方面的相关投诉，无产品召回事件发生。



## Service complaint management

The Company and Kaifeng New Material have opened up convenient channels for customer consultation, complaints and suggestions, and formulated *customer complaint management regulations* to communicate and address customers' concerns, complaints and insights timely and effectively. Besides, we have set annual assessment indicators for "customer satisfaction" and "complaint follow-up", established a sound after-sales customer service system, and assigned technical and service personnel to visit customers from time to time. In 2024, our product quality was stable and met applicable standards; there were no major quality disputes; the after-sales follow-up rate was maintained at 100%, and the customer satisfaction rate reached 99%; no customer complaints about quality were received, and no products were recalled.



## 3.4 员工

### 3.4.1 员工权益保障

#### 员工概况

2024末公司总计263名员工，雇佣合同覆盖率100%。

按性别构成划分：女性67人、男性196人。

按专业构成划分：生产人员150人、技术人员47人、行政人员41人、销售人员17人、财务人员8人。

#### 合规就业

根据《中华人民共和国劳动法》和各项劳动管理制度等有关规定，制定《招聘任用管理规范》与员工签订劳动合同。建立健全员工社会保险制度、住房公积金制度、补充保险制度，依法为员工缴纳保险费用。2024年，公司用人合同、社会保险覆盖率保持100%。

建立和完善包括薪酬体系、激励机制，制定《薪酬管理办法》《内部晋升、竞聘管理规范》《薪资核算及发放管理规范》等制度，建立工资正常增长机制，保障员工依法劳动、享有权益。2024年，公司人均带薪年假天数超过7天。

保护童工、保护女工、反对歧视、保障尊严、尊重自愿劳工，2024年，公司未发生任何歧视、雇佣童工或强迫劳动的争议事件。



## 3.4 Employees

### 3.4.1 Protection of Employees' Rights and Interests

#### Our payroll

As of the end of 2024, the Company had 263 employees on the payroll, and all of our employees have signed labor contracts.

By gender: 67 females and 196 males.

By profession: 150 production workers, 47 technicians, 41 administrative staff, 17 sales persons, and 8 financial staff.

#### Employment compliance

In accordance with the *Labor Law of the People's Republic of China* and *applicable labor management regulations*, we have implemented the Good Employment Practice, and signed labor contracts with our employees. In addition, we always bear the due corporate contribution to social insurance, housing provident fund and supplementary insurance for our employees in accordance with the law. In 2024, all our employees entered into labor contracts, and had access to the social insurance package.

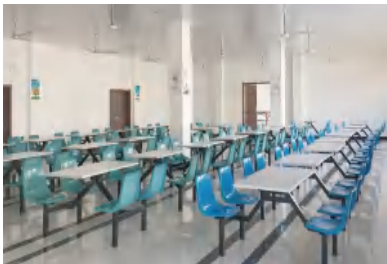
We have established and improved the remuneration system and the incentive mechanism, and formulated a range of regulations such as the *Management Regulations on Remuneration*, the *Management Regulations on Internal Promotion and Competition for Jobs* and the *Management Regulations on Remuneration Accounting and Payment*. These actions allow for regular pay increase, and enable our employees to work and enjoy their rights and interests according to law. In 2024, there were over 7 paid leave days per employee.

We stay committed to prohibiting child labor, protecting female employees, combating discrimination, safeguarding dignity, and respecting voluntary labor. In 2024, the Company had no incidents of discrimination, child labor or forced labor.



## 设施配套

我们致力于为员工提供整洁、绿色的园林式生产生活环境。中央空调覆盖各个厂房，为员工提供恒温、恒湿的作业环境，周边各类生活娱乐设施齐全。自建食堂为员工提供温馨舒适的就餐环境和丰富的菜式选择，为员工提供用餐补贴，食品安全有保障。为丰富员工业余生活，在工作场所提供舒适的休息环境，设有健身房、阅览室等活动场所，配套乒乓球室、篮球场、多功能媒体室、茶室等活动场所。为符合条件的员工提供整洁舒适的公寓，鼓励夫妻共同来司就业，重视吸引和留住人才。

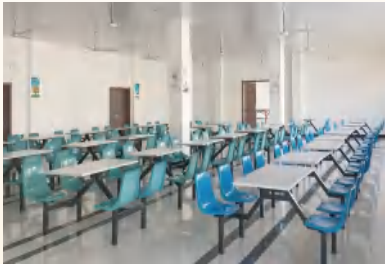
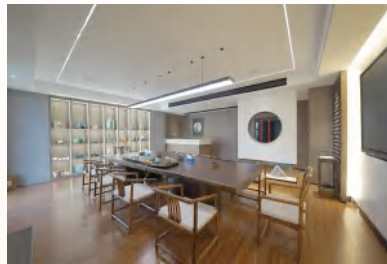


## 关爱机构

公司和凯丰新材坚持“以人为本”，关心关爱员工，设立员工关爱中心，关爱残疾职工、关爱特殊女工、关爱困难职工，给予其额外补贴，给在职女职工每年提供免费检查，组织建立职工帮扶互助基金，构建了意见箱、邮件、电话、面对面沟通等多种沟通与申诉渠道。同时，人力资源部会同生产部、行政部、工会等部门开展多样化员工关爱活动，第一时间发现问题、解决问题，让员工有问题可以及时得到解决，不断提升员工满意度。

## Availability of facilities

We are committed to providing employees with a clean garden-style production and living environment. To this end, central air-conditioning system covers every workshop, providing employees with a working environment of constant temperature and humidity. Besides, well-established living and recreational facilities are available for employees. To be specific, our canteens provide pleasant dining environment and a wide range of delicious food options. And meal allowance is another benefit for employees. To enrich the spare-time life of employees, a variety of recreation facilities have been equipped, including but not limited to fitness centers, reading rooms, table tennis rooms, basketball courts, multi-function media rooms and tea rooms. To attract and keep talents, qualified employees are provided with neat and comfortable apartments, and married couples are encouraged to both work in the Company.



## Employee care

Highlighting the importance of employees, the Company and Kaifeng New Material have set up an employee care center especially for employees with physical disabilities, female employees during their pregnancy and lactation, and employees in need. These three groups enjoy additional allowance, physical examinations free of charge, and aid fund respectively. Moreover, our employees have access to multiple communication and complaining channels, such as suggestion box, email, hotline, and face-to-face communication. To timely identify and address the concerns of employees, the Human Resources Department works with the Production Department, the Administration Department and the Labor Union to organize a rich diversity of employee care activities, continuously enhancing employee satisfaction.

## 丰富活动

公司为员工提供展示和培养兴趣爱好的平台渠道，积极组织开展体育健身、节日活动、关爱女性等各类活动，帮助员工更好平衡工作与生活。公司日常还组织员工不定期开展读书分享会、美食节、观影教育、诗歌朗诵大赛等活动，丰富员工业余生活，增强团队凝聚力。



2024年3月，“三八”女工植花活动



2024年9月，“中秋”开展娱乐游会



2025年1月，“表彰”年度优秀员工

## 民主保障

公司遵守《国际人权公约》《世界人权宣言》等国际准则，重视人权民主，成立工会组织，完善工会各项体系，制定《自由结社和劳资谈判》《工会组织规范》等制度，一直采用自愿加入与自愿退出工会的原则，建立员工与公司之间的沟通枢纽，鼓励员工参与决策制定和问题解决。2024年，工会收到员工建议14份，全部完成了研讨及落实；全年开展职代会及民主沟通会4次，员工满意度得分为96%，同比提高了5个百分点。

## Various activities

The Company has provided its employees with various platforms to showcase their talent and develop hobbies, and organized sports competitions, festival events and female care activities to help employees enjoy better life.



In March 2024, the International Working Women's Day



In September 2024, Mid-Autumn Festival



In January 2025, we granted honors and rewards to excellent employees



## Guarantee of democracy

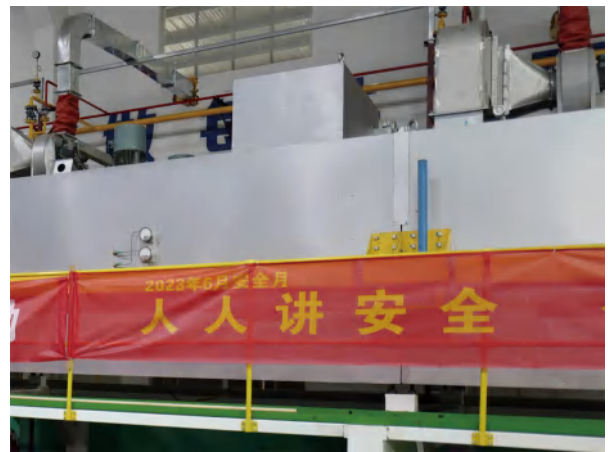
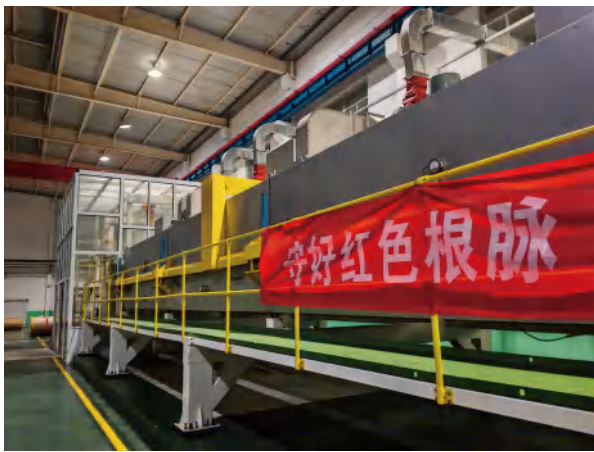
Emphasizing the protection of human rights and democracy, the Company observes applicable international rules such as the three major international covenants on human rights and the *Universal Declaration of Human Rights*, and has formulated internal regulations including the *Freedom of Association and Collective Bargaining and the Management Regulations on Labor Union*. The *Labor Union* has been set up along with improved working systems for employees to communicate with the Company. Employees are allowed to join or withdraw from the Labor Union freely, and are encouraged to participate in making decisions and solving problems. In 2024, the Labor Union received 14 suggestions, and studied and put all suggestions into practice. Four meetings including the workers' congresses and democratic communications were held. The employee satisfaction was 96%, a 5-percent year-on-year growth.



### 3.4.2 职业健康与安全生产

公司和凯丰新材认真贯彻和执行《安全生产法》及安全生产相关的法律法规，确立安全生产工作以人为本，强化监督检查、隐患整治，建立了ISO45001职业健康安全管理体系，定期开展EHS审核、要素化检查及班组考评，有序开展“百日排查行动”及“党员安全岗行动”。设立应急领导小组，设置突发事件应急响应程序，每年不定期进行演练。建立公司双重预防分级管控表、重大风险源清单、班组隐患排查表、部门安全风险告知卡重点风险公告、岗位安全告知卡、安全风险四色图等，张贴到每个风险点、每个岗位，实现全员参与、层层管控。

2024年，公司为生产一线岗位200多名员工进行了职业健康体检，职业健康档案覆盖率达100%，职业病发生次数保持0次；公司新员工安全教育培训率达100%、特殊工种持证上岗率达100%、因公死亡率0%。



#### 职业健康认证培训

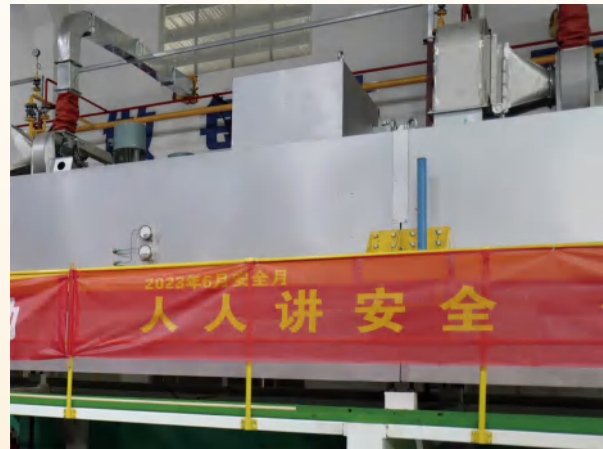
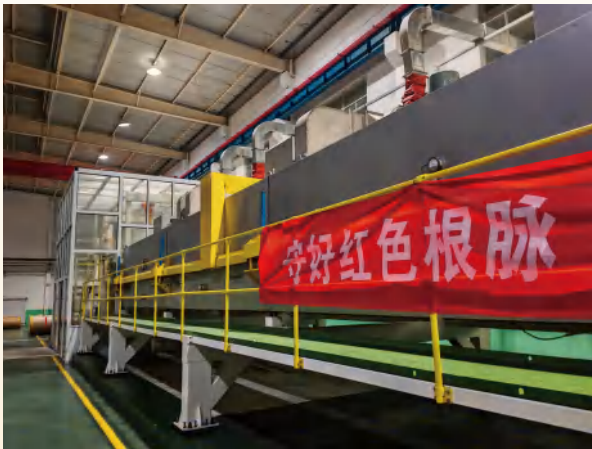
我们持续开展职业健康安全管理体系 (ISO45001) 认证工作和6S评价工作，新引入全球合规与道德规范倡议组织 (AMFORI) 第三方机构开展BSCI现场审计评价。2024年，我们的BSCI认证评价中在职业健康安全等13个领域指标获得11个“A”评价。2024年，公司新员工安全教育培训率达100%、人均职业健康培训时长14小时；特殊工种持证上岗率达100%、因公死亡率0%。



### 3.4.2 Occupational Health and Work Safety

The Company and Kaifeng New Material always abide by the *Law on Work Safety* and other applicable work safety laws and regulations. To ensure people-centered safety work, the following combined measures have been taken: step up supervision and inspection, identify and wipe out hidden hazards; establish and maintain ISO 45001 Occupational Health and Safety Management System; organize EHS-specific audit, factor-by-factor check, and performance appraisal on a regular basis; carry out the “100-Day Campaign to Identify Hidden Hazards” and the “Party Member Safety Post Initiative”. In addition, we set up an emergency response leading group, work out emergency response procedures, and arrange drills every year. For the effective control by all employees at all levels, a number of work safety documents have been formulated and posted at all risk points and posts, such as the Hierarchical Control Table for Dual Prevention, the List of Major Risk Sources, the Hidden Hazard Identification Table for Work Shifts, the Department-level Safety Risk Notice, the Major Risk Notice, the Post Safety Card, and the Four-color Diagram of Safety Risks.

In 2024, over 200 front-line employees were provided with occupational health examinations. All employees had their occupational health records. There were no occupational disease cases. All new employees received work safety training. All employees engaged in special types of work held required certificates. There were no work-related fatalities.



#### Occupational health certification and training

We keep working toward Occupational Health and Safety Management (ISO 45001) certification and 6S (SEIRI, SEITON, SEISO, SEIKETSU, SHITSUKE, and SAFETY) assessment. Moreover, we have invited a third-party organ to conduct a field audit in line with AMFORI BSCI requirements. In 2024, we got 11 “A” results in 13 domain indicators for BSCI certification, including occupational health and safety. In 2024, all of our new employees received occupational safety training, and the average occupational health training hours per employee reached 14; all employees engaged in special jobs worked with required certificates, and there were no deaths in line of duty.

### 3.4.3 职业发展与培训

#### 员工成长体系

公司和凯丰新材高度重视人才培养与发展工作,以“专注、研究、创新”的企业精神与用人理念,为员工打造研究型、成长型职业发展平台。建立可持续发展的战略性人力资源梯队,培养和引进有理想、敢担当、年轻化、知识化、专业化、求真务实的员工成为各级骨干,组织开展多种形式的岗位培训、技能培训、管理培训、资质培训、知识竞赛、技能竞赛等,鼓励员工持续学习。



#### 职业成长培训

我们制定职业教育和职业技能培训政策,邀请外部专家、学者和员工进行技术分享与交流,通过开放的技术氛围,促进员工技术能力的培养和进步。2024年,公司员工培训覆盖率100%、人均培训时长29小时,做到了人人受教育、全体共成长。



### 3.4.3 Career Development and Training

#### Employee development system

Taking talent training and development as a top priority, the Company and Kaifeng New Material uphold the principles of “Focus, Research, Innovation”, and strive to build a career development platform friendly to employees’ research and growth. Besides, our efforts have been intensified to foster a sustainable and strategic talent pool, attract and cultivate younger, better-educated, more professional and more pragmatic backbone employees with ideals and a sense of responsibility, provide various forms of training sessions on posts, skills, management and qualification, and organize knowledge and skill contests, encouraging employees to keep learning.



#### Career development training

We have formulated policies related to vocational education and skill training, invited external experts and scholars to share technical skills and insights with our employees, and fostered an open technical exchange climate to help employees develop and upgrade their technical capabilities. In 2024, all of our employees received training, and the average training hours measured as 29. These achievements demonstrate that our employees have equal access to training and enjoy equal opportunities to grow.





# 治理创新力

4.1 可持续发展

4.2 商业行为

4.3 合规运营





KALIN

# Governance Innovation

4.1 Sustainable Development

4.2 Business Practices

4.3 Operational Compliance



## 4.1 可持续发展

### 4.1.1 可持续治理机制

#### 可持续治理架构

“五回报一助力”即回报国家、回报生态、回报社会、回报股东、回报员工、助力商业向善，“12345”可持续治理体系即“一个双碳目标、两个转型抓手、三种工厂定位、四条优化路径、五级治理架构”。

“一个双碳目标”为2026年实现碳达峰、2035年碳排放强度较2021年下降90%、2040年实现碳中和；“两个转型抓手”为精细化管理、提高新质生产力；“三种工厂定位”为绿色工厂、智能工厂、零碳工厂；“四条优化路径”为产品绿色转型、耗能结构转化、资源循环利用、工艺效能升级。

“五级治理架构”为以董事会战略与可持续发展委员会为核心的五级ESG治理架构。“决策层面”一级机构合并设立董事会战略与可持续发展委员会，董事长牵头作为第一责任人担任主任委员，统领执行监督层面和具体业务层面的各项机构。

#### “12345”可持续治理体系

五回报一助力

回报国家 回报生态 回报社会 回报股东 回报员工 助力商业向善

#### 一个双碳目标

2026年  
实现碳达峰  
2035年  
碳排放总量  
较2021年  
下降90%  
2040年  
实现碳中和

#### 两个转型抓手

精细化管理

提高新质生产力

#### 三种工厂定位

绿色工厂

智能工厂

零碳工厂

#### 四条优化路径

产品绿色转型

耗能结构转化

资源循环利用

工艺效能升级

#### 五级治理架构

董事会战略与可持续发展委员会

ESG工作小组、风险管理小组

绿色发展委员会、安全生产领导小组

应急领导小组、员工关爱中心等

职业健康专职团队、爱心基金委员会等

## 4.1 Sustainable Development

### 4.1.1 Sustainability Governance Mechanism

#### Sustainability management framework

“Five-faceted Contribution and One Drive”: Make contribution to the country, the ecology, society, shareholders, and employees; drive business to develop for good. “12345” Sustainability Governance System: 1 dual-carbon goal, 2 priorities for transformation, 3-pronged positioning, 4 optimization approaches, and 5-tier management framework.

“1 Dual-carbon Goal”: carbon peaking by 2026; 90% drop of carbon emission intensity compared to 2021 by 2035; carbon neutrality by 2040. “2 Priorities for Transformation”: fine management and improvement in new quality productive forces. “3-pronged Positioning”: green, smart and zero-carbon factory. “4 optimization approaches”: green transition of product, energy-intensive structure upgrade, cyclic utilization of resources, and efficiency improvement of process.

“5-tier management Framework”: 5-tier ESG management framework led by the Strategy and Sustainability Committee under the Board of Directors. The Strategy and Sustainability Committee has been set up as the top ESG decision-making body, and leads the execution and oversight bodies as well as business departments. The Chairperson serves as the primary responsible officer and head of the Committee.

#### “12345” Sustainability Governance System

##### Five-faceted Contribution and One Drive

Make contribution to the country, the ecology, society, shareholders, and employees; Drive business to develop for good.

##### 1 Dual-carbon Goal

Carbon peaking by 2026; 90% drop of carbon emission intensity compared to 2021 by 2035; carbon neutrality by 2040.

##### 2 Priorities for Transformation

Fine management and improvement in new quality productive forces.

##### 3 Pronged Positioning

Green, smart and zero-carbon factory.

##### 4 Optimization Approaches

Green transition of product, energy-intensive structure upgrade, cyclic utilization of resources, and efficiency improvement of process, etc.

##### 5-tier Management Framework

The Strategy and Sustainability Committee, ESG Working Group & Risk Management Team, Green Development Committee, Emergency Leading Group, Employee Care Center, etc.



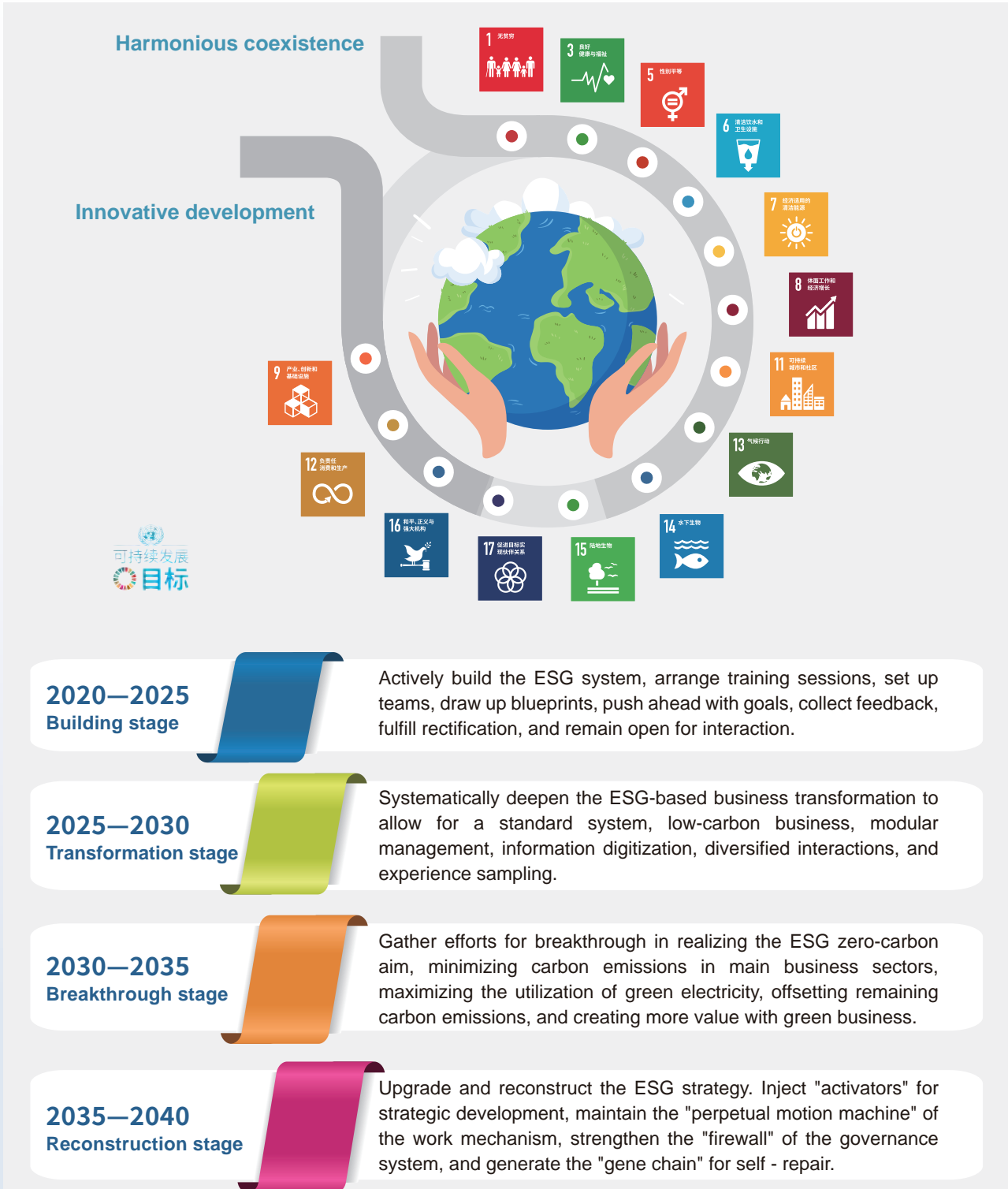
## 可持续战略规划

可持续发展之路是人类共同的旅程，我们以“美好共生、创新发展”为公司可持续发展理念，以联合国2030可持续发展目标SDGs为指导，识别出14个可持续发展重点目标。对标最优资源和投入配置，更高效地助力可持续发展议程的达成。



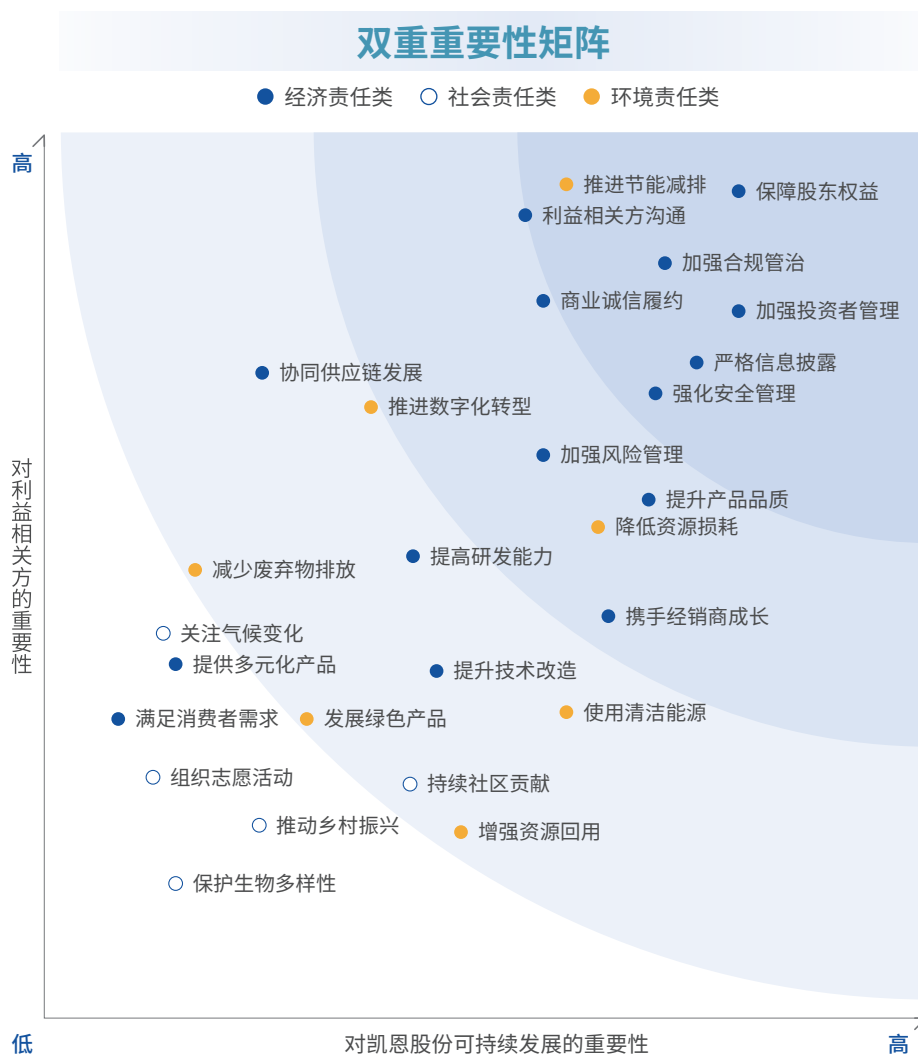
## Sustainable strategy planning

On the human's common journey of sustainable development, we are committed to "innovative development for harmonious coexistence", aligning with 2030 UN SDGs (sustainable development goals). According to our actual situation, we have identified 14 SDGs, and pooled the best resources and efforts to facilitate the realization of the Agenda for Sustainable Development.



## 可持续实质性议题

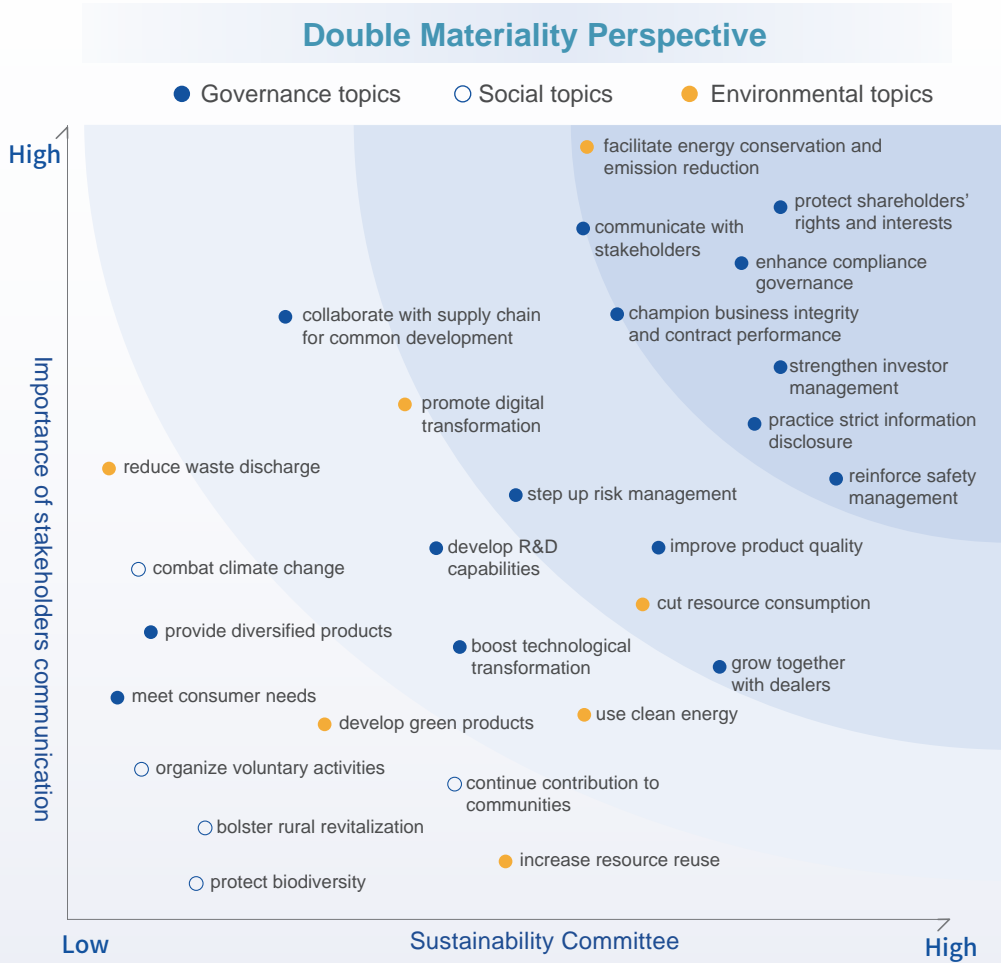
我们根据“双重重要性”原则，基于“识别—评估—审定”的流程，参照国内外披露标准、行业宏观政策、相关行业实践，并结合公司实际情况初步识别实质性议题，最后交由董事会战略与可持续发展委员会审定出28项实质性议题。



|             |   |   |  |   |
|-------------|---|---|--|---|
| <b>非常重要</b> | <ul style="list-style-type: none"> <li>● 保障股东权益</li> <li>● 利益相关方沟通</li> </ul>                   | <ul style="list-style-type: none"> <li>● 加强合规管治</li> <li>● 商业诚信履约</li> </ul>                    | <ul style="list-style-type: none"> <li>● 严格信息披露</li> <li>● 强化安全管理</li> </ul>   | <ul style="list-style-type: none"> <li>● 加强投资者管理</li> <li>● 推进节能减排</li> </ul> |
| <b>比较重要</b> | <ul style="list-style-type: none"> <li>● 加强风险管理</li> <li>● 提升技术改造</li> <li>● 降低资源损耗</li> </ul>  | <ul style="list-style-type: none"> <li>● 提升产品品质</li> <li>● 携手经销商成长</li> <li>● 使用清洁能源</li> </ul> | <ul style="list-style-type: none"> <li>● 推进数字化转型</li> <li>● 协同供应链发展</li> </ul> | <ul style="list-style-type: none"> <li>● 提高研发能力</li> <li>● 减少废弃物排放</li> </ul> |
| <b>一般重要</b> | <ul style="list-style-type: none"> <li>● 满足消费者需求</li> <li>○ 组织志愿活动</li> <li>● 发展绿色产品</li> </ul> | <ul style="list-style-type: none"> <li>● 提供多元化产品</li> <li>○ 持续社区贡献</li> </ul>                   | <ul style="list-style-type: none"> <li>○ 推动乡村振兴</li> <li>○ 关注气候变化</li> </ul>   | <ul style="list-style-type: none"> <li>○ 保护生物多样性</li> <li>● 增强资源回用</li> </ul> |

## Digital empowerment for sustainable development

In line with the Double Materiality Perspective, domestic and international disclosure standards, industry macro-policies, industry practices and our actual conditions, the Company works out a material topic shortlist via identification and assessment and submits it to the Strategy and Sustainability Committee for review to determine the final material topics. In 2024, 28 material topics were finalized.



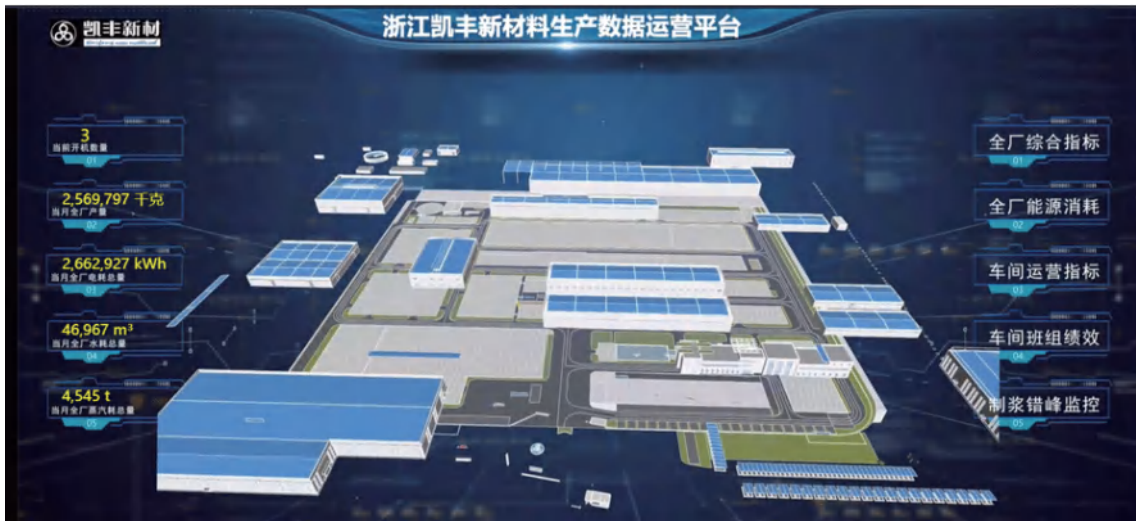
|                            | Low   | Sustainability Committee   | High   |
|----------------------------|---|--|--|
| <b>High significance</b>   | <ul style="list-style-type: none"> <li>● protect shareholders' rights and interests</li> <li>● communicate with stakeholders</li> <li>● strengthen investor management</li> </ul> | <ul style="list-style-type: none"> <li>● enhance compliance governance</li> <li>● champion business integrity and contract performance</li> <li>● facilitate energy conservation and emission reduction</li> </ul> | <ul style="list-style-type: none"> <li>● practice strict information disclosure</li> <li>● reinforce safety management</li> </ul>  |
| <b>Medium significance</b> | <ul style="list-style-type: none"> <li>● step up risk management</li> <li>● boost technological transformation</li> <li>● cut resource consumption</li> </ul>                     | <ul style="list-style-type: none"> <li>● improve product quality</li> <li>● grow together with dealers</li> <li>● develop R&amp;D capabilities</li> <li>● use clean energy</li> </ul>                              | <ul style="list-style-type: none"> <li>● promote digital transformation</li> <li>● collaborate with supply chain for common development</li> <li>● reduce waste discharge</li> </ul> |
| <b>Low significance</b>    | <ul style="list-style-type: none"> <li>● meet consumer needs</li> <li>○ organize voluntary activities</li> <li>● develop green products</li> </ul>                                | <ul style="list-style-type: none"> <li>● provide diversified products</li> <li>○ continue contribution to communities</li> <li>○ protect biodiversity</li> </ul>   | <ul style="list-style-type: none"> <li>○ bolster rural revitalization</li> <li>○ combat climate change</li> <li>● increase resource reuse</li> </ul>                                 |

## 可持续发展数字化建设

我们是特种纸行业最早把可持续发展和ESG作为主体战略的上市公司之一，及早通过信息化系统作为有效手段和载体，分别在环境端、社会端、治理端、市场端深入布局数字化建设。

在数据采集与整合方面，我们积极与博依特智能合作，持续开展深度智慧化生产建设。博依特作为全球首个专为制浆造纸行业设计的工艺大模型制造者，为我们在数据、工艺和先进AI技术等领域的智能化转型道路上提供了强大助力。

在ESG绩效管理系统方面，我们依托碳足迹申报系统灵活实现碳足迹计算工具和能源管理系统自主协同，实现ESG数据快速分工收集、集中汇总，周期性生成分析报告，后续通过自建的投资关系生态矩阵实时披露ESG关键指标。

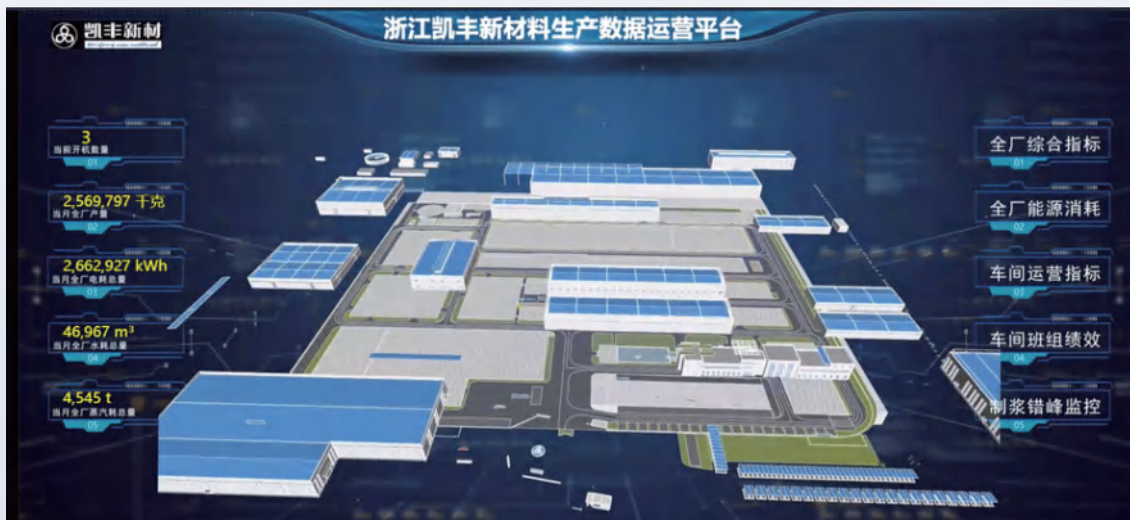


## Digital empowerment for sustainable development

We are the first to take sustainability and ESG as an integral part of our primary strategy among listed companies in the specialty paper industry. To fulfill the strategy, we have empowered the environmental, social, governance and marketing development with information-based and digital approaches.

We actively cement cooperation with POI-TECH in data acquisition and integration to insert more smart genes into production. As the world's first manufacturer of large-scale process model dedicated to the paper-making industry, POI-TECH works as a booster on our journey to intelligent transformation in terms of data, process and advanced AI technology.

We leverage the carbon footprint reporting system for better ESG performance management. The system enables effective collaboration of the carbon footprint accounting tool and the energy management system, and is used to quickly collect and sort out ESG data, generate periodic analysis reports, and disclose ESG KPIs in real time via our built-in investor relation matrix.



## 4.1.2 尽职调查

### 尽职调查机构

我们指定董事会战略与可持续发展委员会下设的风险管理小组为常务尽职调查机构,协同ESG工作小组、安全生产领导小组、绿色发展委员会、财务部、法务部和各生产部门,组建跨部门尽职调查专项小组,对制度架构、运营流程、日常经营活动、管理层承诺、供应链等多方面开展周期性综合审查。2024年,我们新主动引入全球合规与道德规范倡议组织(AMFORI)第三方机构开展BSCI现场审计评价,在工人的参与与保护等13个领域指标获得11个“A”评价,未发现不符合项。



### 可持续发展风险应对

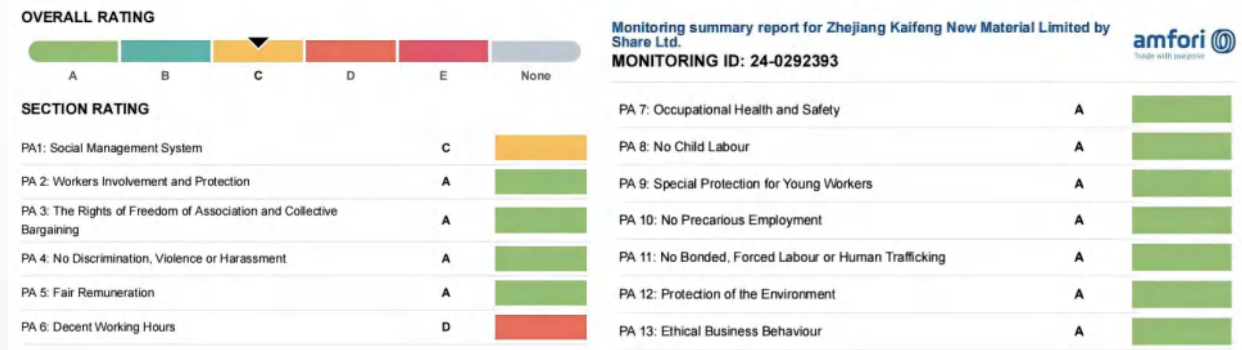
我们根据可持续发展风险矩阵,结合AI利用历史数据模型对未来的综合风险进行预测,编制《可持续发展尽职调查报告》;针对现存和预测的风险点上报管理层进行探讨改进,针对高风险预警事项提出技术替代方案。如原产线的碳排放未达预期值,我们结合自建绿电用量和纸产品生产特性及时调整,增加峰谷期绿电配比、减少天然气产段用时、提高蒸汽多环节循环使用率、增加FSC绿色认证产品派工量、提高回收纸浆和中水利用率,并对产线的部分高耗电装置进行了替换优化。2024年新改进的产线碳排放顺利达标,并且每吨产品耗能指标整体获得下降。

综合来看,我们在可持续发展转型提升的过程中,客观增加了环保设备换新、产线更迭升级、厂区数字化建设、员工数字技能培训、自建光伏绿电、开拓海外市场、研发绿色新产品、更换新能源车辆工具等诸多成本。但对标上述可持续发展风险矩阵分析,我们主营业务扣除非经常性损益后的净利润表现比上年同期扭亏为盈;中国烟草、麦当劳、肯德基、星巴克、宝武、酒钢等战略客户合作稳定且有增加,为我们保持公司经营平稳向好、不断提升公司市场价值打下了坚实基础,整体绿色含金量持续上升。

## 4.1.2 Due Diligence

### Due diligence body

The Risk Management Team under the Strategy and Sustainability Committee is designated as our standing due diligence body. The Team is responsible for working with the ESG Team, the Work Safety Leading Group, the Green Development Committee, the Finance Department, the Legal Department and production divisions to set up a cross-department due diligence group for regular audits of institutional structure, operation process, routine business activities, management commitments and supply chain. In 2024, we invited a third-party organ to conduct a field audit in line with AMFORI BSCI requirements, and got 11 “A” results in 13 domain indicators including employee engagement and protection without any non-conforming items.



### Response to sustainable development risks

We have pooled efforts to predict combined risks in the future by capitalizing on the sustainable development risk matrix and the AI-empowered historical data model, prepare the *Due Diligence Report of Sustainable Development*, report existing and predicted risk points to the management for analysis and improvement, and propose the alternative technical solutions to high-risk warning incidents. For example, as the carbon emissions of the existing production line fail to reach the preset limits, we timely take targeted measures in consideration of the capacity and consumption of our self-generated green electricity as well as the production characteristics of paper products. These measures include stepping up the distribution of green electricity during peak and valley periods, shortening the operating time of natural gas-consuming production sections, enhancing the recycling efficiency of steam in multiple links, intensify the production scheduling of FSC-certified green products, improving the utilization rate of recycled pulp and reclaimed water, and replacing and upgrading power-intensive units in production lines. In 2024, the carbon emissions of our upgraded production line met emission criteria, and our energy consumption indicators per ton of products were optimized.

During the process of enhancing transition towards sustainable development, we objectively experienced cost increase as greater efforts have been made to add new environmentally-friendly equipment, upgrade production lines, advance digital transformation in plants, organize digital skill training among employees, install PV panels for green electricity, expand international markets, research and develop green products, and allocate new energy vehicles. Upon analysis over the sustainable development risk matrix, the net profits of our main business (non-recurring profit and loss excluded) have turned to positive on year-on-year basis. We not only maintained but also moved forward our cooperation with strategic customers, such as China Tobacco, McDonald's, KFC, Starbucks, Baowu and JISCO. All these gains shown in the matrix have laid a solid foundation for us to pursue fresh progress while ensuring stability in operations, enhance our market value, and achieve a new leap forward in green transition.



### 4.1.3 利益相关方沟通

| 利益相关方       | 沟通渠道  | 关注重点        | 回应方式             | 典型实践       |
|-------------|---|-------------|------------------|------------|
| 股东与投资者      | 官方网站<br>报告反馈<br>自媒体矩阵<br>商业往来<br>培训沟通<br>论坛交流<br>客户问询<br>媒体互动<br>业务探讨<br>展会介绍<br>政府调研<br>监管巡查<br>环保收集<br>资质申报<br>协会参观<br>社区活动<br>行业会议<br>股东交互 | 保障投资者权益     | 可持续经济增长          | 组织投资者沟通会   |
|             |   | 防范经营风险      | 稳健经营             | 与投资者召开调研会议 |
| 创新发展        |   | 研发与产品创新     | 战略转型             |            |
| 引领社会发展      |   | 依法合规经营      | 优化内控治理、加强审计监察    |            |
| 守法合规        |   | 及时披露信息      | 多平台多角度披露信息       |            |
| 产品质量        |   | 产品全过程管理     | 牵头制定多项行业标准       |            |
| 优质服务        |   | 满足消费者多元需求   | 完善客户服务体系         |            |
| 公平定价        |   | 坚持自主研发与创新   | 严控产业链价格不良传导      |            |
| 产业链<br>合作伙伴 |   | 遵守商业道德、诚实守信 | 实施责任采购政策         | 全生命周期供应链管理 |
|             |   | 互利共赢、共同成长   | 加强产业链合作          | 销售运营能力发展中心 |
|             | 推动产业链健康发展   | 分析行业领先理念    | 所属行业委员会核心成员单位    |            |
| 员工          | 基本权益保障  | 合理的薪酬福利体系   | 同工同酬、竞争力薪资、额外福利  |            |
|             | 职业健康与安全   | 职业健康安全管理体系  | 建立机制、制定政策、开展培训   |            |
|             | 员工职业发展  | 员工培训与晋升     | 晋升通道、职业培训        |            |
| 社会          | 公众参与  | 开放透明        | 接受公众与媒体监督、主动对外宣传 |            |
|             | 共同富裕  | 产业支持        | 产业共富、支持乡村振兴      |            |
|             | 社区发展与进步   | 社会活动        | 志愿者活动、捐赠         |            |
|             | 媒体沟通  | 加强信息披露      | 积极回应舆论           |            |
| 环境          | 减少污染  | 发展绿色产业链     | 碳排查、节能减排改造       |            |
|             | 应对气候变化  | 开展减碳行动      | 企业碳足迹核算          |            |
|             | 生态保护  | 开展生态保护项目    | 生物多样性保护          |            |



### 4.1.3 Communication with Stakeholders

| Stakeholders                   | Communication channels  | Major concerns   | Responses  | Effective practices  |
|--------------------------------|---|--|--|--|
| Shareholders and investors     | Official website<br>Reports<br>We-media<br>Commercial intercourse<br>Training<br>Forums<br>Inquiries from customers<br>Media interaction<br>Business discussion<br>Exhibitions<br>Government research<br>Inspection and oversight<br>Eco-friendly collection<br>Qualifications<br>Engagement with associations<br>Community activities<br>Industry conferences<br>Interaction with shareholders | Protection of investors' rights and interests                | Sustainable economic growth  | Hold meetings to communicate with investors  |
|                                |   | Prevention of operating risks                                | Prudent operation  | Conduct research meetings with investors   |
|                                |   | Innovative development                                       | R&D and product innovation   | Launch strategy transition   |
| Governments and regulators     |   | Leading role in social development                           | Operational compliance   | Optimize internal control and governance; strengthen audit and supervision                         |
|                                |   | Compliance with laws and regulations                         | Timely information disclosure  | Disclose information at multiple platforms   |
| Customers                      |   | Product quality  | Full-process product management  | Lead the formulation of several industrial standards   |
|                                |   | First-rate services  | Response to the diversified needs of consumers   | Refine the customer service system   |
|                                |   | Fair pricing   | Independent R&D and innovation   | Curb adverse price effect effectively in the industry chain  |
| Partners in the industry chain |   | Compliance with business ethics, honesty and trustworthiness | Responsible procurement policy   | Implement the full-cycle supply chain management   |
|                                |   | Cooperation for mutual benefits and common growth            | Cooperation for common development in the industry chain   | Develop marketing and operation capabilities   |
|                                |   | Sound development of industry chain                          | Analysis of pioneering concepts in the industry  | Join the association of the industry as a core member  |
| Employees                      |   | Protection of basic rights and interests                     | Reasonable remuneration and welfare system   | Provide employees with equal pay for equal work, competitive remuneration, and additional benefits |
|                                |   | Occupational health and safety                               | Occupational health and safety management  | Establish mechanisms and policies, and organize trainings  |
|                                |   | Career development   | Employee training and promotion  | Put promotion channels and career trainings in place   |
| Society                        |   | Public engagement  | Openness and transparency  | Receive supervision from the public and the media, and communicate with external parties           |
|                                | Common prosperity   | Industry support   | Strive for common prosperity and rural revitalization  |  |
|                                | Community development   | Public welfare activities                                    | Organize volunteer activities and donations  |  |
| Environment                    | Media communication   | More effective information disclosure                        | Respond to public opinions actively  |  |
|                                | Pollution reduction   | Green industry chain   | Figure out carbon inventory, and shift towards energy conservation and carbon emission reduction |  |
|                                | Response to climate change  | Carbon reduction actions                                     | Launch carbon footprint assessment   |  |
|                                |   | Ecological conservation                                      | Involvement in ecological conservation projects  | Conduct biodiversity conservation  |

## 4.2 商业行为

### 4.2.1 反商业贿赂及反贪污

为了强化廉洁合规意识，我们与包含管理层在内的所有内部员工签订了《廉洁诚信保密协议》，跟进、监督检查新晋管理人员及新入职员工签订合规性，持续开展廉洁履职专项监察工作，以确保晋升过程中的廉洁合规。

在与供应商等外部伙伴的合作上，我们要求全体供应商遵守商业道德，禁止任何形式的腐败、贿赂等行为，将《廉洁承诺书》作为合同附件，要求供应商遵守《保密协议》、《供应商行为准则》等要求，严格执行准入考核和持续管理。

### 4.2.2 反不正当竞争

我们高度重视客户的价值观和权益，明确禁止发布虚假或误导性的广告信息，应当真实、客观地展示产品的性能和优势，不得误导消费者。坚决反对与同行合谋定价、扰乱市场秩序等违法行为。在同行业之间，积极开展合作交流，共同推动行业健康发展，为我国经济持续增长贡献力量。

我们充分授权审计监察部有权对公司日常经济活动实施随时的监察、审计，包括合同的最终审核权、材料采购价格的监察审核权、发现异常的调查和处罚建议权等。历年来，通过对公司收支活动的事先预防（招投标）、事中监察（可变价格审核）、事后审计（决算和异常调查）等，基本防止了商业活动中不正当行为发生。



## 4.2 Business Practices

### 4.2.1 Anti-bribery and Anti-corruption

To enhance the awareness of integrity and compliance, all employees, including the management, are required to sign the *Integrity and Confidentiality Agreement*. In addition, we follow up and supervise whether new promotions and new employments comply with applicable regulations, continue the oversight of integrity and compliance at all positions and for promotions.

In cooperation with external partners such as suppliers, we require all suppliers to abide by business ethics, the *Non-Disclosure Agreement* and the *Supplier Code of Conduct*, and should keep away from corruption and bribery in any form. Moreover, they should sign the *Commitment to Integrity* as an attachment to the supply contract, and receive access assessment and sustained management.

### 4.2.2 Anti-unfair Competition

Attaching great importance to the values and rights of customers, we always present the performance and advantages of products truly and objectively, rather than releasing false or misleading advertisements. We utterly oppose illegal acts such as colluding with peers on pricing and disrupting the market order. Instead, we exchange and cooperate with the counterparts to jointly advance the sound development of the industry and contribute to the sustainable growth of China's economy.

The Audit and Supervision Department has been fully authorized to supervise and audit the daily economic activities of the Company from time to time. The specific duties of the department include contract review, supervision and review of material procurement prices, investigation of abnormal conditions, and proposal of penalty suggestions. Over the years, efforts have been made to prevent in advance (bidding), in-process supervision (price review) and post-audit (final accounting and abnormality investigation) targeting receipts and payments, thus basically putting commercial misconduct to an end.

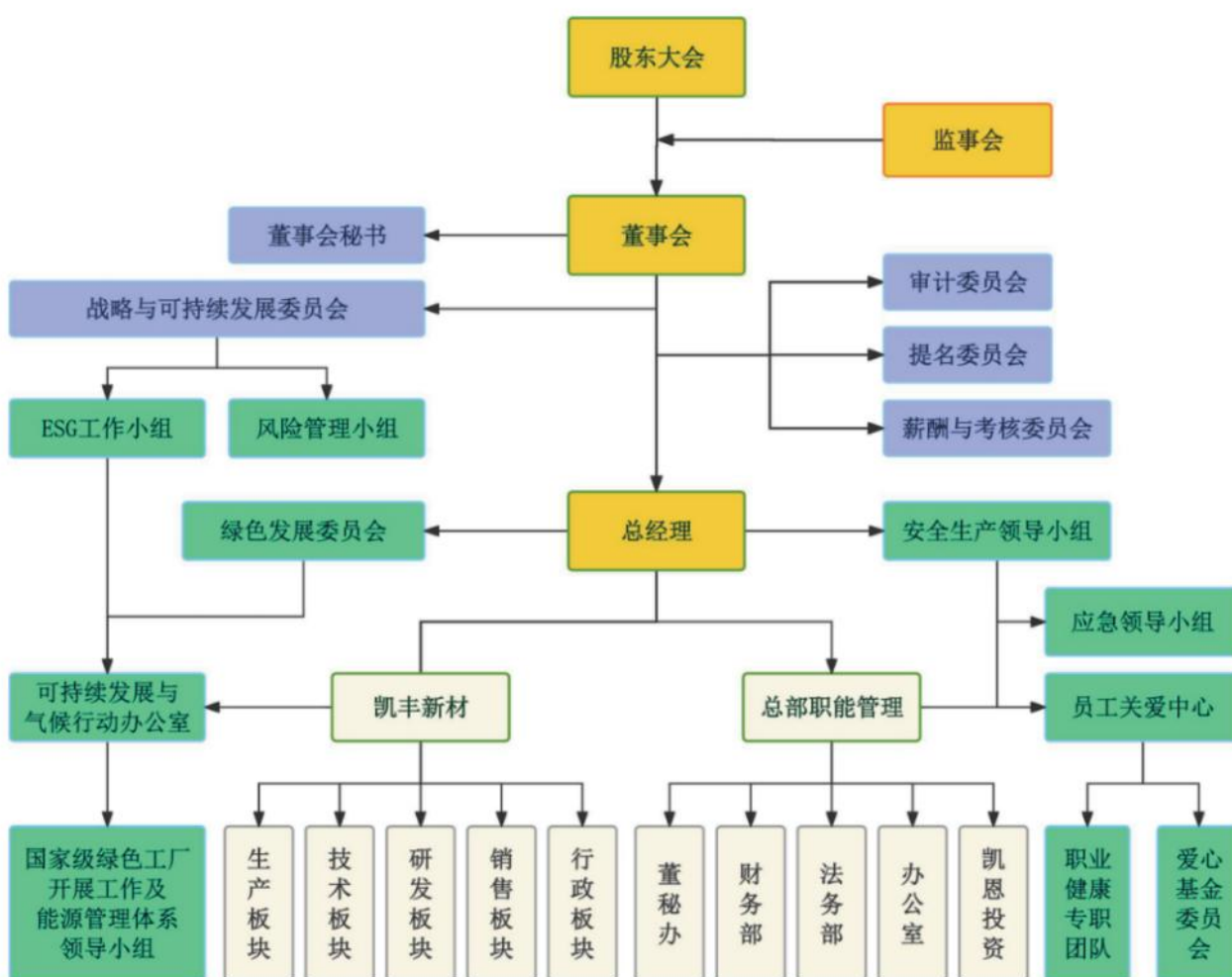


## 4.3 合规经营

### 4.3.1 科学有效管理

#### 合规管理体系

我们严格按照《公司法》《证券法》《上市公司治理准则》及中国证监会、深圳证券交易所发布的有关上市公司治理的规范性文件要求，持续完善公司治理结构，包括股东大会、董事会、监事会、管理层权责、运作规范等。2024年度，公司共召开股东大会3次，董事会6次，监事会4次。



#### 财务合规认证

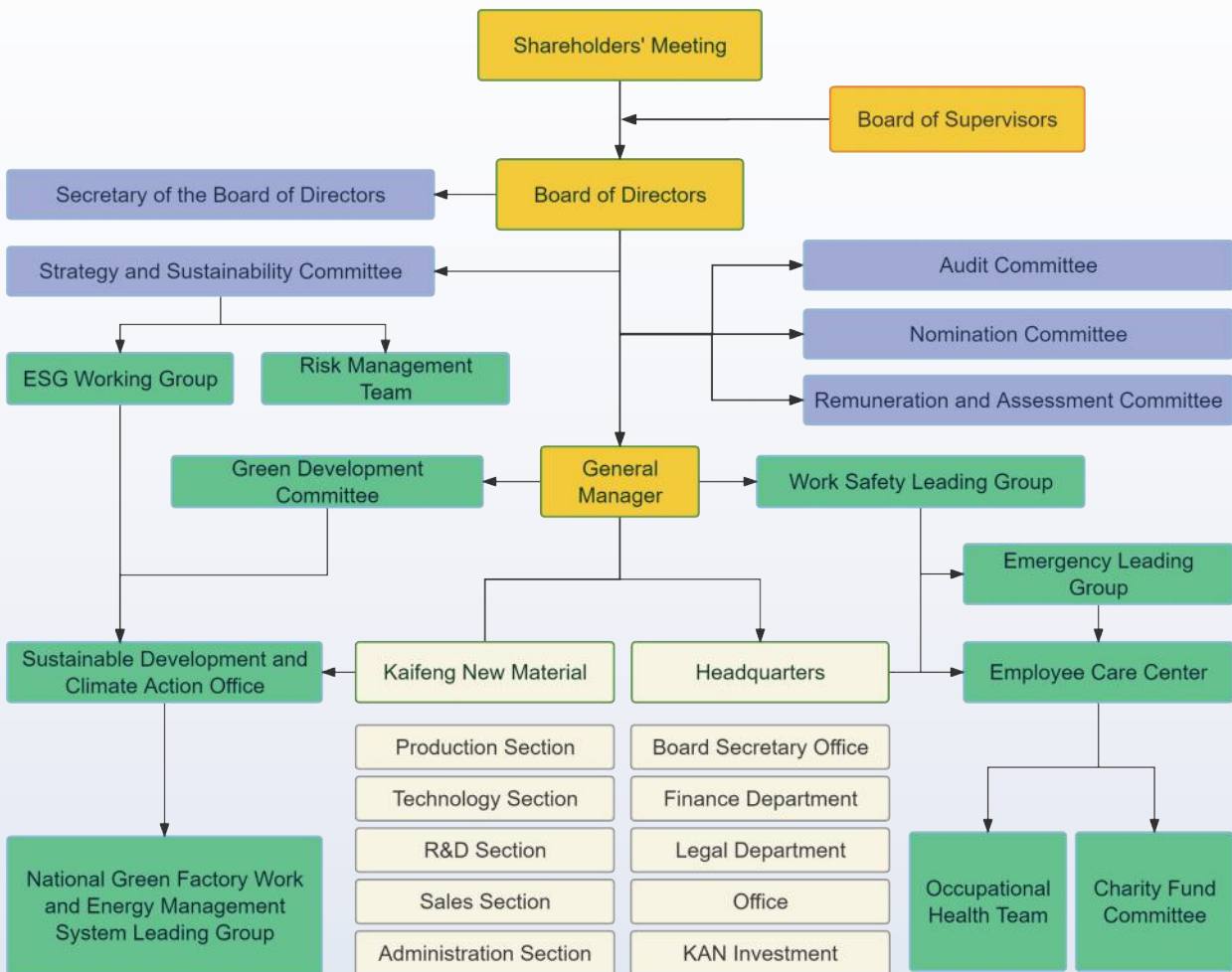
审计机构连续“20年”对公司年度报告出具标准无保留意见。

## 4.3 Operational Compliance

### 4.3.1 Scientific and Effective Management

#### Compliance management system

In accordance with the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China* and regulatory documents over the governance of listed companies released by China Securities Regulatory Commission and Shenzhen Stock Exchange, we have continued to refine our corporate management framework in terms of the shareholders' meeting, the Board of Directors, the Board of Supervisors, the duties and powers of the management, and operation regulations. In 2024, the Company held 3 shareholders' meetings, 6 meetings of the Board of Directors, and 4 meetings of the Board of Supervisors.



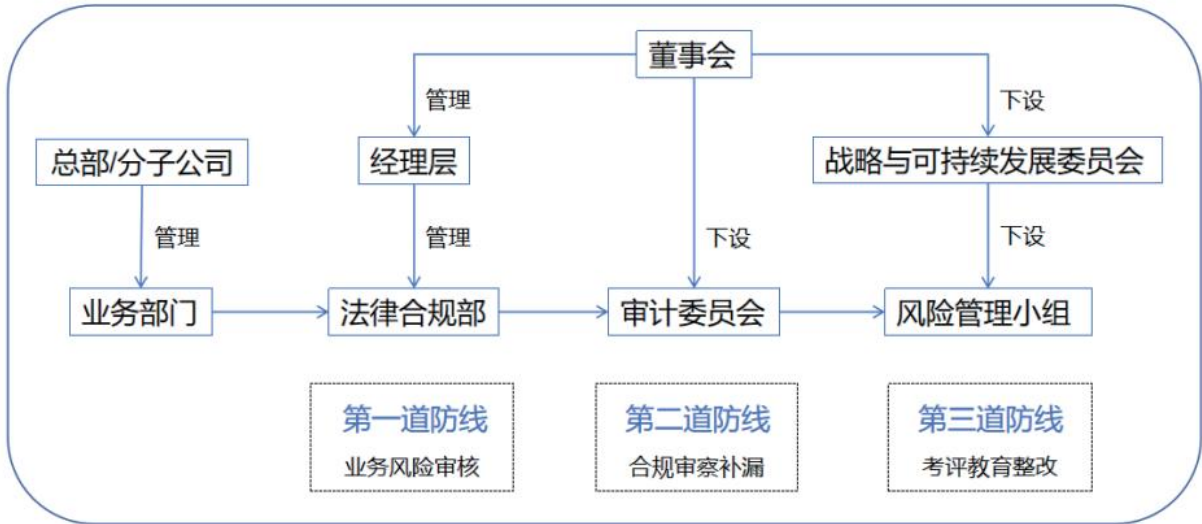
#### Financial compliance certification

The Company has always got the unmodified opinions from the auditor in the past 20 years.

### 4.3.2 全面风险管理

我们在董事会架构下特别设立了风险管理委员会，采纳廉洁合规规定责分工体系作为执行方案，参照ERM框架构建了全面的风险管理架构，并配备专业的风险管理团队。

全面风险管理体系图



### ESG主题责任月

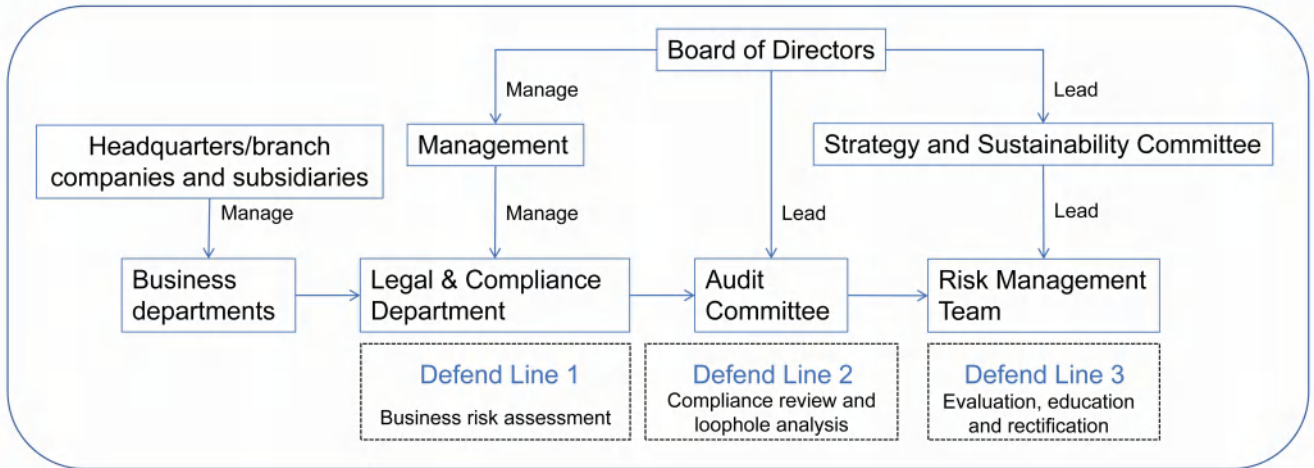
我们自2023年便组织开展了ESG主题责任月活动，重点围绕《可持续发展报告》分节宣发、ESG热点政策宣讲、低碳办公竞赛、生活环保知识竞赛、ESG业务板块交叉打分、ESG标杆上市公司参观等专项活动，引导员工及利益相关方了解ESG、增强社会责任和环保担当，从自身小事做起，呼吁身边每一个人共同守护美好家园。



### 4.3.2 Comprehensive Risk Management

Under the Board of Directors, a Risk Management Committee has been set up with clear division of responsibilities related to integrity and compliance. Besides, the combination of an ERM-based risk management structure and a professional risk management team has been put in place.

#### Comprehensive Risk Management System



### ESG Month Campaign

Since 2023, we have continuously implemented ESG Month Campaigns to encourage our employees and stakeholders to know more about ESG, reinforce sense of social and environmental responsibility, and make a difference in protecting our common communities through small actions. To this end, we have always communicated the *Sustainability Report* by sections and latest ESG policies, organized low-carbon office competitions and daily environmental protection knowledge contests, cross-evaluated business segments in ESG performance, and visited ESG-highlighted listed companies.





## 附录

## 5.1 综合关键绩效表

| 关键绩效项                | 2024   | 2023   | 2022    |
|----------------------|--------|--------|---------|
| <b>经济绩效</b>          |        |        |         |
| 营业收入(万元)             | 59051  | 82600  | 139180  |
| 净利润(万元)              | 2180   | 5329   | 7629    |
| 经营活动产生的现金流量净额(万元)    | 7061   | -2005  | 21832   |
| 资产总额(亿元)             | 179946 | 196026 | 230095  |
| 净资产(亿元)              | 170008 | 169740 | 171410  |
| 资产负债率                | 5.5%   | 13.4%  | 25.5%   |
| <b>环境绩效</b>          |        |        |         |
| 环保总投入(万元)            | 25892  | 44822  | 86503   |
| 绿色采购投入(万元)           | 25423  | 43386  | 77141   |
| 节能降耗技术投入(万元)         | 207    | 247    | 1568    |
| 技术改造投入(万元)           | 1175   | 1189   | 7793    |
| 直接(范围1)温室气体排放量(吨)    | 4048   | 4487   | 75051   |
| 间接(范围2)温室气体排放量(吨)    | 44749  | 62210  | 84552   |
| 范围1、范围2合计温室气体排放量(吨)  | 48797  | 66697  | 159603  |
| 合计温室气体排放密度(吨/百万营收)   | 83     | 81     | 115     |
| 当年碳排放总量较2021年下降的比例   | 71%    | 60%    | 5%      |
| 年产纸产品总量(吨)           | 60367  | 61681  | /       |
| 每吨纸产出对应温室气体排放量(吨/吨纸) | 0.8    | 1      | /       |
| 用电量(万千瓦时)            | 6532   | 5680   | 12165   |
| 吨纸用电量(万千瓦时/吨纸)       | 0.1    | 0.1    | /       |
| 蒸汽消耗量(万吨)            | 11     | 11     | /       |
| 吨纸蒸汽消耗量(吨/吨纸)        | 2      | 2      | /       |
| 天然气使用量(万立方米)         | 187    | 206    | /       |
| 吨纸天然气使用量(立方米/吨纸)     | 31     | 33     | /       |
| 能源消耗总量(百万千焦)         | 575933 | 920259 | 1114905 |
| 吨纸能源消耗总量(百万千焦/吨纸)    | 10     | 15     | /       |
| 太阳能发电总量(万千瓦时)        | 1132   | 954    | 573     |
| 外购绿电(万千瓦时)           | 650    | /      | /       |
| 清洁绿电使用量占总用电量比例       | 27%    | 17%    | 5%      |
| 总用水量(万吨)             | 128    | 142    | 563     |
| 中水回用率                | 98%    | 97%    | 95%     |
| 水循环与再利用的总量(万吨)       | 44     | 43     | /       |
| 工业废水排放总量(万吨)         | 80     | 87     | /       |
| 其中:直接排入环境的工业废水量(万吨)  | 0      | 0      | /       |
| 工业废水处理量(万吨)          | 80     | 87     | /       |

# Appendixes

## 5.1 Integrated KPI Table

| Key Performance Index  | 2024   | 2023   | 2022    |
|--|--------|--------|---------|
| <b>Financial Performance</b>   |        |        |         |
| Operating revenue (RMB 10,000)   | 59051  | 82600  | 139180  |
| Net profit (RMB 10,000)  | 2180   | 5329   | 7629    |
| Net cash flow from operating activities (RMB 10,000)                                     | 7061   | -2005  | 21832   |
| Total assets (RMB 10,000)  | 179946 | 196026 | 230095  |
| Net assets (RMB 10,000)  | 170008 | 169740 | 171410  |
| Asset-liability ratio  | 5.5%   | 13.4%  | 25.5%   |
| <b>Environmental Performance</b>   |        |        |         |
| Total environmental protection investment (RMB 10,000)                                   | 25892  | 44822  | 86503   |
| Green procurement investment (RMB 10,000)  | 25423  | 43386  | 77141   |
| Energy conservation and consumption reduction investment (RMB 10,000)                    | 207    | 247    | 1568    |
| Technological transformation investment (RMB 10,000)                                     | 1175   | 1189   | 7793    |
| Direct (Scope 1) GHG emissions (ton)   | 4048   | 4487   | 75051   |
| Indirect (Scope 2) GHG emissions (ton)   | 44749  | 62210  | 84552   |
| Total GHG emissions of Scope 1 and Scope 2 (ton)   | 48797  | 66697  | 159603  |
| Total GHG emission intensity (ton/RMB 1 million of revenue)                              | 83     | 81     | 115     |
| Fall of the total GHG emissions compared to 2021 (%)                                     | 71%    | 60%    | 5%      |
| Annual paper capacity (ton)  | 60367  | 61681  | /       |
| GHG emissions per ton of paper (ton/ton of paper)  | 0.8    | 1      | /       |
| Electricity consumption (10,000 kWh)   | 6532   | 5680   | 12165   |
| Electricity consumption per ton of paper (10,000 kWh/ton of paper)                       | 0.1    | 0.1    | /       |
| Steam consumption (10,000 tons)  | 11     | 11     | /       |
| Steam consumption per ton of paper (ton/ton of paper)                                    | 2      | 2      | /       |
| Natural gas consumption (10,000 m <sup>3</sup> )   | 187    | 206    | /       |
| Natural gas consumption per ton of paper (m <sup>3</sup> /ton of paper)                  | 31     | 33     | /       |
| Total energy consumption (MkJ)   | 575933 | 920259 | 1114905 |
| Total energy consumption per ton of paper (MkJ/ton of paper)                             | 10     | 15     | /       |
| Total solar energy generated (10,000 kWh)  | 1132   | 954    | 573     |
| Purchased green electricity (10,000 kWh)   | 650    | /      | /       |
| Proportion of green electricity consumption in total electricity consumption             | 27%    | 17%    | 5%      |
| Total water consumption (10,000 ton)   | 128    | 142    | 563     |
| Reuse rate of reclaimed water  | 98%    | 97%    | 95%     |
| Total recycled water volume (10,000 ton)   | 44     | 43     | /       |
| Total industrial waste water discharge (10,000 ton)                                      | 80     | 87     | /       |
| Including: industrial waste water discharged directly into the environment (10,000 tons) | 0      | 0      | /       |
| Treatment capacity of industrial waste water (10,000 ton)                                | 80     | 87     | /       |

| 关键绩效项              | 2024  | 2023  | 2022  |
|--------------------|-------|-------|-------|
| <b>环境绩效</b>        |       |       |       |
| 包装材料消耗量(吨)         | 1557  | /     | /     |
| 回收再利用废弃物总量(吨)      | 1802  | /     | /     |
| 废水(工业用水)密度(吨/吨纸消耗) | 21    | 23    | /     |
| 硫化物排放密度(克/吨纸消耗)    | 0.2   | 0.2   | /     |
| 氨氮化合物排放密度(克/吨纸消耗)  | 6.3   | 3.6   | /     |
| 化学需氧量(COD)(克/吨纸消耗) | 471   | 504   | /     |
| 危险废弃物密度(克/吨纸消耗)    | 13    | 23    | /     |
| 一般废弃物密度(吨/吨纸消耗)    | 0.03  | 0.02  | /     |
| 重大环境违规(次)          | 0     | 0     | 0     |
| 浙江省企业环境信用评价等级      | A     | A     | A     |
| <b>社会绩效</b>        |       |       |       |
| 合规纳税总额(万元)         | 1637  | 4763  | 8965  |
| 股东分红占归母净利润比例       | 32%   | 31%   | 11%   |
| 研发费用(万元)           | 2901  | 4445  | 9585  |
| 其中:知识产权保护投入(万元)    | 11    | 10    | 28    |
| 数字化转型投入(万元)        | 191   | 91    | 1480  |
| 货币资金(万元)           | 66762 | 87371 | 53770 |
| 应付账款(万元)           | 4451  | 5901  | 15678 |
| 前五大供应商比例           | 44%   | 33%   | 36%   |
| 安全生产投入(万元)         | 136   | 134   | 282   |
| 员工福利投入(万元)         | 161   | 123   | 146   |
| 员工总数(人)            | 263   | 266   | 925   |
| 雇佣合同覆盖率            | 100%  | 100%  | 100%  |
| 职业健康档案覆盖率          | 100%  | 100%  | 100%  |
| 新员工安全教育培训率         | 100%  | 100%  | 100%  |
| 特殊工种持证上岗率          | 100%  | 100%  | 100%  |
| 员工培训覆盖率            | 100%  | 100%  | 100%  |
| 人均培训时长(小时)         | 29    | 24    | 51    |
| 人均职业健康培训时长(小时)     | 14    | 10    | 23    |
| 因公死亡率              | 0%    | 0%    | 0%    |
| 工会入会率              | 100%  | 100%  | 100%  |
| 员工满意度              | 96%   | 91%   | 89%   |
| 客户满意度              | 99%   | 99%   | 98%   |

| Key Performance Index   | 2024  | 2023  | 2022  |
|---|-------|-------|-------|
| <b>Environmental Performance</b>  |       |       |       |
| Packaging consumption (ton)   | 1557  | /     | /     |
| Total recycled waste (ton)  | 1802  | /     | /     |
| Waste water (industrial water) density (ton/ton of paper consumed)              | 21    | 23    | /     |
| Sulfide emission density (g/ton of paper)                                       | 0.2   | 0.2   | /     |
| Ammonia-nitrogen compound emission density (g/ton of paper consumed)            | 6.3   | 3.6   | /     |
| COD (g/ton of paper)  | 471   | 504   | /     |
| Hazardous waste density (g/ton of paper)  | 13    | 23    | /     |
| General waste density (ton/ton of paper)  | 0.03  | 0.02  | /     |
| Serious environmental violations  | 0     | 0     | 0     |
| Environmental credit rating of enterprises in Zhejiang Province                 | A     | A     | A     |
| <b>Social Performance</b>   |       |       |       |
| Total tax (RMB 10,000)  | 1637  | 4763  | 8965  |
| Proportion of shareholder dividend in net profit attributable to parent company | 32%   | 31%   | 11%   |
| R&D investment (RMB 10,000)   | 2901  | 4445  | 9585  |
| Including: intellectual property protection investment (RMB 10,000)             | 11    | 10    | 28    |
| Digital transformation investment (RMB 10,000)                                  | 191   | 91    | 1480  |
| Monetary capital (RMB 10,000)   | 66762 | 87371 | 53770 |
| Accounts payable (RMB 10,000)   | 4451  | 5901  | 15678 |
| Proportion of top five suppliers  | 44%   | 33%   | 36%   |
| Work safety investment (RMB 10,000)   | 136   | 134   | 282   |
| Investment in employee benefits (RMB 10,000)                                    | 161   | 123   | 146   |
| Total employees   | 263   | 266   | 925   |
| Proportion of employees signing the labor contracts                             | 100%  | 100%  | 100%  |
| Proportion of employees with occupational health records                        | 100%  | 100%  | 100%  |
| Proportion of new employees receiving safety training                           | 100%  | 100%  | 100%  |
| Proportion of employees engaged in special jobs with required certificates      | 100%  | 100%  | 100%  |
| Proportion of employees receiving training                                      | 100%  | 100%  | 100%  |
| Average hours of training per employee  | 29    | 24    | 51    |
| Average hours of occupational health training per employee                      | 14    | 10    | 23    |
| Rate of deaths in line of duty  | 0%    | 0%    | 0%    |
| Enrollment rate of Labor Union  | 100%  | 100%  | 100%  |
| Employee satisfaction   | 96%   | 91%   | 89%   |
| Customer satisfaction   | 99%   | 99%   | 98%   |

| 关键绩效项         | 2024 | 2023 | 2022 |
|---------------|------|------|------|
| <b>公司治理绩效</b> |      |      |      |
| ESG事务分解管理指标   | 165  | 111  | 126  |
| 董事会独立董事占比     | 40%  | 50%  | 43%  |
| 董事会女性占比       | 20%  | 33%  | 29%  |
| 信息披露数量(份)     | 57   | 102  | 138  |
| 投关管理影响力(万人次)  | 124  | 166  | 24   |
| Wind ESG评级    | AA   | A    | A    |
| 秩鼎 ESG评级      | AA   | AA   | AA   |
| BSCI认证评价      | C    | /    | /    |

## 5.2 GRI指标索引表

|       | GRI Standards 2021(参照方案)  | 对应页码  |
|-------|---|-------|
| 关于本报告 | 2-2, 2-3, 2-4   | 首页    |
| 凯恩品牌力 | 2-1,2-6,201-1,305-1,305-2,305-4   | 1-12  |
| 环境守护力 | 301-2,301-3,302-1,302-4,302-5,303-2,<br>303-3,303-4,305-5,305-7,306-2                           | 13-30 |
| 社会推动力 | 203-1,304-2,308-1,403-1,403-2,403-3,<br>403-4,403-6, 403-8, 403-10, 404-2,<br>405-1,413-1,417-1 | 31-56 |
| 治理创新力 | 2-9, 2-12, 2-14,2-16,2-17,2-22,2-26,2-29,3-2,3-3  | 57-74 |

| Key Performance Index  | 2024 | 2023 | 2022 |
|--|------|------|------|
| <b>Corporate Governance Performance</b>                      |      |      |      |
| ESG breakdown management indicators                          | 165  | 111  | 126  |
| Proportion of independent director in the Board of Directors | 40%  | 50%  | 43%  |
| Proportion of female directors in the Board of Directors     | 20%  | 33%  | 29%  |
| Quantity of information disclosed                            | 57   | 102  | 138  |
| Investor relations management influence (10,000 man-times)   | 124  | 166  | 24   |
| Wind ESG rating  | AA   | A    | A    |
| Quantdata ESG rating   | AA   | AA   | AA   |
| BSCI certification   | C    | /    | /    |

## 5.2 GRI Index Table

|                          | GRI Standards 2021   | Page number |
|--------------------------|--|-------------|
| About the Report         | 2-2, 2-3, 2-4  | /           |
| KAN Brand Value          | 2-1,2-6,201-1,305-1,305-2,305-4  | 1-11        |
| Environmental Protection | 301-2,301-3,302-1,302-4,302-5,303-2,303-3,303-4,305-5,305-7,306-2                    | 12-24       |
| Social Momentum          | 203-1,304-2,308-1,403-1,403-2,403-3,403-4,403-6,403-8,403-10,404-2,405-1,413-1,417-1 | 25-38       |
| Governance Innovation    | 2-9, 2-12, 2-14,2-16,2-17,2-22,2-26,2-29,3-2,3-3                                     | 39-48       |



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