



爱干净空气 用再升科技

股票代码:603601

Chongqing Zaisheng  
Technology Co., Ltd

Annual Report 2021

**This is an English translation version of the Annual Report 2021 of Chongqing Zaisheng Technology Co., Ltd (《重庆再升科技股份有限公司 2021 年年度报告》) which is disclosed on [www.sse.com.cn](http://www.sse.com.cn), the official website of Shanghai Stock Exchange.**

**If there is any inconsistency between the contents of this version and the Chinese version, the Chinese version shall prevail.**

**All financial data in this report on PRC accounting standards.**

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## Chapter 1 Interpretation

**In this report, unless the context otherwise requires, the terms are translated as follows:**

**Zisun:** Chongqing Zaisheng Technology Co., Ltd

**Current period, Reporting Period:** the Year of 2021

**Last Term, The Previous Year, Last Year:** the year of 2020

**2021 Convertible Bonds:** A Share Convertible Bonds of Zisun Planed In 2021

**Clean Air Products:** Micro Glass Fiber Filter Media, Composite Micro Glass Fiber Filter Media, Glass Fiber Filter Bag, Clean Air Equipment, Melt-Blown Filter Material, PTFE Membrane, etc.

**High Efficiency and Energy Saving Products:** Vacuum Insulation Panel Core Material, Inorganic Fiber Sprayed Glass Fiber, Absorbed Glass Mat Separator, Ultra-Fine Micro Glass Fiber, Sound Insulation Mat, High Silica Fiber and Other Products

**VIP Core Material:** Vacuum Insulation Panel Core Material

**AGM Separator:** Absorbed Glass Mat Separator

**Melt-Blown Filter Material:** Melt-Blown Chemical Fiber Filter Material

**PTFE:** Polytetrafluoro ethylene

**TROX:** TROX TECHNIK GmbH.

**HVAC:** Heating, Ventilation and Air Condition

**MP Company:** Microporous LLC

**EUCEB:** European Certification Board for Mineral fiber Products

**Fraunhofer:** Fraunhofer-Gesellschaft

**RoHS:** Restriction of Hazardous Substances

**REACH:** Registration, Evaluation and Authorization of Chemicals

**MPPS:** Most Penetrating Particle Size

**Articles of Association:** The Articles of Association of Chongqing Zaisheng Technology Co., Ltd

**SSE:** Shanghai Stock Exchange

**Yuan:** RMB in Chinese Yuan

**N/A:** Not applicable



## Chapter 2 Company Profile and Key Financial Indicators

### I. Company Information

Company Name in Chinese : 重庆再升科技股份有限公司

Company Name : CHONGQING ZAISHENG TECHNOLOGY CO., LTD

Abbreviation of company name : ZAISHENG TECHNOLOGY

Legal representative of the company : Mr. GUO Mao

### II. Contact and Contact Information

	Board Secretary	Securities Affairs Representative
Name	Ms. XIE Jia	Ms. LIU Jiawei
Addr.	No. 1, Chanyi Road, Huixing Street, Yubei District, Chongqing	
Phone	86-023-88651610	
Fax	86-023-88202892	
E-mail Add	zskjzqb@cqzskj.com	

### III. Basic Introduction

Registered Address	No. 1, Chanyi Rd., Huixing St., Yubei Dist., Chongqing
Historical Changes of Registered Address	In Jan. 2020, it changes from No.197, Lianggang Ave. Yuebei Dist., Chongqing (IPO Add.) to the present one.
Official Address	No. 1, Chanyi Rd., Huixing St., Yubei Dist., Chongqing
Postal Code	401120
Website	www.cqzskj.com
E-mail	mail@cqzskj.com

### IV. Information Disclosure and Storage Location

The name and website of the media where the company discloses its annual report:

- Shanghai Securities News (www.cnstock.com)
- China Securities News (www.cs.com.cn)
- Securities Times (www.stcn.com)
- Securities Daily- (www.zqrb.cn)

The website of the stock exchange where the company discloses its annual report:

Shanghai Stock Exchange, www.sse.com.cn

Location of company annual report: No. 1, Chanyi Rd., Huixing St., Yubei Dist.,  
Chongqing

## V. Stock Profile

Stock Type	Stock Exchange	Stock Abbreviation	Stock Code
A Share	Shanghai Stock Exchange	ZAISHENG TECHNOLOGY	603601

## VI. Other Relevant Information

(1) Accounting firm hired by the company (domestic):

Name: Baker Tilly China Certified Public Accountants (Baker Tilly China)

Office Add.: Areas A-1 and A-5, Building 68, No. 19, Chegongzhuang West Rd., Haidian Dist., Beijing

Signing Accountant: Mr. SHEN Jun, Mr. HUANG Luyao

(2) Sponsor of Performance continuous supervision duties during the reporting period :

Name: Huafu Securities Co., Ltd.

Office Add.: Floor 3rd, 4th and 5th, Building 1#, No. 27, Guping Rd., Gulou Dist., Fuzhou City, Fujian Province

Sponsor representative name: Mr. CHEN Canxiong, Mr. Dai Kunzu

Period of continuous supervision: From 2020-5-9 to 2022-12-31

## VII. Major Accounting Data and Financial Indicators in The Past Three Years

## 1. Key Financial Data

Unit: Yuan Currency: CNY

Major Accounting Data	2021	2020	YOY (%)	2019
Operating revenue		1,884,228,703.44		1,252,193,566.26
Net profit attributable to the shareholders of the listed company		359,677,001.99		170,937,571.47
Net profit attributable to the shareholders of the listed company after deducting the non-recurring profits and losses		339,549,989.10		164,258,861.60
Net cash flows from operating activities		291,270,329.26		344,513,801.22
	At the end of 2021	At the end of 2020	YOY (%)	At the end of 2019
Net assets attributable to the shareholders of the listed company		1,821,254,074.67		1,424,872,604.20
Total assets		2,742,389,115.64		2,448,260,581.66



## 2. Key Financial Indicators

Unit: Yuan Currency: CNY

Major Financial Indexes	2021	2020	YOY	2019
Basic earnings per share	0.3461	0.5037	-31.29%	0.2432
Diluted earnings per share	0.3438	0.4971	-30.84%	0.2384
Basic earnings per share after deducting nonrecurring profits and losses	0.3130	0.4755	-34.17%	0.2337
Weighted average ROE (%)	13.08	21.59	-8.51 PP	12.48
Weighted average ROE after deducting non-recurring profits and losses (%)	11.83	20.38	-8.55 PP	11.99

Explanation of the company's main accounting data and financial indicators for the first three years at the end of the reporting period:

During the reporting period, Zisun operating income decreased by 14.04% over the same period last year. The reason is that the epidemic caused a sharp increase in the revenue in 2020 from masks and melt-blown material. After removing the impact factor of epidemic related materials, our revenue from other products in 2021 hit an increase of 0.92% over last year.

In 2021, the net profit attributable to shareholders of the listed company decreased by 30.64% compared with the same period of last year, and the net profit after deducting non-recurring gains and losses decreased by 33.55%. The reason also is epidemic related materials which has high sales revenue and gross profit in 2020 and drop significantly in 2021.

## VIII. Differences in Accounting Data Under Domestic and Foreign Accounting Standards

1. Differences in Net Profit and Net Assets Attributable to Shareholders of Listed Companies in The Financial Report Disclosed in Accordance with Both The International Accounting Standards And The Chinese Accounting Standards

N/A

2. Differences Between Net Profit and Net Assets Attributable to Shareholders of Listed Companies in Financial Reports Disclosed in Accordance with Foreign Accounting Standards And Those Disclosed In Accordance With Chinese Accounting Standards

N/A

3. Explanation of Differences Between PRC and Foreign Accounting Standards

N/A

#### IX. Key Financial Data by Quarter in 2021

Items	Q1	Q2	Q3	Q4
Operating revenue	452,243,825.57	336,758,146.18	367,167,688.29	463,541,182.62
Net profit attributable to the shareholders of the listed company	80,444,838.44	59,588,415.44	47,122,840.90	62,315,257.25
Net profit after deducting non-recurring gains and losses attributable to shareholders of listed companies	76,469,217.74	53,702,649.19	38,014,028.42	57,432,298.52
Net cash flows from operating activities	25,316,476.29	59,462,581.51	-13,185,127.86	77,178,749.03

**X. Non-Recurring Profit and Loss Items and Amount**

Non-recurring profit and loss items	Amount in 2021	Note (If applicable)	Unit: Yuan Currency: CNY	
			Amount in 2020	Amount in 2019
Profit or loss from disposal of non-current assets	-127,483.11		747,450.43	-98,022.36
Unauthorized approval, or no formal approval documents, or occasional tax refunds or exemptions				
Government subsidies included in current profits and losses except for government subsidies closely related to the Company business, in line with national policies and obtained by quota or quantity at unified state standards	28,433,861.58		21,563,520.37	13,930,181.59
Capital occupation fees charged to non-financial enterprises included in current profit and loss				
The investment cost of acquiring subsidiaries, associates and joint ventures is less than the income generated by the fair value of the identifiable net assets of the investee when the company acquires the investment				
Profit and losses on non-monetary assets exchange				
Profit and losses on entrusting others to invest or manage assets				
Various asset impairment provisions accrued due to force majeure factors such as natural disasters Debt restructuring gains and losses				

Debt Restructuring Profit and Losses

Enterprise restructuring costs, such as employee placement costs, integration costs, etc.

Profits and losses that exceed fair value from transactions where the transaction price is obviously unfair

Net profit and loss for the current period from the beginning of the period to the date of merger of subsidiaries arising from business combination under the same control

Profits and losses arising from contingent events unrelated to the normal operation of the company

Profit or loss on changes in fair values of held-for-trading financial assets, derivative financial assets, held-for-trading financial liabilities and derivative financial liabilities, and investment income obtained from disposal of held-for-trading financial assets, derivative financial assets, held-for-trading financial liabilities, derivative financial liabilities and other credit investment, except for effective hedging operations associated with the company's normal operation	-36,984.00	1,541,374.19	-4,257,111.97
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Reversal of provision for impairment of receivables subject to separate impairment test

Profits and losses from external entrusted loans

Gains and losses arising from changes in the fair value of investment properties that are subsequently measured using the fair value model

The impact of a one-time adjustment on current profit and loss according to the requirements of tax, accounting and other laws and regulations on current profit and loss

## Zisun Annual Report of 2021

Custody fee income from entrusted operations			
Other non-operating revenue and expenses except for the abovementioned items	70,582.63	265,234.04	-1,667,616.05
Other profit and loss items that meet the definition of non-recurring profit and loss			
Minus Income tax impact	4,244,470.37	3,755,402.28	1,234,469.26
Affected amount of minority equity (after-tax)	242,348.57	235,163.86	-5,747.92
Total	23,853,158.16	20,127,012.89	6,678,709.87

### XI. Items Measured at Fair Value

Unit: Yuan Currency: CNY

Items	Dec.31, 2020	Dec. 31, 2021	Current Period Change	Amount Of Impact on Current Profit
Transaction Monetary Assets	20,428,616.00	2,391,632.00	-18,036,984.00	-36,984.00
Accounts Receivable Financing	94,794,793.11	82,675,886.76	-12,118,906.35	
Accounts Receivable Financing	600,000.00	4,350,000.00	3,750,000.00	
Total	115,823,409.11	89,417,518.76	-26,405,890.35	-36,984.00

## Chapter 3 Management Discussion and Analysis

### I. Discussion and Analysis of Operating Conditions

#### (1) Company Profile

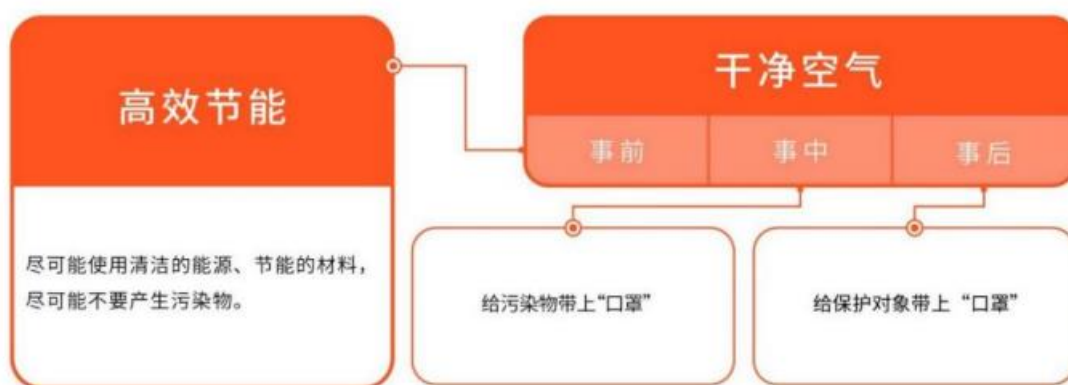
With the mission of “Clean Air” and the vision of “Working Hard for Energy Saving and Cleanliness, Striving for The Happiness of Future Generations”. Zisun will continue to uphold the goal orientation of start with purpose and devote all energy to the work related to “Clean Air” without any distractions, carry out innovative R&D and application around the beforehand, processing, and afterwards phrase of clean air, and strive to achieve the long-term strategic goal of “Be the Global Leader In Clean Air Industry”.



Zisun, with stable growth, is a future-oriented platform company driven by team building and innovation. Zisun adheres to the organizational structure of “Life, Inter-growth, Zisun”, aiming to realize platform-based transformation, with the cultural platform of “Conscience, Self-drive, Platform Sharing, Mutual Growing and Win-win”.

Focusing on the future, Zisun actively explores and utilizes the digital technology of the times. Zisun continuously optimizes and iterates existing production methods and product quality, improves production efficiency, and solves problems such as overproduction, disorderly competition, and low-level repetitive construction in the industry. At the same time, Zisun shares information, resources, and technology with its peers and users to give full play to its symbiotic advantages.

Zisun focus on the research of new materials such as super-fine fibers, membrane, adsorption materials, micro electrostatic materials, oil and gas separation materials, and sound and heat insulation materials. Based on the owned technology of materials and our National Enterprise Technology Center, Zisun deeply excavates the advantageous properties of materials. Zisun gives full play to the technical advantages, material advantages, testing advantages, R&D advantages and design advantages that have been cultivated for many years in the fields of “Clean Air” And “High Efficiency and Energy Saving”. Zisun implements a strong integration and cross-border strategy, continuously expands the application field and has served the area of industry and civil, medical, electronics, agriculture and animal husbandry, indoor public space, military industry, aerospace and other fields.



Zisun focuses on innovative R&D and application exploration around the whole process of the beforehand, processing, and afterwards phrase of “Clean Air”, and implements a strong industrial interconnection strategy to provide professional materials and products for the “Clean Air” And “High Efficiency and Energy Saving” fields. Zisun holds a strong scientific research system, a large-scale production base,

and sufficient capital sources, and is committed to building a leading company in the clean air industry.

We think Clean Air has beforehand, processing, and afterwards phrase.

Afterwards phrase is to put a “Mask” on the protected object which not only is human being, animals and plants but also people’s living and working space, and the human body itself.

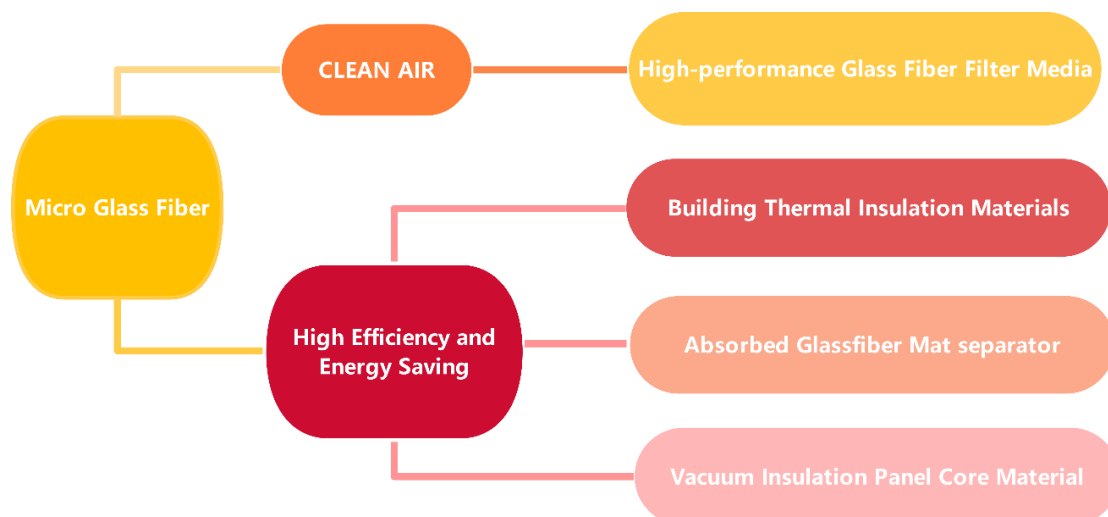
Processing phrase is to cover the pollutant with a “mask”, which means that the pollutants generated in the process shall be removed as far as possible to prevent pollutants from being discharged into the atmosphere.

Beforehand phrase is to make pollutants as little as possible, which means that to use clean energy and energy-saving materials as much as possible, and adopt a clean way of life and production, and adopt a clean way of life and production, and save energy and electricity as much as possible. Beforehand phrase is also regards as energy saving portfolio of Zisun. Finally, to eliminate the “Mask” and give a world of blue sky and white clouds to future generations.

## **(2) Introduction to Zisun Technical Barriers**

Zisun has been deeply involved in the research and development, production and application of micro glass fiber for tens of years and had built extremely high technical barriers. Micro glass fiber is the core raw material of glass fiber filter media, vacuum insulation panel core material, insulation mat and AGM separator etc...





Mainly made of minerals such as quartz sand, through the physical action of high-speed airflow, micro glass fiber is super fine, short, flocculent, soft and cotton-like. It presents low density, good insulation, heat resistance, corrosion resistance. These ultra-small diameter micro glass fibers are intertwined with each other so that they form numerous tiny gaps. Then this structure has good special effects on filtering, adsorbing, restricting movement of small particles and molecules, etc.

Micro glass fiber is a new inorganic non-metallic material with strong professionalism and high entry barriers. Pushed by the various national policy promotion and industry technology iterative update, the productivity and numbers of small producer declines year by year whereas large-scale ones gradually become bigger and stronger.

The diameter of Zisun micro glass fiber could reach 0.1-3.5 $\mu$ m. Zisun holds the industry-leading, production scale with a variety of patents of formula, equipment and production process. The R&D and production of micro glass fiber has high industry barriers, mainly including technical barriers, process barriers, brand barriers and scale barriers.

Zisun Micro Glass Fiber Industry Barriers	
<b>Technical Barriers</b>	The ultrafinesness of the fiber diameter has a direct impact on its filtration, thermal insulation and other characteristics. The production of stable ultra-fine nmicro glass fiber requires continuous R&D investment, superb production technology, professional formula ratio and years of technical accumulation. Our products have passed EUCEB and German Fraunhofer certification, which are safe, harmless and environmentally friendly.
<b>Craft Barriers</b>	Through self-designed production equipment, complex process technology, systematic control process, unique ingredient formula, and complex processes such as multiple accurate tests, Zisun can produce micro-glass fiber wool with uniform microporous structure and stable chemical properties. In order to achieve ultra-finesness and at the same time achieve mass production control, the requirements for process technology are really high.
<b>Brand Barriers</b>	Excellent product performance and consistency are critical to customer selection. The standards of customers are strict, and the introduction period is generally long. Once selected, it will form a strong customer stickiness, and will be more trustworthy to companies with brand and technology accumulation in the industry.
<b>Scale Barriers</b>	Zisun has the large-scale production capacity from microfiber glass wool to downstream products, and continuously improves the automation and intelligence in production and operation activities, continuously optimizes resource allocation, consolidates the industrial chain, and taps economic benefits. , Our industrialization, large-scale, intelligent production and continuous process improvement continue to improve energy utilization efficiency and continuously strengthen the ability to continuously reduce costs.

The stable production of micro glass fiber requires continuous R&D investment, superb production technology, professional formula ratio and years of technical accumulation.

On a global scale, Zisun owns the ability to independently design manufacture

equipment, unique ingredient formula patents, and the ability to control complex and precise systems.

Micro Glass Fiber VS normal Glass Fiber		
	Micro Glass Fiber	Micro Glass Fiber
Raw Materials	Quartz sand and other mineral raw materials	Quartz sand and other mineral raw materials
Production Process	Forming with high-speed airflow and physical action	Pool kiln drawing method, crucible method, etc.
Physical Size	0.1um to 5um5	More than ten microns to tens of microns
Appearance	White, soft, flocculent	Continuous, fixed-length, multiple fiber bundles
Performance	Special properties such as filtration, adsorption, restriction of movement, etc.	Insulation, heat resistance, corrosion resistance, high mechanical strength
Common Use	As the core raw material of glass fiber filter media, VIP core material and battery separator etc.	Made of glass fiber cloth/felt by woven/non-woven process, Or to make composite materials by composite reinforced resin, cement and other materials,used for building waterproof and thermal insulation, auto parts, wind power blades, electronic cloth, etc.

### (3) Introduction to Zisun Products by Application Fields

#### 1. Main Products in Clean Air

Zisun holds multiple core filter materials and filter technologies including high performance glass fiber filter media, low-resistance melt-blown filter, high-efficiency PTFE membranes, micro electrostatic filter media, nano-filter materials (under development) and chemical filter materials and other filter materials and equipment.

Taking different regions, different scenarios, different industry characteristics into consideration, Zisun provides customized products for users. There is a fully consideration of temperature, humidity, space, region, environment, function and other factors on air quality. The goal is to satisfy user's pursuit of dust-free, sterile, and healthy environment and solve the current problems of high energy consumption, difficult maintenance, hardness of maintenance and loud noise.

As one of the few worldwide with the supply capacity of high-performance glass fiber media, low-resistance melt-blown filter media, high-efficiency PTFE membranes, micro electrostatic filter and chemical filter materials, our "Clean Air" materials cover international standard filtration efficiency (such as EN779, EN1822 and ASHRAE/HEPA/ULPA) with the MPPS efficiency of 99.999999% and above.

\* The filtration efficiency of air filter material varies with dust particle size. At a certain particle size point, the efficiency is the lowest, that is, the penetration rate is the largest, which is called the most easily penetrable particle size (MPPS). MPPS varies with filter material and air speed. For HEPA and ULPA air filter materials, MPPS is generally between 0.1-0.25 $\mu$ m.

	Name	Advantage	Usage
<b>CLEAN AIR</b>	Micro Glassfiber Filter Media	made of ultra-fine glass fiber, fiber distribution is uniform, high filtration precision, large dust holding capacity, good physical strength, good machinability, heat resistance, flame retardant, covering ASHRAE/HEPA/ULPA grades	Used in high-end manufacturing such as semiconductor, medicine, biology, also in areas that require the Solution of fine particles of 0.3um and below
	Melt-blown Filter Media	made of polypropylene, the fiber diameter of 1-5um, with a unique capillary structure, electrostatic electreted, the filtration efficiency of HEPA level, with excellent performance of both of filtration and physical strength	Used in air purifiers, fresh air systems, personal protection and other fields
	High-efficiency PTFE Membrane	Made of nano-fineness PTFE fiber, very high porosity, combination of ultra-low resistance and ultra-high efficiency, Waterproof and breathable, long life, chemically stable	Used in fields with high filtration efficiency and low system resistance requirements, such as electronics, semiconductors, etc., and also in fields with waterproof and impact resistance requirements, such as vacuum cleaners, etc.
	Micro Electrostatic Filter Material	High capture efficiency, zero consumables, reusable cleaning, long life, low wind resistance, low noise, and more energy saving	Used in indoor air treatment, dealing with polluting particles, efficiently removing air VOCs, quickly and effectively killing pathogenic microorganisms in the air, eliminating peculiar smell in the air, and improving air freshness
	Nanofiber Filter Media	Fiber diameter of 0.3-0.5um, could be used in combination with wood pulp fiber, synthetic fiber and other materials, with good durability, physical strength, temperature resistance and dust holding capacity	Used in automobile cabin, engine intake, gas turbine and high-end manufacturing where there is a need for particulate matter management

High-performance glass fiber filter media, low-resistance melt-blown filter material, and high-efficiency PTFE membrane are produced by each patented technology. Based on the connection and combination of superfine fibers of different diameters, those air filter materials, which can be observed with distinct morphologies under SEM, hold different filtration properties

During the production process, Zisun needs to control the raw material technology

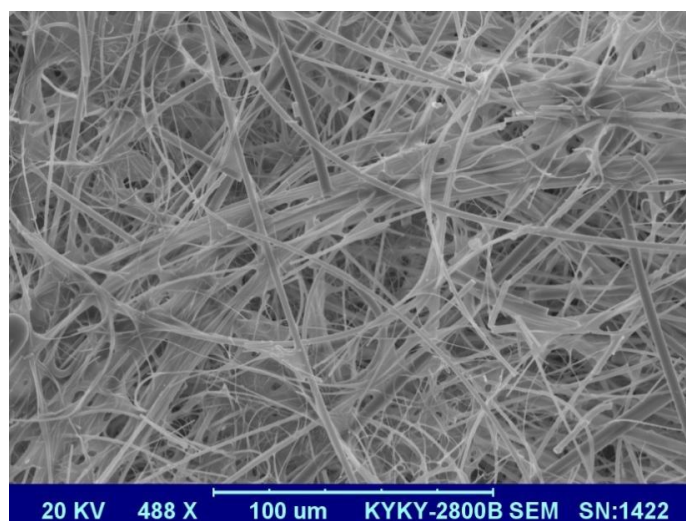
and stabilize large-scale production at the nanoscale. The comprehensive technology is extremely high.

### 1.1 Glass Fiber Filter Paper

Fine micro glass fiber is the main raw material of glass fiber filter media which is produce by Wet-laid process. Usually, the thickness of this glass fiber filter media is 0.3mm. Compared with other filter materials made of animal and plant fibers, synthetic fibers and activated carbon, it has the characteristics of large dust holding capacity, high filtration efficiency and uniform fiber distribution. As an ideal clean air filter material, it is a core component of clean air equipment. Glass fiber filter media is widely used in advanced manufacturing, biomedicine, animal husbandry and other fields that require high air cleanliness.



(Fig of Glass Fiber Filter Media Product)



(High-performance glass fiber filter media, Zoom in 488 times)

### 1.2 High-efficiency PTFE Membrane

PTFE is the abbreviation of polytetrafluoro ethylene. It has a molecular weight, which is generally millions, either hundreds of thousands to the lowest or more than ten million to the highest. The global industry continues to explore and develop new filter materials in recent years. PTFE membrane has attracted widespread attention in the industry for its unique molecular structure and superior filtration performance. Bulking and stretching the PTFE molecule in two directions, here come a high-efficiency PTFE membrane containing a large number of micropores and high porosity. It combines the advantages of more stable chemical properties, more uniform fiber distribution, higher filtration performance, and lower resistance and become an irreplaceable new high-end filter material in some special application fields.

After several years of R&D, Zisun owning unique technical advantages, is one of the few companies in the world that can stably produce high-performance PTFE membranes in large quantities.

Due to ultra-high efficiency and ultra-low resistance, PTFE Filters shows low system resistance, low energy consumption and stable chemical properties which are widely used in panels, semiconductors, medicine, household appliances and other industries. It can also be matched with other filter materials and equipment to provide optimal "Clean Air" solutions for different scenarios

### **1.3 Low-resistance Melt-blown Media**

Low-resistance melt-blown media is produced by melt-blown method, in which polymer electret masterbatches such as polypropylene are blown through the polymer melt at high temperature and high speed, so that the fibers are rapidly stretched, and the fibers are then cured on the curtain device to form melt-blown filter media. The filtration performance is influenced by the fineness of fiber diameter and electrostatic adsorption effect. The low-resistance melt-blown media has a unique capillary structure and the filtration efficiency can reach HEPA level, which can be used in air purifiers, fresh air systems, individual protection and other fields.



#### 1.4 Micro Electrostatic Filtration Media

Micro electrostatic filtration media uses a strong electric field with a unique dielectric material as the carrier to sterilize and adsorb fine particles (blocking aerosols) to achieve air disinfection and purification technology. The dust collection module is made of non-metallic materials (polymer) and graphene materials as carriers, and is combined with driving circuits, which overcomes the disadvantages of traditional metal electrostatic generation of ozone, lightens arc discharge, with powerful function of efficient sterilization, adsorption of particles as small as 0.01um.

#### 1.5 Chemical Filtration Media

Chemical filtration media is used for the treatment of nano-scale molecular compound gases such as VOCs, AICD, BASE, etc., and extremely low concentrations of airborne molecular pollutants at the ppb level (one billionth concentration) or even ppt level (one trillionth concentration).

Zisun has made a breakthrough in the bottleneck of airborne molecular pollutant control technology through in-depth principle research and application practice. We provided chemical filtration equipment for Hefei Jinghe Semiconductor Phase II project in the semiconductor field, Nanjing China Electronics Panda Lighting, KinWong Electronics and CSCEC Electronics in the panel field, Nine Dragons Paper, Jinhai Pulp & Paper and other paper companies, as well as the Bank of China and China Settlement Center data room projects to provide chemical filtration equipment to ensure safe production in many industries.

With the national policy's emphasis on "high-quality development" and "high-quality life", Zisun increasingly recognize that CLEAN AIR materials and technology play an important role in this area of improving the work efficiency of people and equipment, minimizing energy consumption, benefiting human health and environmental safety.

Zisun has been cultivating the technology of clean air materials for many years,



actively excavating the properties of materials, and striving to expand new materials and new applications.

## 2. Technical Mechanism of Zisun Clean Air Materials

The materials, equipment and solution of Zisun Clean Air portfolio is capable to protect human health, high-end manufacturing production processes, and the environment from the harm the air pollutants.

Air pollutants components can be subdivided into particulate matter (PM) and airborne molecules (AM). As shown in the figure, different particulate pollutants in the air have different sizes, ranging from 0.1um to 500um.

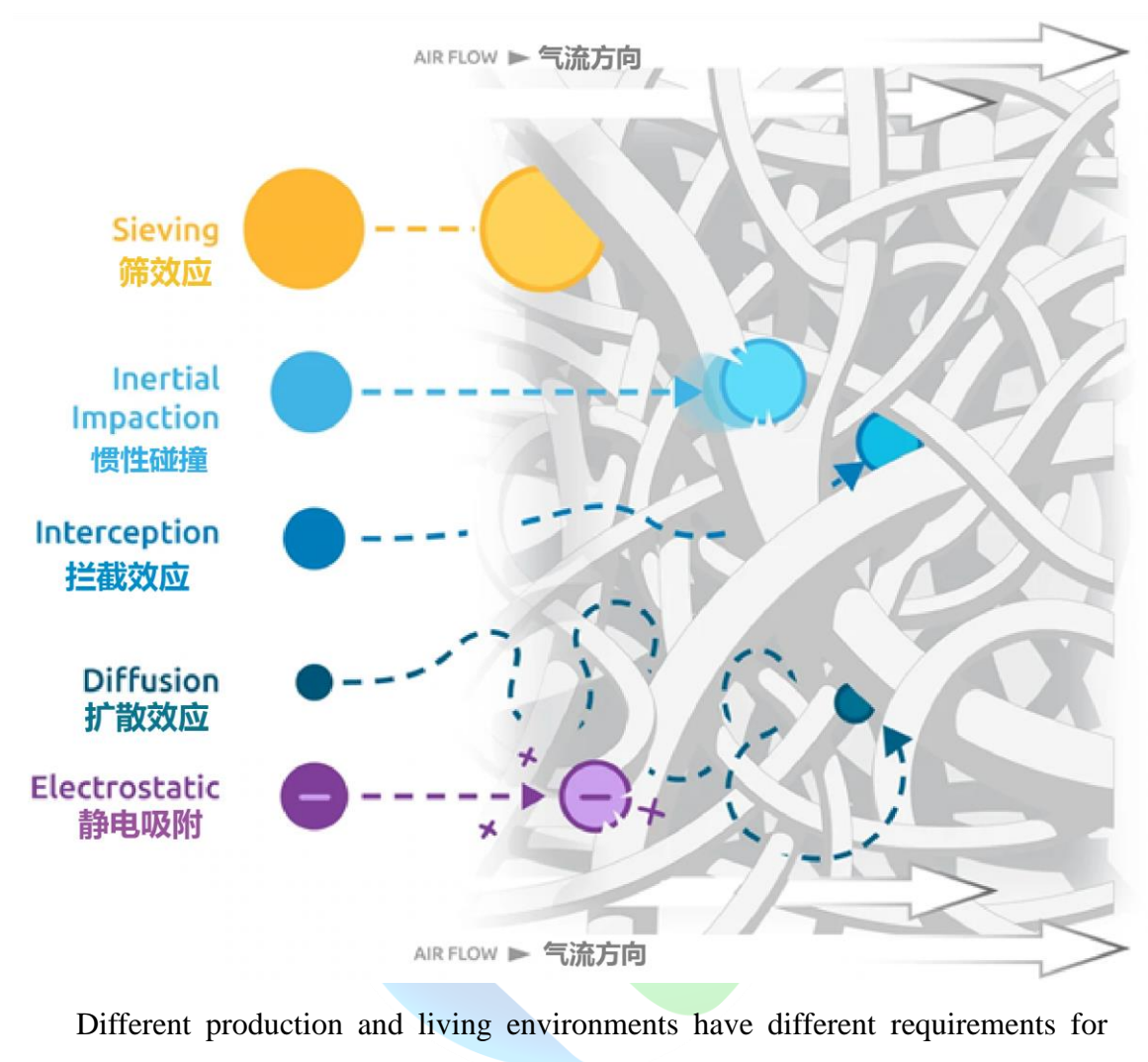


(Fig from Visual Capitalist)

Common sources of particulate pollutants can be divided into four categories:

- Natural source: soil dust, pollen, spore, bacteria.
- Fixed Manmade source: fuel combustion (e.g., electricity generation, metallurgy, petroleum Industry, chemical industry, textile industry, heating supply, various industrial process, cooking etc.)
- Moved Manmade source: Exhaust gas emitted into the atmosphere

when various vehicles consume fossil fuel.



Different production and living environments have different requirements for clean air. From high-end manufacturing to thousands of households, Zisun Clean Air materials have important applications scenarios.

In the semiconductor field, for example, the production environment requires extremely high cleanliness, and the airborne particulate contaminants have a significant impact on the process yield, performance and reliability of products. A rule of thumb is that the particle size should be less than 1/10 times the size of the smallest feature on the device, i.e., a particle with a diameter of  $0.03\ \mu\text{m}$  will damage a feature with a line width of  $0.3\ \mu\text{m}$ . Therefore, controlling particulate contamination in the semiconductor manufacture process is of great significance to the economics of the production process.

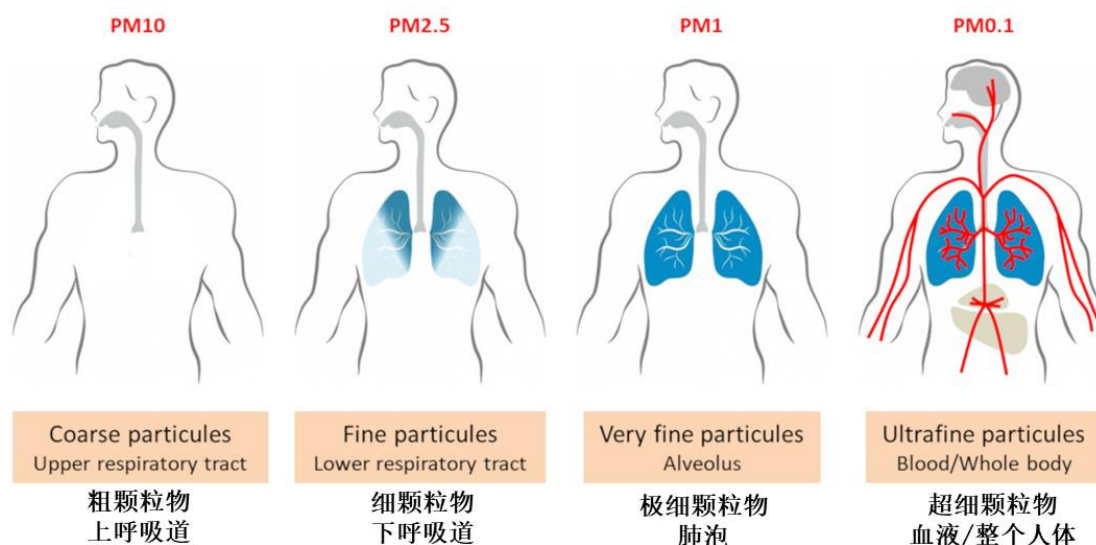
For the manufacturing process of panel field, the particles will adhere to the

surface of the substrate. In addition, the electrostatic attraction, Brownian motion, thermal motion, photosensitive phenomena, and colloidal micelle effects may cause particle adhesion. The rule of thumb is that the particle size must be less than half of the minimum device feature size, particles larger than this size can cause fatal defects, such as a 2  $\mu\text{m}$  feature size cannot touch particles larger than 1  $\mu\text{m}$  in size.

For the public's daily life related to indoor spaces such as homes, schools, offices, hospitals, etc., the state, industry, and the public are gradually emphasizing, paying attention, and popularizing the effects of airborne particulate pollutants on health. Airborne particulate matter can enter the human body through respiratory, digestion and skin, and has multiple negative impacts on human health.

Respirable particulate matter (PM<sub>10</sub>) with an aerodynamic equivalent diameter of less than 10  $\mu\text{m}$  can enter the upper and lower respiratory tract of the human body. PM<sub>2.5</sub> and smaller diameter particles can enter the lungs and alveoli. PM<sub>0.1</sub> can penetrate the body through the capillary membrane of the alveoli where the air is separated from the blood flow.

In addition, fine particles may be enriched on heavy metals, acidic oxides, organic pollutants (such as polycyclic aromatic hydrocarbons, pesticides, etc.), and may also be carriers of bacteria and fungi, which are extremely harmful to humans.



(Fig from encyclopedie-environnement.org)

Observed from the nano meter scale, Zisun high-performance glass fiber filter media, low-resistance melt-blown filter media, and high-efficiency PTFE membranes have unique filtration structures. According to the diffusion effect, interception effect, inertial effect, van der Waals force and Brownian motion, and sieve effect, our materials capture and intercept particulate pollutants in the air with various mechanisms.

With a variety of patented technologies, Zisun can produce high performance fiberglass filter media, low resistance melt blown material and high efficiency PTFE membrane in a stable and large scale and make different clean air materials with high filtration efficiency with the help of connecting combinations of micron-level fibers of different diameters, which can filter with specific efficiency for various particles in the air. Zisun tests the performance of clean air filtration materials with 0.3um and 0.1um diameter test particles, and the highest efficiency can reach 99.999999%.

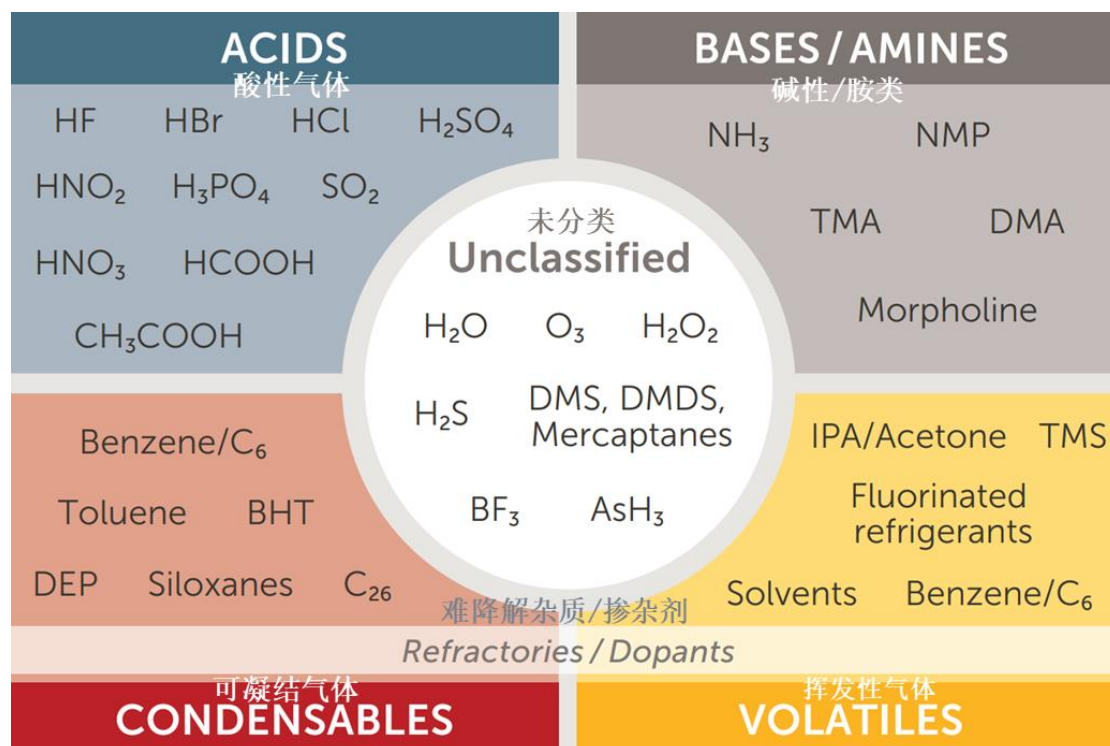
There are common airborne molecular pollutants as follows:

- VOCs: e.g., Benzene, Toluene, Octane, Butyl Acetate, Ethylbenzene, Xylene and Nonane.
- Acid: e.g., Hydrogen Sulfide, Sulfur Dioxide, Nitrogen Dioxide, Nitric Oxide, Nitric Acid.
- Alkaline: e.g., Ammonia
- Organic Acids: e.g., hydrochloric acid, hydrogen fluoride, sulfur dioxide, acetic acid, formic acid
- Ozone molecules

Zisun chemical filter material is for the treatment of nano-scale molecular compound gases such as VOCs gas, ACID gas, and BASE gas. Its main principle is to use three recording routes based on van der Waals force adsorption, chemical reaction adsorption and chemical reaction absorption to treat airborne molecular pollutants.

For different high-end manufacturing fields such as semiconductors, panels,

electronics, and medical care, airborne molecular contamination has different significant impacts on different production processes and production processes.



(Classification of airborne molecular pollutants in semiconductor industry)

Taking the semiconductor industry as an example, as SEMI F21-95 Standard Classification of Airborne Molecular Contaminant levels in Clean Environments says, airborne molecular contamination are generally divided into 4 categories. Airborne molecular contamination directly affects the yield and production efficiency of semiconductor manufacturers. For panel manufacturers, Airborne Molecular Contaminant can cause various problems such as poor brightness, spots, and acidification of the organic layer of the panel, especially the Lens Haze phenomenon in the exposure machine process, which shortens the life of the equipment.

According to the specific production environment and process requirements of different users, Zisun comprehensively considers the particle size, chemical properties, pollutant concentration and other factors of the airborne molecular contamination to be treated customizing the design of the type and structure of chemical filter materials to ensure the "clean air" of the user's production environment.



### **3. Solutions and Service of Zisun Clean Air Materials**

In response to the specific composition of air particle pollutants and airborne molecular pollutants, Zisun provides users with a "package" of clean air materials and technology combinations, tailored to local conditions with Zisun high-performance glass fiber filter media, low resistance melt-blown materials, high-efficiency PTFE membrane, micro-electrostatic filtration materials, chemical filtration materials, to meet the needs of industrial, commercial, residential and other customers in different scenarios of dust-free, sterile, healthy. For different air pollutant control needs, Zisun provides rich material combination solutions, and empowers the platform to provide users with in-depth services, and firmly establish the brand image of “ENJOY CLEAN AIR, USE ZISUN TECHN”.

### **4. Main Products of Zisun High Efficiency and Energy Saving**

In the field of High Efficiency & Energy Saving, Zisun has Micro Glass Fiber, Vacuum Insulation Panel Core (VIP core material), Absorbed Glassfiber Mat (AGM separator), Aeronautics Insulation for Aircraft, Spray Glass Fiber, High Silica Fiber and other products, which serve the high-end energy saving field with high requirements for thermal insulation, acoustic insulation and energy saving.

Our products are conducive to reducing energy consumption, effectively improving energy utilization efficiency, reducing carbon emissions, achieving energy conservation and helping the national green and low-carbon development.

### **5. The Working Mechanism, Solutions and Service of Zisun High Efficiency and Energy Saving Materials**

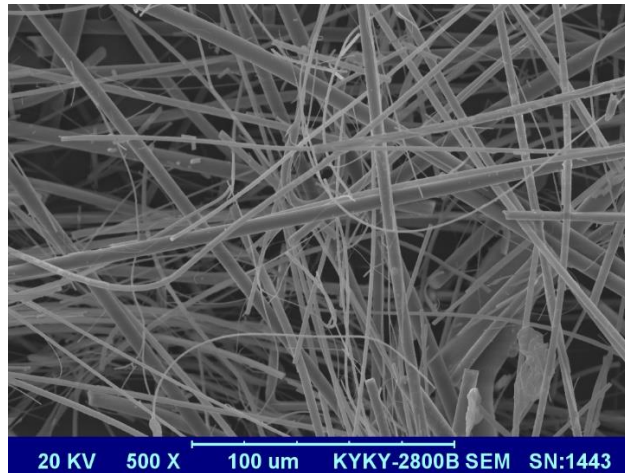
Our products such as Aeronautics Insulation for Aircraft, Spray Glass Fiber, High Silica Fiber, etc. are made into a series of high-efficiency energy-saving products through a special process based on the ultra-fine, uniformity, insulation, corrosion

resistance and other characteristics of our micro glass fiber.



High efficiency and energy saving		
Name	Advantage	Usage
Micro glassfiber	A fibrous cotton-like material made of high-temperature molten silicate (glass) and formed by external forces such as high-speed airflow, the average fiber diameter is about 0.1 $\mu$ m-3.5 $\mu$ m, and has good mechanical strength, thermal conductivity, thermal insulation, sound absorption. Sound insulation, corrosion resistance, chemical stability and other characteristics	used in the fields of "clean air" and "high efficiency and energy saving", the core raw material of glass fiber filter paper, vacuum insulation panel core material, absorbed glass mat of battery etc.
Vacuum insulation panel core material	made of micro glass fiber, low thermal conductivity, small bulk density, non-combustible, good physical processability	Used in green home appliances, building energy conservation and thermal insulation, etc., the core raw material of vacuum insulation panel
absorbed glass mat	made of micro glass fiber, good acid corrosion resistance, uniform thickness, high porosity, fast absorption of electrolyte, good tensile strength in both vertical and horizontal directions, good compression performance to ensure a certain extreme pressure, good insulation, etc.	used in vehicles such as electric bicycles, automobiles, aircraft and ships, energy storage components of photovoltaic power generation equipment, wind power generation equipment and urban energy storage stations, as well as uninterrupted backup power supply (UPS) in communication base stations, databases, traffic monitoring and other fields, is the special core material of VRLA battery
Aeronautics Insulation for Aircraft	made of micro glass fiber, with patented process, with the characteristics of light weight, flame retardant, waterproof, sound absorption, heat insulation, etc.	used in application scenarios with high requirements for comprehensive performance of sound and heat insulation in aircraft cabins, ship cabins, high-speed railways, subways, etc.
Inorganic spray fiber	made of micro glass fiber, Light texture, non-toxic and harmless, sound-absorbing and heat-insulating, fire-resistant and flame-retardant	used for fire protection of buildings, tunnels and other places, heat preservation and sound absorption of special spaces, heat preservation and energy saving of mechanical equipment
High silica fiber	an exclusive formula and adopts a new process, The diameter is stable between 1 $\mu$ m-2 $\mu$ m, has excellent chemical stability and excellent physical properties, is inert to most chemicals, and can work normally and continuously under high heat and strong radiation conditions	used in the aerospace field, such as the thermal insulation layer of aircraft.

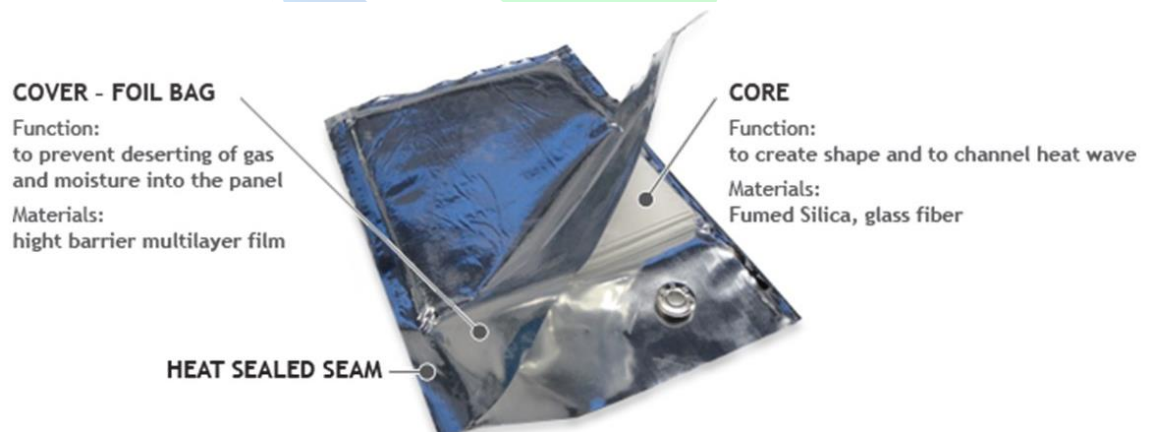




(A certain type of micro glass fiber of Zisun, magnified 500 times)

### 5.1 Vacuum Insulation Panel Core Material

Zisun Vacuum Insulation Panel Core Material relies on company's independent R&D. Based on the large-scale production capacity of micro glass fiber and made by a variety of technical indicators of the microfiber glass, Zisun Vacuum Insulation Panel Core Material has the unique pore structure, which confines the air molecules in numerous microporous chambers, reducing heat transfer and convection.



As shown in the figure, a Vacuum Insulation Panel consists of cover, getter and core material which is the key component for a panel's performance.

Zisun VIP core material has a global leading comprehensive performance with unique pore structure, excellent uniformity of density and ideal thermal conductivity have reached the international advanced level and are one tenth of that of traditional

materials, which means it more suitable for long time, extreme temperature, long-term stable insulation and provide the user with long-lasting and stable thermal insulation performance and greater storage and transportation space.

## 5.2 Absorbed Glass Mat Separator

AGM separator is one of the core components of the lead acid valve regulated battery (aka VRLA battery) used in communication backup power supply, data centers such as large Internet companies, operators, banks and financial institutions, in the fields of rail transit and backup power supply for nuclear power plants, as well as in new energy power generation, energy storage for industrial and commercial enterprises, and more. It is applied to urban energy storage stations in the Energy Storage System (ESS), serving the peak shaving and valley filling of wind energy, solar energy and water energy, the safety of urban electricity consumption, and the peak shaving and valley filling on the national grid side.

It is also widely used in automotive start-stop batteries to ensure that the vehicle start-stop system (Star-Stop) works, relying solely on the battery to drive in-car entertainment equipment, lighting equipment and other electrical systems when the engine is turned off, and to provide motor energy storage for vehicles with energy recovery functions (including fuel cars, hybrid cars and new energy vehicles).

AGM separator is used to wrap the lead plates of batteries, requiring excellent insulation, chemical stability and a rich microporous structure that allows the passage of electrons in sulfuric acid while isolating the lead plates from contact within the battery. The performance of the battery separator has an important influence on the safety, reliability, service life and electric capacity of VRLA batteries.

Our AGM separator is made of micro glass fiber with excellent acid corrosion resistance and high porosity, excellent mechanical processing performance, and outstanding physical indicators. After two years of rigorous testing by MP company, the results confirm that our AGM products have excellent performance and quality. Zisun AGM products have been supplied to Exide, Tianneng, Nandu, Chaowei and

other outstanding battery manufacturers in batches.

### 5.3 Aeronautics Insulation for Aircraft

Made by fiberglass, through modified composite and other patented technology, Zisun acoustic and thermal insulation blanket has excellent performance of light weight, flame retardant, waterproof, sound insulation, heat insulation, etc., which can be used in aircraft cabin, ship cabin, subway and other applications with high comprehensive requirements for sound insulation and heat insulation.

Zisun has built an acoustic laboratory according to the standard of ASTM completed the aerospace quality management system AS9100 certification, and Zisun acoustic and thermal insulation blanket has obtained the qualification certificate of COMAC.

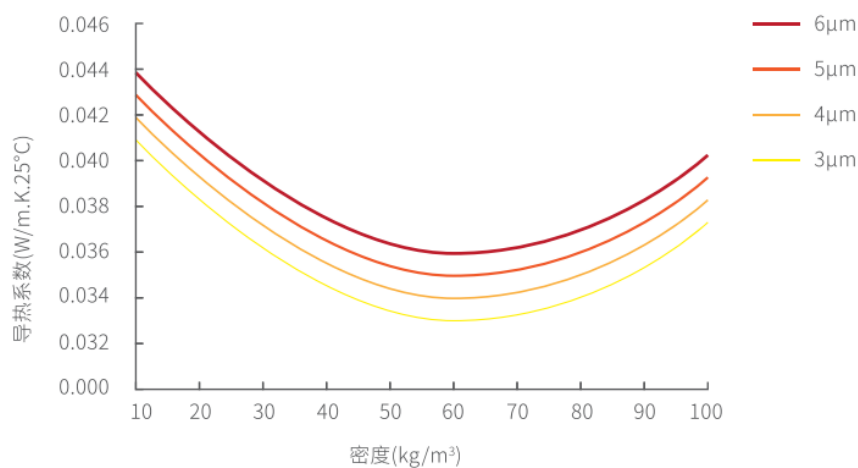
The rapid development of global space technology has put forward new application environment and requirements for the thermal protection materials of spacecraft, such as long-time heat protection, high efficiency thermal insulation, high bearing capacity and high reliability of materials. Zisun has successfully developed high performance high silica fiber products, which can be used for spacecraft heat insulation and thermal insulation, and has excellent chemical stability and excellent physical properties, inert to most chemicals, and can work normally and continuously under high heat and strong radiation conditions. At present, our high-silica fibers have been used by international well-known aerospace companies to take the lead in reaching deep commercial cooperation, which is of great significance to develop high-end applications in aerospace.



### 5.4 Micro Glass Fiber Products for Buildings

Our ultra-fine glass fiber is uniform and slender, with moderate aspect ratio, excellent mechanical properties, and good sound absorption and heat insulation properties. Zisun micro glass fiber has obtained EUCEB non-carcinogenic certification and Fraunhofer Laboratory biodegradability certification. It has also passed RoHS and REACH hazardous substance testing certification. It is green, environmentally friendly, and biosafe.

Based on the various excellent characteristics of our micro glass fiber, Zisun has explored the potential of the material to develop and produce a series of products for the green building field.



玻璃棉导热系数与纤维直径的关系

### **5.4.1. Granular Glass Fiber Products**

Zisun granular glass fiber products are light, non-toxic and tasteless, with good weather-resistance, continuous material and convenient construction, which can be particularly suitable for special-shaped structures, seamless connection and effectively blocking the cold and heat bridge, and have three powerful abilities of fire prevention, thermal insulation, sound absorption and noise reduction. Granular glass can also be subdivided into sprayed glass fiber and blown glass fiber.

Sprayed glass fiber - It is made of granular cotton to match the size of the fiber spraying equipment. After mixing with water-based adhesive, it is sprayed on the substrate to be protected by mixing with atomized water through air pressure pump to form a coating. The coating is naturally dried to form a seamless, overall stable and airtight spray coating with certain strength and thickness. The surface presents elastic natural texture and fiber texture, and can be widely used in underground garages, equipment rooms, exterior walls, transportation hubs, stadiums, art centers, museums, factories and other different places.

Blown glass fiber - It is a kind of cotton with softer texture, larger granular size and looser size. It can be directly sprayed into small spaces such as attic ceilings without the use of adhesives through the construction of special blowing equipment. It forms a thermal insulation layer with uniform density, no chemical substances, flexible and easy to operate, and is very suitable for thermal insulation applications of high thermal insulation and high airtight residential buildings.

### **5.4.2. Energy-saving Glass Fiber Insulation Material for Building**

Zisun established Sichuan Zisun Building Energy Conservation Technology Co., Ltd to develop and produce more energy efficient, more environmentally friendly, more efficient high-end glass fiber products, relying on its R & D strength and brand advantages in ultra-fine micro glass fiber industry.

Sichuan Zaisheng glass fiber products have excellent mechanical properties, excellent thermal insulation and sound absorption properties, and the products are light,

soft, non-allergic, low weight capacity, biodegradable and biosafe.

Industrial high-temperature glass fiber, with 4um to 6um of Zisun' ultra-fine fiber glass fiber as the core material and processed by environment-friendly high-temperature adhesive curing process, has excellent thermal insulation performance, fire and moisture resistance. The product can be widely used in thermal insulation of equipment and pipelines in electric power, petroleum, chemical, light industry, metallurgy and other industries. Industrial high-temperature glass fiber is made of ultra-fine fiber glass fiber of 4um to 6um of Zaisheng Technology as the core material.

Glass fiber for steel structure building, with 4um to 6um of Zisun' ultra-fine fiber glass fiber of as the core material, organically combined with strength and resilience. The product is easy to construct, effectively avoids the cold-bridge effect, and can be widely used for thermal insulation and heat insulation of steel structure buildings, block water vapor, and prevent the steel structure from corroding.

The special glass fiber for animal husbandry fire protection and heat preservation is based on Zisun' 5um to 7um ultra-fine fiber glass fiber as the core material. Compared with other common animal husbandry heat preservation materials, it has obvious advantages.

性能	离心玻璃棉	聚氨酯	发泡塑料	岩棉
保温性能	导热系数低	导热系数低	一般	一般,持久性不佳
吸声降噪性	优	无	无	优
防火性	A1级 不燃 无有毒烟气	D或E级 难燃 产生有毒烟气	D或E级 难燃 产生有毒烟气	A1级 不燃
施工性能	轻质 现场施工简单 手感舒适	施工工艺繁复 产品偏厚	施工工艺繁复 产品偏厚	自重残渣多 易粉化 回弹差 块状施工慢
化学性能	稳定耐老化 抗腐蚀	不稳定 易老化腐蚀	不稳定 易老化腐蚀	稳定
经济性能	成本价格低 性价比高	成本价格很高	成本价格高 只能用于双层夹心板	成本价格中等

High-performance sound-absorbing cotton (also known as fiberglass high-density panel) is widely used in applications with high sound-absorption requirements, such as audio-visual rooms, underground parking garages, auxiliary floor sound insulation, etc.

The porosity of the microfiber structure achieves a balance between elastic shock

absorption performance and mechanical strength, effectively absorbs vibration and sound energy transmitted to the material by pressing layers of ultra-fine and ultra-long fibers, and at the same time has excellent thermal insulation performance, with R value reaching 0.3 (m<sup>2</sup>.K)/W. and class-A fireproof material.

## II. Overview of the Development and Changes from 2015 to 2021

### (1) Adhere To "Three Insistence", Keep an Eclectic and Steady Development

Zisun has logged to Shanghai Stock Exchange in 2015 aiming the R&D of the technology and materials for the beforehand, processing, and afterwards phrase of clean air.

Firstly, Zisun insists on standing at the forefront of technology. Secondly, Zisun insists on developing around the country's industrial policy. Thirdly, Zisun insists on sticking to the manufacturing industry, promoting the high-quality development of the enterprise, and leading the high-quality life of the employees.

Our portfolio cover from Micro Glass Fiber, High Performance Fiber Glass Filter Media, VIP Core Material to Melt Blown Material, PTFE Membrane, Micro Static Filter, AMC Filter, Aeronautics Insulation for Aircraft, Spray Glass Fiber, High Silica Fiber.



2022 is the ecological year of Zisun, and we will work around the following three points:

Point one: To actively deploy the industrial ecology in the field of clean air.

Point two: To Establish a healthy workplace ecology for employee growth.

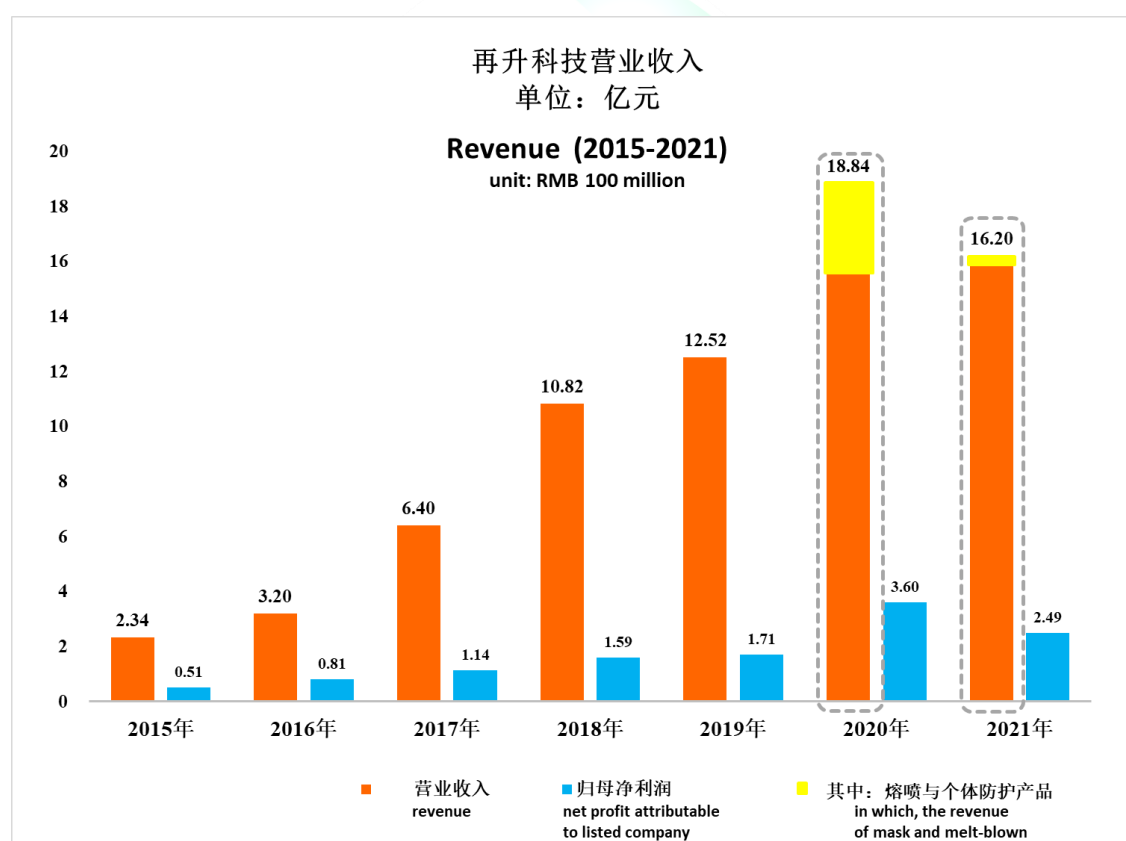


Point three: To actively serve users to pursue a better life of science and technology experience ecology.



## (2) Forge Ahead and Develop Steadily

Since 2015, our main financial indicators have developed steadily, operating income and net profit have increased steadily, the asset-liability ratio has remained low for a long time, the gross profit margin of single product has been stable, and R&D investment has continued to increase.



From 2015 to 2021, Zisun's operating income will increase from 234 million yuan to 1.62 billion yuan, CAGR 38.09%; the net profit will increase from 51 million yuan to 249 million yuan, CAGR 30.25%.

Zisun attaches great importance to investor returns and has formulated a



reasonable dividend policy, with total cash dividends of 475 million RMB from 2015 to 2020, accounting for 58.65% of the net profit attributable to ordinary shareholders of the listed company since 2015.

### **(3) Steady Increase in Production Capacity, Consolidating the Leading Position of The Industry**

The production capacity of the main products has developed rapidly. Zisun continues to consolidate its leading position in the industry in terms of production technology, and the scale advantage of Zisun is becoming more and more obvious. As of the date of this report, the project under construction of “50,000 tons per year of high performance ultra-fine fiber glass construction project”, “8,000 tons per year of clean air filtration material construction project” and “clean air filtration material upgrade and transformation project” has been progressing in an orderly manner.

After the completion of “50,000 tons per year of high performance ultra-fine fiberglass construction project”, it can provide sufficient raw materials for our downstream products of micro glass fiber.

The above three proposed investment projects will push the Zisun’s product and revenue scale to a new level, and employees strive to ensure that the project is completed and put into production as soon as possible.

### **(4) Do not Hesitate to Invest in R&D to Consolidate Technical Strength**

Zisun does not skimp on continuous R&D investment and values the technical talents.

The R&D expenses have increased from 7.11 million RMB at the end of 2015 to 97.7947 million RMB in 2021, and the number of technical personnel has increased from 40 at the end of 2015 to 236 at the end of 2021.

Zisun recruits talents on a global scale with an international perspective for the In-

depth study of Clean Air. Zisun has built a stable talent echelon, created a unique talent management plan, and supported efficient and targeted talent incentive policies, and cultivated a group of technical elites with solid theory and with passion for both Zisun and industry.

From a strategic point of view, Zisun always adheres to the high-quality development of the enterprise to lead the high-quality life of employees, so that talents can enjoy their reciprocation.

Zisun continues to move forward along the international advanced level, and talents have a yearn.

The management team employs people without any doubts, so that our employee can give full play to their strengths. Talents can stand out by streamline administration and delegate power. Zisun recruits talents with energy fulfilled.

From a practical point of view, Zisun has constructed a talent incentive policy with rich levels including assistance in settlement, daily subsidies, equity incentives and so on.

Zisun attaches great importance to the Industry-University-Research cooperation, cooperating with Tongji University, Chongqing University, Tianjin University and other famous universities in various ways since 2015. Zisun has a professional R & D design team, rich experience in R & D, and an independent R & D system.

Zisun has achieved the full coverage of the raw material formula and preparation process of the product with patents. By the end of 2021, Zisun has obtained 151 patents and dozens of patents have been submitted for review.

Zisun also actively participates in industry academic exchanges and information sharing. Zisun has published many academic papers, and actively undertakes several national and municipal projects. Zisun will continue to expand its R&D team, actively incubate new products, gather the elements of enterprise development, attract high-end talents to join, and serve the development of the whole industry.

### **(5) Promote System Construction with International Vision**

Zisun continues to promote the international standard specification system and various authoritative certifications. So far, we have passed ISO 19001, ISO 24001, AS9100 and IATF 16949:2016 system Certification. Our microfiber glass has obtained EUCEB non-carcinogenic certification and Fraunhofer laboratory biodegradability certification. In January 2022, Zisun has obtained the Test Qualification Certificate of COMAC.

### **(6) Strict Management Operation and Continuous Improvement of Management Level**

As a listed company, Zisun will improve the corporate governance structure in strict accordance with Company Law of the People's Republic of China, Securities Law of the People's Republic of China, Code of Governance of Listed Companies, Stock Listing Rules of Shanghai Stock Exchange and other relevant laws.

Zisun ensures the operation standardization and effectiveness of the Board of shareholders, board of directors and board of supervisors and strictly abides by the relevant laws and regulations of listed companies.

We strengthen the management of investor relations, continues to do a good job in information disclosure, adheres to the guidance of investor needs, truthfully, accurately, completely, timely and fairly disclose information.

We continuously improve the initiative, pertinence and effectiveness of information disclosure, and actively accepts the supervision of the society and the majority of investors.

### **(7) Value Each Employee and Continuously Optimize the Working Environment**

We realized that talent is a great help to promote the development of enterprises. The development of Zisun cannot be separated from the effort of each employee.

Therefore, we create a comfortable and self-driven working atmosphere from multiple aspects and dimensions of individuals, teams and organizations.

From 2015 to the present, Zisun has a stable management structure with a stable senior management staff, a rich middle-level staff structure and a continuous increase in the number of technical staff.

Working environment: Zisun optimizes the office and workshop by the strictly control of VOC, CO<sub>2</sub>, temperature, humidity and. And abundant plants are grown.

Zisun is committed to creating a comfortable, beautiful, clean and technologically intelligent office experience center for employees.

Living service support: Zisun has built a courtyard residence in the Zhengyuan factory area to improve the living environment of employees.

Also, we provide employees with three meals a day for the employees to meet the needs of the personalized dietary tastes.

Individual and team incentives:

Zisun introduced the “Competitiveness” and comprehensively enhanced employees’ sense of participation, gain and achievement through the processes of “setting goals - organizing empowerment - evaluation and competitiveness - sharing results”.

Zisun has set up the Gold Metal Award to stimulate the team awareness and innovation enthusiasm.

Since January 2018, 2,006 silver medals has been provided, and issued and 103 gold medals have been issued.

The 2019 Stock Option Incentive Plan widely covers the middle-level and high-level management employees. And The 2021 Employee Stock Purchase Plan is targeted at the key technical staff.

Those two “plans” are organically combined to create a highly efficient and precise staff incentive program.

The individual needs are guaranteed in Zisun. There are rich cultural activities and

various team activities from time to time, such as fun sports games, Friday afternoon tea and other activities.

### **(9) Multiple Branding Channels**

With the brand strategy of “Enjoy Clean Air, Use Zisun Tech”, Zisun has a leading brand position in the industry.

On the one hand, Zisun has won the trust and reliance of global customers with excellent product performance and stable supply capacity over the years.

On the other hand, with the development of economy and technology, Zisun uses the Internet (such as WeChat public account, TIK TALK and other platforms) as a tool to enhance brand popularity and expand brand value.

Facing the differentiation and diversification of product application fields, Zisun adopts a differentiated marketing model.

Zisun explores the core of user needs, does not stick to stereotypes, and chooses the appropriate model according to local conditions.

For example, Zisun actively participates in various industry exhibitions to demonstrate the advanced nature of our materials, technology and production capacity, and also through the establishment of experience stores, allowing users to experience the many advantages of the whole-house comfort system.

## **III. Industry Situation of The Company During the Reporting Period**

### **(1) Overview Of the Industry Situation**

In The Fourteenth Five-Year Plan and the Outline of Vision 2035, it proposes to promote green development, promote harmonious coexistence between man and nature, emphasize in-depth pollution prevention and control actions, continuously improve environmental quality, accelerate the green transformation of development methods, and comprehensively improve resource utilization efficiency , vigorously develop the green economy, build a green development policy system, formulate an action plan for

peaking carbon emissions by 2030, strive to achieve carbon neutrality by 2060, promote a comprehensive green transformation of economic and social development, and build a beautiful China.

The “Opinions of the Central Committee of the Communist Party of China and the State Council on Completely Accurately and Comprehensively Implementing the New Development Concept and Doing a Good Job in Carbon Reaching Peak and Carbon Neutrality” issued by the Party Central Committee and the State Council clearly pointed out:

- To accelerate the formation of green production and lifestyle. Vigorously promote energy conservation and emission reduction, comprehensively promote clean production, accelerate the development of circular economy, strengthen comprehensive utilization of resources, and continuously improve the level of green and low carbon development.
- To vigorously develop green and low-carbon industries. Accelerate the development of new-generation information technology, biotechnology, new energy, new materials, high-end equipment, new energy vehicles, green environmental protection, and strategic emerging industries such as aerospace and marine equipment.
- To vigorously develop energy-saving and low-carbon buildings. Continue to improve energy conservation standards for new buildings, and accelerate the large-scale development of ultra-low energy, near-zero energy, and low-carbon buildings. Vigorously promote the energy-saving renovation of existing buildings and municipal infrastructure in cities and towns and improve the energy-saving and low-carbon level of buildings.

The “Proposal of the Central Committee of the Communist Party of China on Formulating the 14th Five-Year Plan for National Economic and Social Development and the Visionary Goals for 2035” has made “reaching a new level of people's well-being” one of the main goals of China's economic and social development in the 14th

Five-Year Plan period. To achieve this economic and social development goal, we must adhere to the people-centered development ideology, further address the most direct and realistic interests of the people, promote high-quality development, create a high-quality life, and continuously realize the people's aspirations for a better life.

The China Central Committee and the State Council released the top-level policy of “1+N dual carbon” to help achieve “carbon neutrality and carbon peaking”. Local policies are frequently introduced one after another. The global requirements for green, environmental protection and energy saving are constantly improving, and various domestic and foreign demands have created more development opportunities for the fields of “clean air” and “high efficiency and energy saving”.

## **(2) Introduction To the Clean Air Industry**

### **1. Indoor Air Quality**

Economic development, the continued prevalence of the epidemic, and the public’s yearning for a better life have promoted the improvement of IAQ requirements. In the short term, there is an increasing demand for existing air conditioning systems and air quality improvement equipment and services (such as ventilators, Air Cleaning Products and Air Filters. In the long run, the demand for indoor air quality solutions continues to increase by focusing on providing users with value-added and high air quality solutions.

#### **1.1 Relevant Policies**

According to the National Health Commission's "Indoor Air Quality Standards",

(1) People spend more than 80% of their time indoors every day, the air they breathe mainly comes from indoors, and the chance and time of contact with indoor pollutants are more than outdoor.

(2) The sources and types of indoor pollutants are increasing day by day, resulting in an even heavier level of indoor air pollution on the basis of outdoor air pollution

(3) In order to save energy, the degree of airtightness of modern buildings has increased. Due to the imperfect central air-conditioning ventilation facilities, indoor pollutants cannot be discharged outdoors in time, resulting in the deterioration of indoor air quality.

WELL & Healthy Buildings Application Guide point out that the air, water, nutrition, light, health, comfort and spirit of buildings affect human health and well-being. Healthy Building Evaluation Standard (T/ASC 02-2016) require that the daily average concentration of indoor PM<sub>2.5</sub> is not higher than 25ug/m<sup>3</sup>, the daily average concentration of PM<sub>10</sub> is not higher than 25ug/m<sup>3</sup>, and the daily average concentration of CO<sub>2</sub> is not more than 900ppm.

According to the World Health Organization (WHO), nine out of ten people in the world breathe polluted air and seven million premature deaths each year are linked to air pollution which can be divided into 34% stroke; 26% ischemic heart disease; 22% chronic obstructive pulmonary disease; 12% acute lower respiratory tract infection in children; 6% lung cancer.

## 1.2 Industry Trends

Modern humans, especially urban populations, spend the vast majority of their time indoors, and indoor air quality has a significant impact on the general public. According to the U.S. Environmental Protection Agency, indoor air quality is about five times worse than outdoor air quality. After the popularity of air conditioning systems in the 1970s, the sick building syndrome (SBS) emerged, which refers to adverse health or comfort reactions of people who spend varying amounts of time in buildings that are not caused by disease or a well-defined pathology. Studies have proven that sick building syndrome is mainly caused by severe indoor air pollution, high carbon dioxide concentration, poor lighting, and lack of thermal comfort.



改善室内空气质量

**BENEFITS TO IMPROVING YOUR INDOOR AIR QUALITY**



In HVAC systems, air intakes often inhale dust particles, chemical contaminants, harmful viruses and bacteria, and other toxic particles which are captured by filters or lodged in ventilation ducts and other areas and may cause serious health risks. Then keeping ventilation systems in good clean and hygienic conditions can help prevent the build-up of harmful particles from spreading in the system.

The fresh air system is also subdivided into various modes such as one-way flow, two-way flow and displacement ventilation. Displacement ventilation is a cutting-edge ventilation technology that enables high air quality, thermal comfort, and ventilation efficiency in residential areas, while also saving building energy consumption.

### 1.3 What Zisun Could Do with Indoor Air Quality

At present, indoor air quality and comfort are generally solved by single or multiple systems such as HVAC unit, fresh air system and floor heating system.

Our subsidiary Zisun Jinghua , together with Germany TROX, relying on our 20 years of rich experience in the field of clean air, has formed a professional team to create a comfortable and dust-free air conditioner for the high-end residential market.

**ZISUN** 再升科技 | **TROX®** TECHNIK The art of handling air  
 世界在窗外 / 森林在我家  
 节能 安静 无尘  
 六项功能 节能 无尘 安静 富氧 美观 智管  
**家居舒适无尘空调**  
 联系方式: 400603601 / 13272708881  
 重庆再升科技股份有限公司 渝北区·蝉衣路1号  
 专属服务 定制 设计 施工 智管

Zisun Comfort Dust-free Air Conditioner for residential integrates fresh air purification, cooling and heating, dehumidification and humidification, variable air volume intelligent monitoring, and intelligent control into one system to provide users with a customized whole-house comfort system, combined with our rich “Clean Air” Materials, professional equipment and first-class technology, and strive to create a high-quality life for users that is energy-saving, dust-free, quiet, oxygen-rich, beautiful, and intelligent, and strive to seize the trend of consumption upgrades and the rapid development of the Internet of Things to promote the development of clean air, develop to the user end, provide services, identify the enterprise positioning and competitive advantages, and build a system integration ecology in the field of comfortable residential market.

## 2. New Energy Vehicles and Other Mobile Space Field

As the epidemic continues to spread, the public is paying more and more attention to the safety of air quality in mobile spaces such as carriages, airplane cabins, and ship cabins.

The structural design of new energy vehicles provides the conditions for them to be equipped with large-sized, high-efficiency cabin filters.

With the gradual increase in the sales and ownership of new energy vehicles, the cabin filter element of new energy vehicles has ushered in a huge market prospect.

### 2.1 Related Policies

In October 2021, the Central Committee of the Communist Party of China and the State Council issued the Opinions on Completely Accurately Implementing the New Development Concept and Doing a Good Job in Carbon Neutralization and the Carbon Peaking Action Plan before 2030.

The plan clearly defines carbon reduction measures which calls for focusing on the implementation of green and low-carbon transformation of energy, energy conservation, carbon reduction and efficiency enhancement, carbon peaking action in the industrial sector, urban and rural construction carbon peaking action, transportation green and low-carbon action, circular economy boosting carbon reduction action, green low-carbon action Carbon technology innovation action, carbon sink capacity consolidation and improvement action, green and low-carbon national action, and orderly carbon peaking action in various regions, etc.

The "New Energy Vehicle Industry Development Plan (2021-2035)" issued by the General Office of the State Council pointed out that my country's new energy vehicles have entered a new stage of accelerated development, and new energy vehicles have become the main direction of the transformation and development of the global automobile industry and a driving force for the continuous growth of the world economy. important engine.

The development of new energy vehicles by integrating various national policies is an important strategic measure to deal with climate change and promote green development.

### 2.2 Industrial Trends

According to the report of the Passenger Vehicle Market Information Joint Conference, during the year of 2021, the cumulative sales of new energy vehicles nationwide will be 2.446 million with a cumulative year-on-year increase of 168.0%.

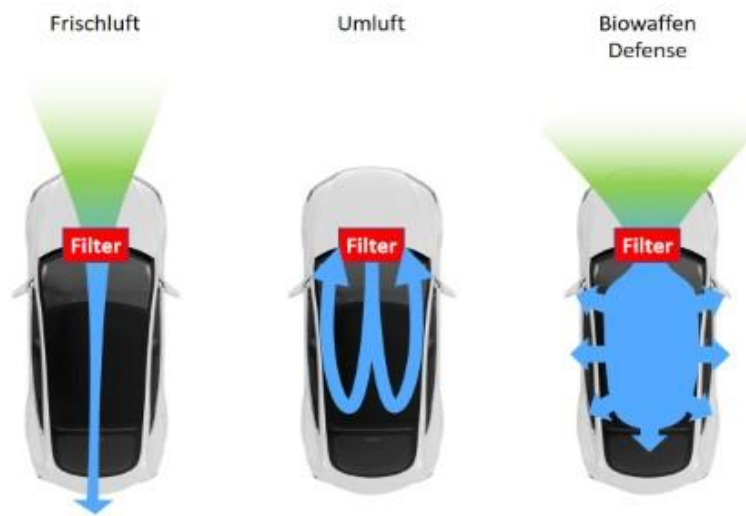
By the end of 2021, the number of new energy vehicles in the country will reach 7.84 million, accounting for 2.60% of the total number of vehicles.

Cars gradually change from a means of transportation to a consumer product with diverse functional needs. Automobile manufacture companies have moved to directly facing consumer demand. As the public pays more and more attention to high quality of life, car users have increasingly higher requirements for safety, comfort, health, and intelligence during driving.

Therefore, healthy and intelligent new energy vehicles have become the development direction of many automobiles manufacturing companies around the world by investing a lot of resources in the research and development of "healthy cars".

Due to its structural advantages, new energy vehicles provide conditions for assembling higher performance, larger size, faster and more efficient cabin filters. With the continuous increase in the demand for new energy vehicles, the demand for cabin filters is increasing day by day.

Some leading new energy vehicle companies have proposed that they have developed "anti-biological and chemical weapons-grade" vehicles because air pollution will reduce the life expectancy of the public. This type of new energy vehicle is equipped with a variety of gas detectors and HEPA-level cabin filters, and the air purification effect of the car cabin is hundreds of times better than other.



New energy vehicles have two sets of electrical systems: high-voltage and low-voltage, and the valve-regulated lead-acid battery has to ensure the power supply of the low-voltage system of the vehicle and also wake up the high-voltage battery system. As the sales and ownership of new energy vehicles continue to increase worldwide, the installed capacity of valve-regulated lead-acid batteries continue to increase, and the demand and technical requirements of AGM battery compartments are increasing.

### 2.3 Zisun in the Field of New Energy Vehicles and Other Mobile Space

Zisun has been established to provide a variety of filters for car cabin air safety and air quality, effectively filtering airborne fine particles, gas pollutants, as well as bacteria, viruses, dust, aerosols, plant Pollen, mold spores, dust mite excretion, etc. The filtration effect of particles  $\geq 0.3\mu\text{m}$  can reach 99.97% and above, allowing drivers to enjoy clean and healthy air in the car, which can enhance driving comfort, protect the health of drivers and enhance driving safety, prevent dust from accumulating inside the air conditioning system and prolong its service life.

With the application of valve-regulated lead-acid batteries in automotive start-stop batteries holding a rise, the installed capacity of valve-regulated lead-acid batteries in new energy vehicles continues to increase, and Zisun AGM separator has also ushered in continuous sales growth. We continue to explore customers of battery manufacturers, insist on exploring material performance, and expand product capacity in real time to



meet the multiple demands of the market for battery separator technology and capacity.

### 3. High Efficiency Agriculture

Chinese agriculture has created the miracle of feeding 20% of the world's population with less than 10% of the world's land resources. Agriculture is China's basic industry. China's modernization is inseparable from agricultural modernization. Comprehensively promoting the rural revitalization strategy and accelerating the modernization of agriculture and rural areas are the basic policies of the state.

#### 3.1 Related policies

The Fourteenth Five-Year Plan and Outline of Vision 2035 proposes:

- to accelerate the modernization of agriculture, improve the quality, efficiency and competitiveness of agriculture, enhance the comprehensive agricultural production capacity, deepen the adjustment of agricultural structure, promote the green transformation of agriculture, deeply implement the action of reducing the number of pesticides and fertilizers, and improve the standard system of green agriculture;
- to accelerate the development of smart agriculture, promote the digital transformation of agricultural production, operation and management services.
- to adhere to the arable land protection system, strengthen the protection of the quantity and quality of arable land, improve the agricultural science and technology innovation system, and build smart agriculture.

In February 2021, the "Opinions of the Central Committee of the Communist Party of China and the State Council on Comprehensively Promoting Rural Revitalization and Accelerating the Modernization of Agriculture and Rural Areas" called for accelerating the promotion of agricultural modernization, strengthening the support of

modern agricultural technology and material equipment, and promoting the green development of agriculture.

### 3.2 Industry Status

Plant factory, also known as three-dimensional agriculture, refers to an efficient agricultural system that produces vegetables, medicinal plants and fruits at high spatial density in a highly controlled environment, and achieves continuous crop production on an annual basis through high-precision environmental control in the facility, which is an automatic control of environmental conditions such as temperature, humidity, light, CO<sub>2</sub> concentration and nutrient solution for plant growth using intelligent computers and electronic sensing systems, so that the growth and development of plants in the facility are not or rarely constrained by natural conditions. Compared with traditional field farming, its production process does not use pesticides, uses 90% less water, and saves up to 95% or more of the land.

Precision agriculture is a new type of agriculture in which information technology is fully integrated with agricultural production. Supported by information technology, a whole set of modern farming operation technology and management system is implemented according to space, positioning, timing and quantification to reduce the use of fertilizers and pesticides while improving yields.

Plant factories and precision agriculture can save land resources as much as possible, improve output efficiency, reduce resource consumption, especially reduce the consumption of natural resources such as water, land and energy, reduce agricultural carbon emissions, and achieve scientific, standardized, quantified and efficient agriculture through industrial centralized planting.

As a pioneer of high-efficiency agricultural modernization, the container plant factory has the technical advantages of standardization, automation, closed type, and planting. They are equipped with advanced green crop planting systems, and carry out research on the lighting, temperature and humidity environment and airflow organization of plant factories to form a functional and economic closed micro-

environment management plant factory platform, which can realize a sustainable economy such as year-round planting, zero chemical agents, energy saving, and resource recovery. Its sea and land transportation are flexible and mobile, can precisely arrange production, digital operation and fine management of all aspects of agricultural production, can meet the supply needs of agricultural urbanization and community, fill the gap of local vegetable, flower and fruit trade, reduce intermediate links, and also carry out the integration of home, office, commercial and planting laboratories to achieve zero distance contact between vegetables and users.

### 3.3 Zisun in the Field of Efficient Agriculture

Zisun has carried out active research with experts and professors of Tongji University, a well-known domestic university, to provide intelligent fresh air system and insulation materials and equipment, to improve the production efficiency and product quality of the plant factory and provide technical support for insect-free and pesticide-free vegetables and fruits and serve modern smart agriculture. Zisun is actively building a container plant factory with “Clean Air” and “energy efficient” products and technologies, providing technological support for low-carbon, green, modern and efficient agriculture, contributing to the “low carbonization” of agriculture and creating more social benefits.



(Fig Of Zisun Container Plant Factory)

## 4. Animal Husbandry



Animal husbandry listed as the two pillars of agricultural production alongside planting is one of the main components of agriculture. Animal husbandry is related to the supply of meat, eggs and milk to the masses. The comprehensive capacity of animal husbandry is the guarantee of national food security.

### 4.1 Related policies

The General Office of the State Council's "Opinions on Promoting the High-Quality Development of Animal Husbandry" (Guobanfa [2020] No. 31) pointed out:

- Accelerate the implementation of regional prevention and control of major animal diseases such as African swine fever, implement the inter-provincial joint meeting system, and coordinate the prevention and control of animal diseases, supervision of livestock and poultry and livestock and poultry products, and market supply. Unified planning and implementation of designated channel transportation of livestock and poultry. Support qualified areas and large-scale farms (households) to build epidemic-free areas and communities. Promote the purification of animal diseases, focus on breeding livestock and poultry farms, give priority to the purification of vertically transmitted animal diseases, and build a number of purification demonstration farms.
- Guide livestock and poultry slaughtering and processing enterprises to transfer to the main breeding areas, promote the local slaughter of livestock and poultry, and reduce the long-distance transportation of live livestock and poultry. Encourage slaughtering and processing enterprises to build refrigerated processing facilities such as cooling warehouses and low-temperature segmentation workshops and configure cold chain transportation equipment. Promote logistics and distribution enterprises to improve the cold chain distribution system, expand the sales network, and promote the transformation of live livestock and poultry transportation to meat transportation. Standardize the management of cross-regional transfer of live

livestock and poultry and improve the "point-to-point" transfer system. Advocate the safe and healthy consumption of livestock and poultry products, and gradually increase the proportion of chilled meat consumption.

- Strengthen the comprehensive management of veterinary antibiotics, implement the monitoring of animal-derived bacterial resistance, withdrawal of medicated feed additives, and actions to reduce the use of veterinary antibiotics. Establish an evaluation system for the green development of animal husbandry and promote supporting technologies for green development.

According to the "14th Five-Year Plan" National Animal Husbandry and Veterinary Industry Development Plan formulated and issued by the Ministry of Agriculture and Rural Affairs, by 2025, major progress will be made in the modernization of the national animal husbandry, and dairy cattle, pigs and poultry farming will take the lead in basically realizing modernization.

In terms of product guarantee goals, the self-sufficiency rate of pork is maintained at about 95%, the self-sufficiency rate of beef and mutton is maintained at about 85%, the self-sufficiency rate of milk is more than 70%, and poultry meat and eggs are basically self-sufficient.

In terms of industrial safety goals, the ability to comprehensively prevent and control animal diseases has been greatly improved, a breakthrough has been made in the development of veterinary social services, and the supervision capacity of feed and veterinary drugs has been continuously enhanced.

In terms of green development goals, the comprehensive utilization rate of livestock and poultry manure will reach more than 80%, forming a new green and circular development method that combines planting and breeding and recycling of agriculture and animal husbandry.

In terms of modernization construction goals, the self-sufficiency rate of the core species of livestock and poultry will reach 78%, the scale rate of livestock and poultry breeding will reach more than 78%, and the production and operation of the entire industrial chain of breeding, slaughtering, processing, and cold chain logistics will be intensified, standardized, and automated. , The level of intelligence has reached a new level.

The "Animal Epidemic Prevention Law of the People's Republic of China" revised in 2021 has significantly added the expression "purification and elimination" of animal epidemics, mentioning that "animal epidemic prevention should be based on prevention, and the policy of combining prevention with control, purification and elimination." And "the state promotes the purification of animal epidemics and encourages and supports units and individuals that raise animals to carry out purification of animal epidemics.

### **4.2 Industrial Trends**

The use of land in our country's animal husbandry is limited by the available natural resources, so the density of animal husbandry in my country is high, especially the density of pig breeding is alarming. High-density farming is accompanied by the pressure of environmental protection and disease protection. With the development of society and economy, people's consumption of animal food has changed, the requirements for quality are getting higher and higher, and the demand for categories is constantly diversified. Driven by a variety of policies, the large-scale and intensive trend of dairy cattle, pigs, and poultry farming has become more and more obvious, at the same time the accompanying disease control requirements have become more and more important.



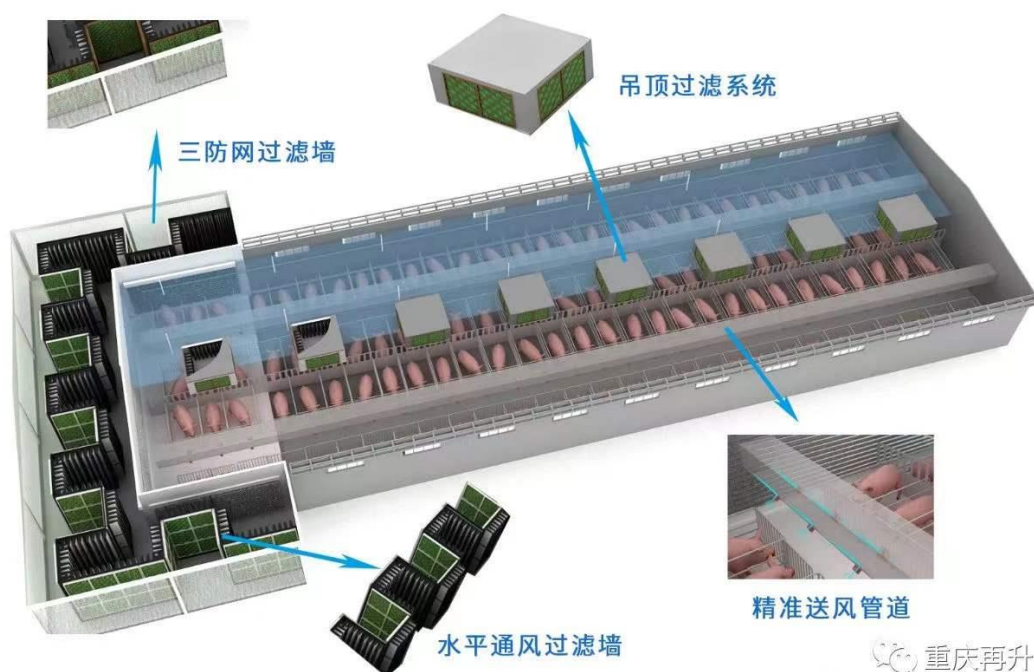
(The interior of pig house overseas)

Taking the pig farming industry as an example, China is the world's largest producer and consumer of pigs, and pork is the mainstream meat consumption variety in China. African swine fever is an infectious disease caused by African swine fever virus (ASFV) infecting domestic and wild boars which broke out in China for the first time on August 1, 2018. China's hog industry has encountered major epidemic prevention pressure. According to the data released by the National Bureau of Statistics, based on 2017 before the outbreak of African swine fever in China, China's pork production fell by 10.85 million tons and 12.27 million tons in 2019 and 2020, respectively. The number of live pigs in 2019 and 2020 decreased by 144.42 million and 161.57 million, respectively.

#### **4.3 Zisun in Animal Husbandry**

Since the large-scale outbreak of African swine fever in China, the pig breeding enterprises have raised the requirements for the prevention and control of the disease in pig houses. Zisun actively conducts technical communication with animal husbandry users, and specially developed a new filter material, which is a high-efficiency, low-resistance, high-temperature and high-humidity filter material with a filtration effect of over 94% for 0.3 $\mu$ m particles, for the special environment of high temperature and high

humidity in pig houses that require the fresh air of pig houses of outstanding breeding enterprises.



(Fig of Fresh Air System of Pig House)

Zisun filter materials for animal husbandry has the international leading level technical indicators. It solves the problems of insufficient efficiency and short life span of chemical fiber filter materials used in the fresh air of pig houses, provides a reliable application solution for effectively reducing the spread of the virus, solves the key technical problems in the prevention and control of African swine fever, and provides equipment and material guarantees. According to user feedback, after the Zisun filter materials and equipment for animal husbandry were put into use, the air quality inside the pig house was improved. For the more, the growth rate of live pigs was accelerated, and the survival rate of live pigs was improved.

In 2021, Zisun continued to provide many outstanding animal husbandry companies with fresh air filter materials and equipment. Affected by the progress of downstream pig cycle expansion, some fresh air application projects for pig barn slowed down during the reporting period will strive to promote the application of clean

air core products in the field of animal husbandry, actively promote our products and services through industry exhibitions and other means, provide materials and equipment for different customer needs, and strive to improve the company profitability.

## **5. Biomedicine, medical and health fields**

### **5.1 Related Policies**

In January 2020, the General Administration of Market Regulation (GAMR) issued the “Drug Registration Management Measures” to continuously regulate drug registration practices and ensure the safety, efficacy and quality control of drugs.

In September 2021, the General Office of the State Council issued a notice on the “14th Five-Year Plan” for national medical security.

On January 17, 2022, President Xi Jinping pointed out in his speech on “Steadfast Confidence, Courageous Progress for a Better World in the Post-Epidemic Era” at the World Economic Forum video conference that “the changes of the times and the epidemic of the century have overlapped each other, and the world has entered a new period of turbulent change. How to overcome the Covid-19 and how to build a post-pandemic world, which are the major issues of common concern to the people of the world, and an urgent and important question that we must answer.”

### **5.2 Industrial Trends**

According to the National Bureau of Statistics, the total health expenditure in China rose from 2,400 billion RMB to 6,600 billion RMB from 2011 to 2019, with a compound annual growth rate of 13.24%.

Based on the macro trends such as domestic population structure and economic development, and the environment of encouraging innovation and domestic substitution and internationalization in the medical and health industry, China's biomedicine and medical and health industries will continue to flourish.



Globally, the continued focus on health and disease treatment in various countries is driving increased investment and financing in the industry. The growing demand of domestic and foreign biomedicine and healthcare industries directly drives the demand for “clean air” materials and solutions for the industry.

The world has suffered untold shocks and disasters since the epidemic of Covid-19. The ability of all industries to combat the impact of the Covid-19, respond to unexpected health crises and awareness of epidemic prevention and control has been greatly enhanced. The public health concept, consumption habits, psychological quality, education and culture have changed accordingly. Globally, the continued emphasis on health and disease treatment in various countries has driven continued investment in the industry and continued increases in industry financing. As the epidemic of Covid-19 continues to recur, the demand for medicine and medical treatment will always continue globally. With the development of science and technology, there will be a variety of needs such as new drugs, vaccines, makeshift hospitals and mobile hospitals, which will directly promote the corresponding application scenarios on the importance and technical requirements of “clean air”.

In summary, the growing demand in domestic and foreign biomedical and healthcare industries is directly driving the demand for “clean air” materials and solutions for the industry.

### **5.3 What Zisun Could Do with Biomedicine, Medical and Health Industry**

For the bio-pharmaceutical, medical and health care industry, it can be subdivided into pharmaceutical biology, chemical raw materials, pharmaceutical services, traditional Chinese medicine, medical devices, biological products, chemical preparations and other production, manufacturing, transportation, storage and other environmental needs of different levels of "clean air" standard users.

For pharmaceutical companies, because their production process involves some highly active, highly toxic, allergenic, teratogenic drugs or intermediates, the industry has established OEB (occupational exposure band) level occupational exposure

classification, which in turn has put forward strict requirements for the biosafety of the production environment. The trend of production process confinement in the biopharmaceutical industry is obvious, and the cleanliness requirements of biopharmaceutical companies and the stringency of air management have also increased.

For vaccine manufacturers, who need both vaccine quality and bio-safety of production activities, different levels of protection for vaccine production workshops impose stringent requirements on “Clean Air” materials, equipment, and technical solutions.

In the field of biomedical and medical health, “Clean Air” materials play an important role in ensuring manufacturing and personnel safety. There are various “Clean Air” materials used for ASHRAE/HEPA/ULPA filtration of clean rooms in this field, with high reliability.

In addition, U-Air provides biosafety equipment and Bag In Bag Out Filter (BIBO) equipment for biopharmaceuticals. With high purification efficiency and airtightness, BIBO equipment is widely used in various fields with high risk or high isolation requirements, such as: chemical and biological (CB) protection, chemical, biological and radiological (CBR) protection, nuclear, biological and chemical (NBC) protection, hospital isolation rooms, pharmaceutical facilities, microelectronic environments, food processing areas, biological research, genetic and biotechnology laboratories, industrial treatment and discharge systems, chemical processing equipment, animal disease research laboratories, radioisotope research laboratories, radioactive isotopes, and other equipment. It is safe and efficient, simple and reliable in use, effectively removing contaminated particles and gases from hazardous environments and avoiding direct contact with harmful contaminants inside the equipment during filter changes and testing.

In addition, U-Air provides bio-safety equipment and BIBO equipment for biopharmaceuticals. The BIBO equipment is safe, simple and reliable, removing contaminated particles and gases from hazardous environments and preventing



personnel from coming into direct contact with harmful contaminants inside the equipment during filter changes and testing. U-Air has already provided services in Liaoning Chengda Biological and Jinhe Youben P3 animal room projects. During the reporting period, U-Air won the bids for the annual clean-room replacement project of Huadong Pharmaceutical, the GMP plant purification project of Boshengji cell production base, the Biological project of Haining Sibe, the project of Yunnan Baiyao Shanghai International Center and the project of Shenyang Sanjiu Pharmaceutical.



(Figs of U-air UltraBIBO Filter Unit)

## **6. Semiconductor, Panel, Precision Instrument Processing and Other Advanced Manufacturing Fields**

### **6.1 Related Policies**

The Central Network Security and Informatization Commission issued the "14th Five-Year Plan for National Informatization" to make deployment arrangements for the development of informatization in my country during the "14th Five-Year Plan" period. Technical breakthrough. Promote innovations in computing chips, memory chips, etc., accelerate the research and development of key materials such as integrated circuit design tools, key equipment, and high-purity targets, and promote breakthroughs in

characteristic processes such as insulated gate bipolar transistors (IGBTs) and microelectromechanical systems (MEMS).

## 6.2 Industrial Trends

In its World Fab Forecast, SEMI highlighted that global front-end fab equipment spending is expected to grow 10% year-over-year in 2022 to a record high of more than \$98 billion. Fab equipment spending rose 17% in 2020 and 39% in 2021, marking another three-year increase from 2016 to 2018.

SEMI released the Year-End Total Semiconductor Equipment Forecast (- OEM Perspective), which states that total global sales of semiconductor manufacturing equipment by original equipment manufacturers are expected to reach a new high of \$103 billion in 2021, compared with 710 in 2020. A record increase of 44.7% to \$100 million. The total global semiconductor manufacturing equipment market is expected to expand to \$114 billion in 2022.

SIA data show that global semiconductor sales in 2021 will reach a record high of US\$555.9 billion, a year-on-year increase of 26.2%. Among them, the sales of the Chinese market were US\$192.5 billion, still the largest semiconductor market in the world, with a year-on-year increase of 27.1%. SIA also expects global semiconductor sales to grow 8.8% this year as chip manufacturers continue to expand capacity to meet demand.

Frost & Sullivan expects a compound annual growth rate of 9% in global clean room investment from 2020 to 2024, while domestic clean room investment, the semiconductor industry's clean room will have a compound annual growth rate of 20%. According to the data provided by Frost & Sullivan, the domestic clean room market is mainly dominated by semiconductor and electronics industry, which occupies more than half of the market.

According to SIA and BCG forecasts, the growth rate of foundry capacity in mainland China during the period 2021-2030 will rank first in the world.

A clean environment is an important guarantee for the smooth production of semiconductors, panels, precision instrument processing and other industries at home and abroad. The continuous investment in the industry will promote the demand for new additions and replacements of "clean air" materials and equipment.

### 6.3 What Zisun Could Do Within Advanced Manufacturing Fields

Zisun in advanced manufacturing fields such as conductors, panels, and precision instrument processing

In the semiconductor manufacturing process, the critical dimensions of printed patterns are getting smaller and smaller, and the control of airborne particulate and airborne molecular contamination is a key factor affecting its yield. A wafer has to go through multiple processes, while any slight contamination in the entire process chain will have a serious impact on its yield, performance, and reliability.

In clean rooms represented by advanced manufacturing fields such as semiconductors, panels, and precision instrument processing, "Clean Air" materials which play an important role in the reduction of air pollutants and energy saving will be processed into various filters or filter units according to requirements. Zisun continues to dig deep into the properties of materials and promote technological progress.



(Figs of U-Air Cylinder Matrix Filter Set and Ultrafan FFU)

Zisun has a wealth of “Clean Air” materials and equipment solutions, according to the specific needs of different types and levels of clean rooms, we can provide suitable materials and solutions to effectively deal with particle pollutants and gas molecules in the clean room; effectively ensure the safe operation of personnel, equipment and materials in the clean room, avoid the escape of pollutants during the production process of the clean room, and ensure the safety of the surrounding environment.

In 2021, U-air has provided “clean air” products and solutions for more than 40 outstanding companies, including Huizhou Xinli, Hefei Jinghe, Dongguan Huawei, Jiasheng Semiconductor, Jingxin Semiconductor, Shanghai BYD and others. U-air also continues to provide “Clean Air” services for BOE, Jiatai Optoelectronics, Xiamen Tianma, Shanghai Hefei and other users, providing a variety of products and solutions. U-air will continue to dig deeper into the material performance and continuously improve the product quality to meet the increasing application needs of advanced manufacturing fields such as semiconductor, panel and precision instrument processing.

### **(3) High-efficiency Energy-saving Industry**

#### **1. The Field of Green Appliances**

Household appliances are the second largest source of residential energy consumption, accounting for more than 20% of total residential energy consumption (after heating), and up to 30% of residents' carbon emissions come from household appliances.

Through the upgrading of the product structure of green household appliances, especially the promotion and popularization of low-energy consumption products in the market, the carbon emission of residents' consumption side can be effectively reduced.

The structure of the household appliance industry under the requirement of carbon neutrality is facing adjustment, and enterprises with high carbon emissions may be eliminated.

### **1.1 Related policies**

In June 2019, the “Green and Efficient Refrigeration Action Plan” jointly issued by the National Development and Reform Commission and other seven ministries and commissions put forward specific requirements for the municipal High efficiency and energy saving level of refrigeration products such as air conditioners in my country.

In the policy documents such as the “Implementation Plan for Promoting the Update and Upgrading of Key Consumer Goods and Smooth Resource Recycling (2019-2020)” issued by the Ministry of Ecology and Environment and other departments, it is proposed to support the sales of green and smart home appliances and promote the upgrading of home appliances.

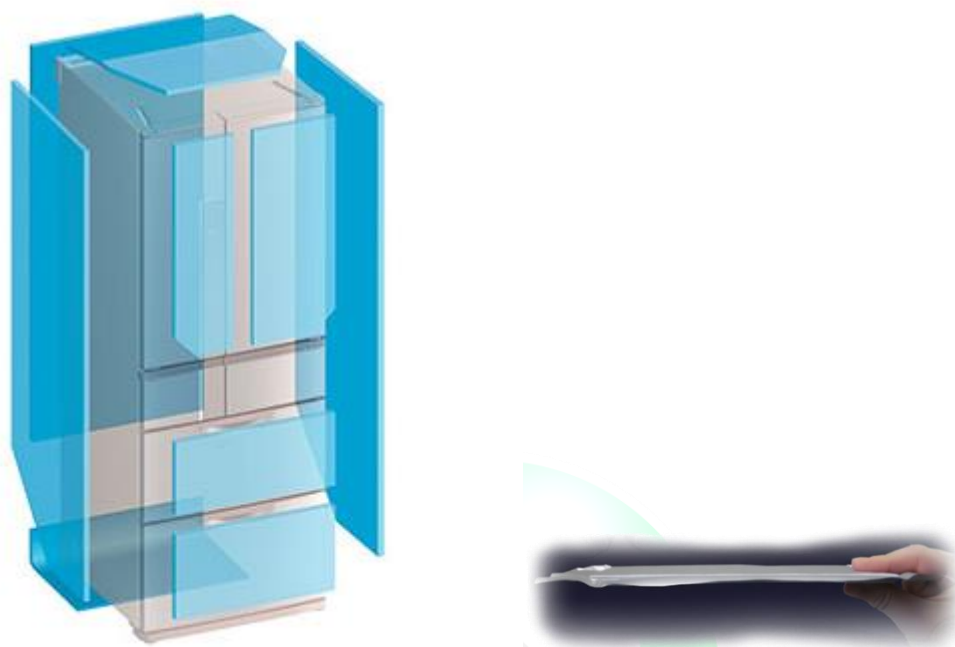
The “Technology Roadmap for China's Household Refrigerator Industry (2019 Edition)” clearly proposes to achieve a comprehensive balance between energy saving and basic functions of refrigerators. By 2025, the High Efficiency and Energy Saving level of refrigerators will be increased by 25% compared with 2019, and by 25% in 2030 compared with 2025.

### **1.2 Industrial Trends**

Transmission is the major contributor (> 50%) to the total cooling load for typical domestic refrigerators. Understandably, insulation in refrigerator walls plays an important role in reducing it. Compared with traditional refrigerator insulation layer, vacuum insulation board board has lower thermal conductivity, longer insulation time and smaller thickness, with higher energy saving grade, and can enhance the effective utilization rate of refrigerator volume.

With the continuous improvement of High efficiency and energy saving grade standards and environmental protection requirements for relevant household appliances

around the world, the traditional thermal insulation materials, especially for applications such as high-power and large-volume refrigerators, can no longer meet the requirements of high efficiency and energy saving grade household appliances.



(Figs of Vacuum Insulation Panel in Premium Refrigerator)

At present, the VIP panels have been widely used in many premium refrigerator brands around the world and have become an important means of achieving High efficiency and energy saving upgrades for household appliances.

### 1.3 Zisun and Green Appliances

Refrigerators are an important part of appliances, and since their introduction more than a hundred years ago, their related technologies and requirements have been constantly improving. As the core component of a refrigerator, its insulation layer is still mainly made of polyurethane. The excellent thermal insulation performance of VIP board has been gradually extended to water heater, rice cooker, kettle and other appliances that need thermal insulation and heat preservation.

The high-efficiency inorganic vacuum insulation board produced by Zisun is the core insulation material of the VIP board. The core indicators such as thermal

resistance coefficient, physical properties and stability of the core material directly affect the vacuum degree, water absorption and thermal conductivity of the VIP board, and determine the comprehensive performance and service life of the VIP board.

Zisun VIP core material owns the advantages of low thermal conductivity, thin thickness, small volume, light weight, fluorine-free manufacture process and easy recycling, etc., which could efficiently reduce the energy consumption of household appliances and increase the use of space and has been widely used in a variety of green home appliances, mainly high-end refrigerators. Zisun is grasping the market opportunities, constantly improving product performance and increasing product capacity to meet the growing market demand.

## 2. Cold Chain

Cold chain refers to the special supply of certain products in the process of processing, storage, transportation, distribution and retailing, and use, in which each link is always in a specific low-temperature environment necessary for the product to reduce loss, prevent pollution and deterioration, and ensure product safety. chain system.

The cold chain has been deeply integrated into the lives of the public and has a wide range of applications, including primary agricultural products, processed foods, and special commodities (such as medicines and vaccines). One of the core components of cold chain logistics is temperature control and insulation.

### 2.1 Related Policy

In December 2021, the State Council's "14th Five-Year Plan for the Development of Cold Chain Logistics" pointed out that cold chain logistics is the use of temperature control, preservation and other technical processes and facilities and equipment such as cold storage, refrigerated trucks, and refrigerated boxes to ensure that cold chain products are in the initial stage.

Professional logistics in which the whole process of processing, storage, transportation, distribution processing, sales, and distribution is always under the specified temperature environment.

Promoting the high-quality development of cold chain logistics is an important means to reduce post-production losses of agricultural products and waste in food circulation, expand high-quality market supply, and better meet the people's growing needs for a better life; it is an important means to support the large-scale industrialization of agriculture, promote agricultural transformation and it is an important foundation for farmers to increase their income and help rural revitalization.

It is an important way to meet the individual, quality and differentiated consumption needs of urban and rural residents, promote consumption upgrades and cultivate new growth points, and deeply implement the strategy of expanding domestic demand and promote the formation of a strong domestic market.

To improve the quality and safety system of fresh agricultural products “from farmland to table, from branch to tip of tongue”, improve the quality control capability of the whole process of pharmaceutical product logistics, support the implementation of food safety strategy and an important guarantee for building a healthy China.

The “14th Five-Year” Cold Chain Logistics Development Plan requires:

- to improve the development level of refrigerated vehicles, such as accelerating the development and manufacture of light and micro new energy refrigerated vehicles and refrigerated containers
- to promote new refrigerated vehicles, railway refrigerated vehicles, and refrigerated containers; unitization of transportation vehicles, such as guiding cold chain transportation enterprises to use standardized pallets, turnover boxes (baskets), cages and other transportation units, as well as unitized cold chain vehicles such as cold storage boxes and incubators, and strengthen the circulation and sharing system of standardized cold chain vehicles



construction

- to improve the energy-saving level of cold chain logistics facilities, such as improving the thermal insulation and flame retardant properties of thermal insulation materials in cold storage, refrigerated vehicles, etc.
- to increase the research and development and application of green cold chain equipment, such as encouraging the use of green, safe, energy-saving, environmentally friendly refrigerated vehicles and supporting equipment facility
- to emphasize R&D and application of cold storage turnover boxes, thermal insulation packaging, thermal insulation covers, etc. that meet the characteristics of cold chain logistics. Encourage the use of green, low-carbon, high-efficiency refrigerants and thermal insulation consumables

In May 2018, “Technical Specifications for Verification Performance Verification of Temperature Control Facilities and Equipment for Cold Chain Logistics of Pharmaceutical Products” stipulates the verification of temperature-controlled warehouses, temperature-controlled vehicles, refrigerators, incubators and temperature monitoring systems involved in cold chain logistics of pharmaceutical products Contents, requirements and operation points of performance confirmation.

In March 2021, implement the “National Food Safety Standard Hygiene Specification for Food Cold Chain Logistics” (GB 31605-2020) mandatory national standards to improve and standardize the quality and management level of cold chain logistics services. The healthy and sustainable development of the cold chain logistics market plays an important role in promoting and promoting.

## 2.2 Industrial Trends

With the improvement of people’s living standards in our country, our demand for cold chain is increasing day by day, and the market scale is constantly expanding. According to the “2021 China Cold Chain Logistics Industry Research Report”, from

2015 to 2020, the market scale of cold chain logistics will increase from 179.2 billion yuan to 360.4 billion yuan with CAGR 15%.

At present, the demand for food cold chain drives the growth of demand for cold chain logistics, and various policies support the expansion of cold chain application scenarios and customer groups. Taking the promotion of food and beverages to the cold chain industry as an example, the demand for cold chain transportation of cold beverages, quick-frozen food, dairy products and agricultural products in my country is increasing. As the penetration rate of the Internet continues to rise, the demand for fresh food e-commerce in online consumption is also increasingly prominent. In addition, pharmaceutical cold chain, chemical cold chain, and electronic cold chain will continue to drive the demand for cold chain logistics.

The history of the cold chain industry in developed countries has been more than 150 years, and the development of cold chain logistics is in a leading position in the world, with a cold chain market size of \$98.47 billion in North America, \$78.94 billion in Europe, and \$17.65 billion in Japan in 2020. According to the relevant reports,

(1) the cold storage capacity per urban resident in China was only 0.13 cubic meters in 2018, lower than the global average of 0.15 cubic meters and much lower than 0.49 cubic meters in the United States.

(2) from 2015 to 2018, the cold chain circulation rates of Chinese fruits and vegetables, meat and aquatic products were increased from 22%, 34% and 41% to 25%, 39% and 63%, respectively. The spoilage rate was controlled at 15%, 8%, and 10% or less, However, there is still a gap with the average cold chain circulation rate of 80%-100% in developed countries and the corrosion rate of less than 5%.

In the post-epidemic era, as the epidemic prevention and control becomes more difficult and the epidemic of the covid-19 may become a new normal, “vaccine + therapeutic drugs” will become the strategy for the prevention and treatment of the covid-19. Vaccinations are accelerating domestically and globally. According to iFinD data, as of the end of October 2021, the total number of covid-19 vaccine doses in the

world was 7.087 billion doses, 2.274 billion doses in China, 424 million doses in the United States, 112 million doses in Germany, 99 million doses in France, and 104 million doses in the United Kingdom. 1.063 billion doses in India and 276 million doses in Brazil. The demand for biomedical cold chain driven by the covid-19 vaccination is vigorously driven.

In cold chain logistics, the insulation performance of various containers will directly affect the delivery distance of cold chain logistics, the quality stability of goods and other key indicators, which directly affects the product circulation rate and loss rate. The current cold chain insulation materials are mainly based on traditional polystyrene and polyurethane, with the increasing demand for biological products, pharmaceutical products, various types of vaccines, the transport distance is getting longer and longer, the cold chain logistics in each link of the thermal insulation requirements are also increasing.

At present, the cold chain insulation materials are mainly based on traditional polystyrene and polyurethane, which have disadvantages such as large volume, short thermal insulation time, and easy generation of pollutants in the production process.

It can be seen that the thermal conductivity of VIP board is only one tenth of the traditional materials, which can meet the requirements of long time, extreme temperature and long-lasting stable heat insulation, providing users with longer-lasting stable heat insulation performance and larger storage and transportation space.

In addition, the VIP board has better thickness advantage than traditional organic insulation materials, which can improve the space utilization rate of logistics containers and storage space.

Combining the various advantages of VIP board, it is expected to gradually replace traditional thermal insulation materials in the future.

### **2.3 Zisun in Cold Chain Transportation**

The key material of the VIP board is the VIP core material. The thermal resistance coefficient, physical properties, stability and other core indicators of the VIP core material determine the thermal conductivity and service life of the VIP board. The VIP core material developed and produced by Zisun, relying on the excellent performance of microfiber glass, has a unique pore structure, minimizes heat transfer caused by conduction and convection, and has excellent performance. The uniformity of surface density and thermal conductivity have reached the international advanced level.

### 3. Green Building Field

#### 3.1 Related Policy

The Outline of the 14th Five-Year Plan and Vision 2035 proposes to promote new urban construction, green building materials, assembled buildings and steel structure houses, and build low-carbon cities, emphasizing the acceleration of green transformation of development. The Ministry of Housing and Urban-Rural Development defines green building as “high-quality buildings that save resources, protect the environment, reduce pollution, provide people with healthy, suitable and efficient use space during the whole life cycle, and maximize the harmonious coexistence between man and nature”.

In September 2021, the “Opinions of the Central Committee of the Communist Party of China and the State Council on Completely, Accurately and Comprehensively Implementing the New Development Concept and Doing a Good Job in Peaking and Carbon Neutralization” (Zhongfa [2021] No. 36) pointed out that vigorously develop energy-saving and low-carbon buildings, Continue to improve energy conservation standards for new buildings, and accelerate the large-scale development of ultra-low energy, near-zero energy, and low-carbon buildings. Vigorously promote the energy-saving renovation of existing buildings and municipal infrastructure in cities and towns and improve the energy-saving and low-carbon level of buildings. Gradually carry out building energy consumption quota management, implement building High efficiency

and energy saving evaluation labels, and carry out low-carbon development performance evaluation in the building sector.

The new version of “Green Building Evaluation Standards” (GB/T51356-2019) establishes a new model of green building development that is “people-oriented, emphasizing performance, and improving quality”, and proposes the index system of “safety and durability, health and comfort, life convenience, resource conservation and environmental livability”. Green building should take into account the climate characteristics, geographic environment, natural resources and other factors, and adopt appropriate exterior insulation system, exterior window insulation system, ventilation system, natural lighting, solar energy and building integration, green building materials and intelligent control and other technologies.

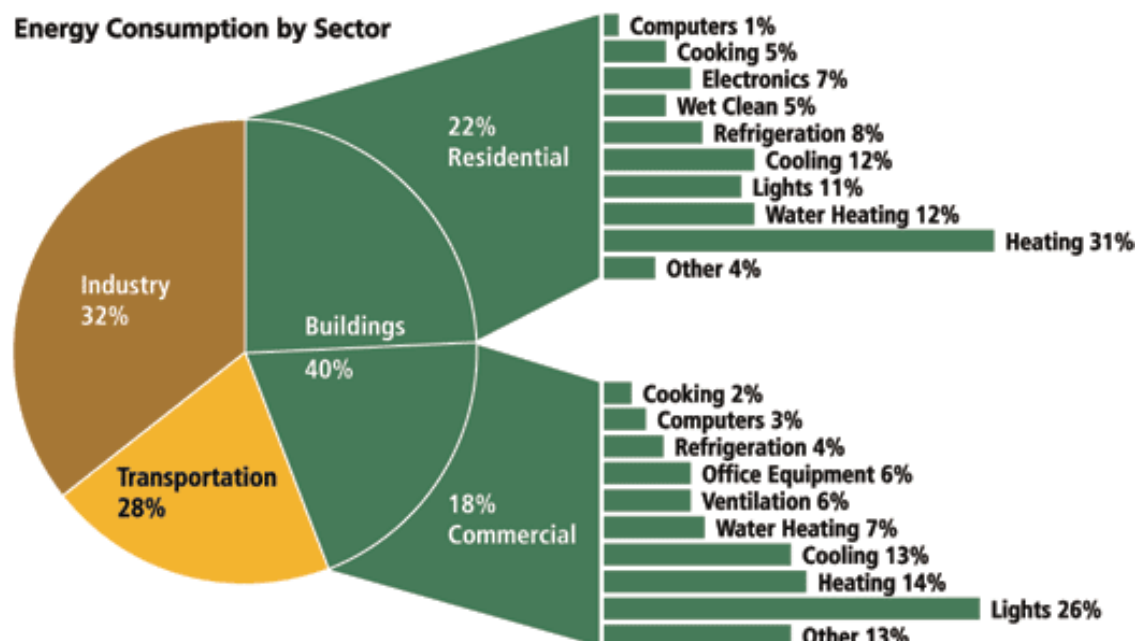
The Ministry of Housing and Construction, Development and Reform Commission and other departments issued the “Green Building Creation Action Plan”, the proportion of green building area in new buildings in urban areas reached 70% by 2022, star-rated green buildings continued to increase, the level of High efficiency and energy saving of existing buildings continued to improve, residential health performance continued to improve, the proportion of assembled construction methods steadily increased, the application of green building materials further expanded, green residential user supervision fully promoted, the people actively participate in the creation of green building activities, the formation of a social atmosphere that advocates green living.

### **3.2 Industrial Trends**

According to the China Building High efficiency and energy saving Association's China Building Energy Consumption Research Report (2020), the building operation phase accounts for 21.7% of the total national energy consumption, and the building operation phase carbon emissions account for 21.9% of the national carbon emissions.

According to the UCLA paper “Phase Change Composite Materials for Energy Efficient Building Envelopes”, the energy consumed by heating and cooling needs in

all types of commercial and residential buildings accounts for more than 30% of the total energy consumed to operate the building.



The insulation performance of building walls in building operation has a significant impact on building energy consumption and indoor comfort. The insulation in the building reduces the dissipation of indoor heat to the outdoors, reduces the energy consumption of building heating and cooling, and improves the comfort of the building. The performance of building insulation materials is affected by the external environment, for example, condensation of water vapor in cold and warm air in the insulation layer can cause deterioration of materials, shorten service life, breed mold and other adverse effects.

Common building insulation materials such as organic materials, inorganic materials and composite materials, such as bead rock board, polystyrene particle board, rigid foam polyurethane, rock fiber, mineral fiber, glass fiber, aerogel, etc., and fiber glass has a good market prospect because of its excellent sound absorption and insulation performance, light and soft, affordable and easy to obtain, biosafe.

Currently, high-end construction cotton is monopolized by excellent foreign companies, such as Owens Corning and other companies.

Owens Corning is a developer, manufacturer and marketer of insulation materials, roofing systems and fiberglass composites, including building materials such as fiber glass insulation, Formica® extruded foam panels, Langstone™ synthetic stone exterior materials and Silentex® systems and other composites for solutions in the automotive industry. (Taken from the official website of Owens Corning)

### 3.3 Zisun and Green Buildings

In order to break the foreign monopoly and focus on high quality of life, Zisun is actively laying out dust-free residential air conditioning system and developing and producing energy-saving materials for buildings. At present, Zisun' team of comfort residential dust-free air conditioning system is actively working to promote product R&D in order to creates a comfortable residential environment that is energy-saving, quiet and dust-free for many customers.

In terms of building energy saving, our VIP core material owns the characteristics of good fire resistance, low thermal conductivity, long service life, low energy consumption in the production process, low water absorption, light weight, and easy construction, which can meet the requirements of green buildings for high-efficiency thermal insulation and energy-saving of walls

Considering the heat and thermal insulation needs around green buildings, relying on Zisun R&D strength and industry brand advantages in microfiber glass, Sichuan Zaisheng has been set to develop and produce more energy-saving, environmentally friendly and efficient high-end microfiber glass aiming to provide excellent building insulation solutions for green buildings.

Zisun has developed a series of green building insulation products with micro glass fiber as the core material. These materials have excellent physical properties, good thermal conductivity, lightweight flame retardant, and low water absorption.





It can be widely used in building insulation fields such as household appliances, public buildings, agriculture and animal husbandry, and intelligent workshops. It can also be used with prefabricated buildings, BIPV (Building Integrated Photovoltaic, building-integrated photovoltaics), passive houses, NET-ZERO buildings (Net Zero Energy Building, near-zero energy buildings) and other applications. Zisun will actively expand and promote the application of green building insulation products and contribute to the green building field.

#### **4. Aviation and Aerospace**

In order to ensure the temperature and comfort of the cabin in flight, the aircraft is installed with an insulation layer between the skin and inner wall which aims to reflect heat radiation or reduce heat conduction, realize the functions of heat insulation, noise reduction and noise reduction in the cabin, improve cabin comfort and reduce aircraft energy and fuel consumption.

##### **4.1 Related Policy**

The CAAC in “The 14th Five-Year Plan for Civil Aviation Development” requires the improvement of the industry green development policy management system and the improvement of the civil aviation green development capability support system. It emphasizes the application of enhanced new technologies and new materials in aircraft and airports. In detail, the plan, for the green development of the civil aviation industry, proposes specific guidelines which is the carbon dioxide emission per ton-kilometer of transport aviation will be reduced from 0.928 kg in 2020 to 0.886 kg in 2035, and the energy consumption per passenger at the airport will be reduced from 0.948 kg of standard coal to 0.853 kg of standard coal.

### 4.2 Industrial Trends

According to the “Commercial Aircraft Market Forecast Annual Report (2020-2039)”, China’s aviation market will receive 8,725 passenger aircraft with more than 50 seats in the next 20 years, with an average annual growth rate of the fleet of 4.1% and an average annual growth rate of passenger turnover of 4.3%; China’s fleet will reach 9,641 by 2039. Global air passenger turnover (RPKs) will increase at an average annual rate of 3.73%, with 40,664 new aircraft expected to be delivered. By 2039, the global passenger aircraft fleet is expected to reach 44,400 aircraft, which is the current fleet (23,856 aircraft) 1.9 times. Routine maintenance and repair affect the safety of the aircraft, and aircraft must be inspected according to strict laws and regulations. The interval between inspections is determined by flight hours, flight cycles (landing and takeoff times), and calendar hours. During the inspection and maintenance, the aircraft’s acoustic and thermal insulation blankets are replaced and maintained according to specific standards and actual conditions.

With the development of technology and the improvement of quality of life, people have put forward higher requirements for the comfort of transportation, and cabin noise is one of the indicators that passengers focus on. At present, although the airworthiness clause does not impose mandatory restrictions on cabin noise, in order for a model to gain stronger competitiveness in the market, it is necessary to strictly control the noise,

vibration and other comfort indicators in the aircraft cabin, and make sure that it is the optimal design is carried out under the premise of considering various factors.

Aircraft noise is mainly divided into two categories: cabin noise and external noise. Reducing the noise in the cabin is mainly to improve the comfort of passengers, while reducing the external noise is to meet the airworthiness requirements of the regulatory authorities for the aircraft.

Generally speaking, the main noise of the aircraft comes from the aerodynamic noise of the high-speed rotating engine blades and the surface of the aircraft. Reducing engine noise has become an important task in aircraft design. A better aircraft shape design helps reduce the noise generated when high-speed airflow rubs against the surface of the aircraft. The thermal and sound insulation layer laid in the aircraft fuselage also contributes to the reduction of cabin noise.

With the increasing global requirements for aircraft energy saving and emission reduction, as well as the maintenance of newly delivered aircraft and existing aircraft, the need of aircraft insulation mat will be also increased from the aspects of quantity and performance.



(Fig of Insulation of Aircraft, from Virginaustralia Airline)

### **4.3 Zisun in Aviation and Aerospace**

Zisun high-efficiency and energy-saving product, sound and heat insulation blanket, have obtained the test qualification certificate of Commercial Aircraft Corporation of China Limited. This product is made of glass fiber through patented processes such as modification and compounding, which has excellent performance of light weight, flame retardant, waterproof, sound insulation, heat insulation, etc. It can be used in aircraft cabin, ship cabin, subway and other applications with high comprehensive requirements for sound insulation and heat insulation. We have obtained the aerospace quality management system AS 9100 certification and has built an acoustic laboratory with ASTM standard.

In addition, the high-silica fibers developed and produced by Zisun have been used for a long time by international well-known aerospace companies, and have reached in-depth commercial cooperation, which is of great significance to develop high-end applications in aerospace. Zisun will continue to make efforts to provide more users with high-quality localized products and services.

## **5. Emerging Application Areas**

Achieving peak carbon neutrality and striving to build a clean, low-carbon, safe and efficient energy system is a major decision and deployment made by the Party Central Committee and the State Council.

Pumped storage and new energy storage are important technologies and basic equipment supporting new power systems. They have great significance to promoting green energy transition, responding to extreme events, ensuring energy security, promoting high-quality energy development, and supporting the realization of climate change goals.

### **5.1 Related Policy**

In July 2021, the “Guiding Opinions of the National Development and Reform Commission and the National Energy Administration on Accelerating the Development of New Energy Storage” requires that by 2025, the transformation of new energy storage from the initial stage of commercialization to large-scale development will be realized. The innovation capability of new energy storage technologies has been significantly improved, the independent and controllable level of core technology and equipment has been greatly improved, and great progress has been made in terms of high safety, low cost, high reliability, and long life. The business model is basically mature, with an installed capacity of over 30 million kilowatts.

New energy storage plays a significant role in promoting the process of carbon neutralization in the energy sector. By 2030, full market development of new energy storage can be achieved. The core technology and equipment of new energy storage is independently controllable, and its technological innovation and industrial level are at the forefront of the world. The standard system, market mechanism, and business model are mature and sound, and are deeply integrated with all aspects of the power system. The installed capacity basically meets the corresponding needs of the new power system. New energy storage has become one of the keys supports for the carbon neutralization of the energy sector. The “Opinions” provide detailed planning guidance for specific plans, including coordinating the development of special energy storage plans, vigorously promoting the construction of power-side energy storage projects, actively promoting the rational layout of grid-side energy storage, and actively supporting the diversified development of user-side energy storage.

### **5.2 Industrial Trends**

The power system is a stable and balanced system. The energy storage power station is to adjust and buffer between various power sources and power demand, which is equivalent to the role of a reservoir, which can effectively improve the system's ability to regulate voltage and frequency. Energy storage is critical in electricity consumption.



With the continuous advancement of the parity process of new energy sources such as wind power and photovoltaics, the installed capacity of new energy sources has continued to increase. However, due to the intermittent and unstable characteristics of new energy power generation, the accompanying energy consumption problem has become increasingly prominent. energy storage power stations can be used to cut peaks and fill valleys and improve power supply reliability. As "new energy + energy storage" has become a development trend, the energy storage power station industry has ushered in rapid development

At present, for urban energy storage systems, lead-acid batteries, lithium-ion batteries, etc. are the main ways for electrochemical energy storage systems. VRLA batteries have the advantages of excellent capacity stability, reliable low temperature operation, high cycle charging capacity, low accident risk and low environmental pollution risk, and maintenance-free. It has important applications and wide markets in global urban energy storage systems



(Valve-Regulated Lead-Acid Batteries In Energy Storage Stations,

Fig from OFFGRIDENERGY)

### 5.3 What Zisun Strives

One of the core materials of VRLA batteries is the battery separator made of micro glass fiber. The battery separator is placed in the two pole plates of the battery to prevent the positive and negative plates from contacting each other and cause a short circuit, and adsorb the sulfuric acid electrolyte, which is the core material to maintain the long-term, stable and high-efficiency function of the battery. Important indicators such as microporosity, chemical stability, and mechanical strength of battery separators determine the deep cycle life, charge acceptance and safety performance of VRLA batteries.

Zisun produces battery separators, using the self-developed micro glass fiber as the core raw material, which has excellent affinity with water, acid corrosion resistance, temperature resistance, oxidation resistance, and has a large specific surface area and high porosity. The liquid absorption speed is fast, and it has good mechanical strength and is easy to process. Due to the excellent performance of the Zisun microfiber glass, the battery separator products have extremely low impurity content, which ensures the low self-discharge rate of the VRLA battery. We dig deep into the performance of materials, grasps the market demand, and continues to promote the continuous improvement of the performance and production capacity of our battery separator products.

## IV. The Business of Zisun During the Reporting Period

Under the impact of the epidemic of the century, the evolution of the century-old situation has accelerated, and the instability and uncertainty of the external environment have increased significantly. Zisun takes high-quality development as the starting point, focuses on the needs of users for high-quality life, tempers our core competitiveness, and strives hard to give full play to our resilience, cultivate new products, expand new production capacity, and quickly respond to changes in the external environment and market demand.



By integrating the advantageous resources of the industry, making full use of the accumulation of long-period technology practice for many years, and deeply exploring the advantages of materials, Zisun independently researches and develops a wide range of high-performance products with full coverage, and carries out innovation and application exploration around the beforehand, processing, and afterwards phrase of clean air. We are committed to providing professional materials and products in the fields of “clean air” and “High efficiency and energy saving” by implementing a strong industrial interconnection strategy and exploring R&D and applications. With a strong research system, a large-scale production base, and sufficient capital resources, Zisun has built a leading company in the clean air industry, providing “clean air” and “High efficiency and energy saving” applications and solutions for industrial and residential, medical, electronics, agriculture and animal husbandry, indoor public space, military, aerospace, and other fields.

### **(1) Indoors Applications**

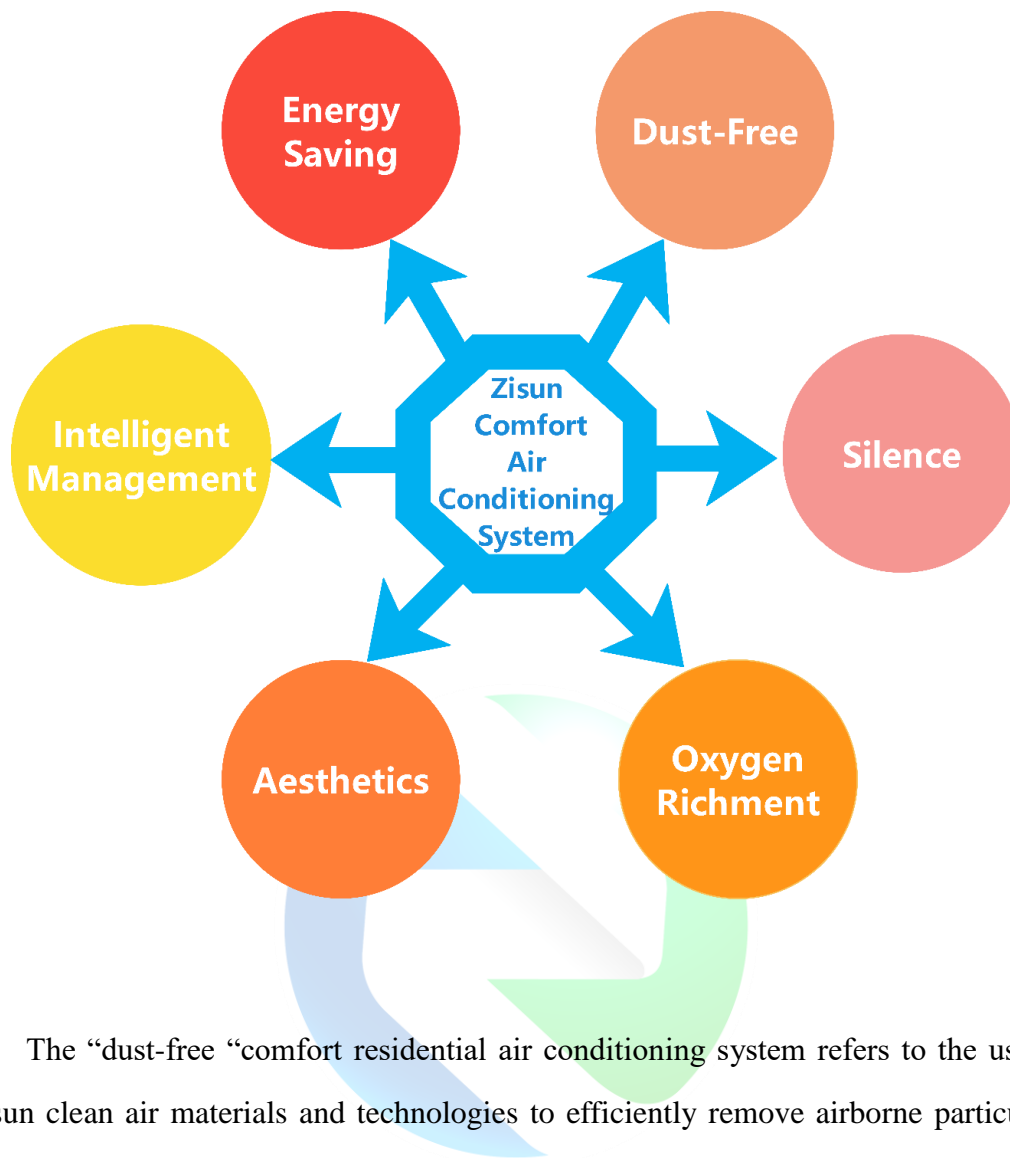
TROX TECHNIK GmbH. was founded in Germany in 1951 and now has 33 subsidiaries in 29 countries, 19 production sites and representative offices in over 70 countries. TROX China offers a complete range of products and systems for centralized and stand-alone ventilation and air conditioning technology, including diffuser, air-water system ends, air adjusting valves, fire and smoke dampers, tunnel industrial valves, mufflers, filters, air conditioning boxes as well as stand-alone ventilation systems and laboratory system solutions.

In China, TROX has provided variable air volume air conditioning systems (VAV system) for the top three tall buildings in China (Shenzhen Ping An Financial Center, China Resources Building, Shanghai Center Building), as well as for Beijing Daxing Airport, Shanghai Pudong Airport, Hong Kong-Zhuhai-Macao Bridge Tunnel, the Water Cube, National Museum of China, Suzhou Museum, Shanghai Disneyland, China Central Television, One Shenzhen Bay, Zhujiang City and other famous buildings in China. TROX China has a wide range of air conditioning products,

including all-air systems, air-water air conditioning systems, stand-alone ventilation systems and laboratory ventilation systems and multi-functional accessories for each system, which can provide a wide range of choices for different indoor environments and user needs.

Zisun and TROX will work together to develop a new generation of products, determined to serve the low-carbon energy-saving society and high-quality urban and rural life, to provide users with solutions that can run quietly throughout the year, ensure high indoor comfort, and protect indoor air quality, to ensure that users are in constant humidity, constant temperature, constant oxygen, constant cleanliness, constant quiet, constant intelligence indoor environment throughout the year.

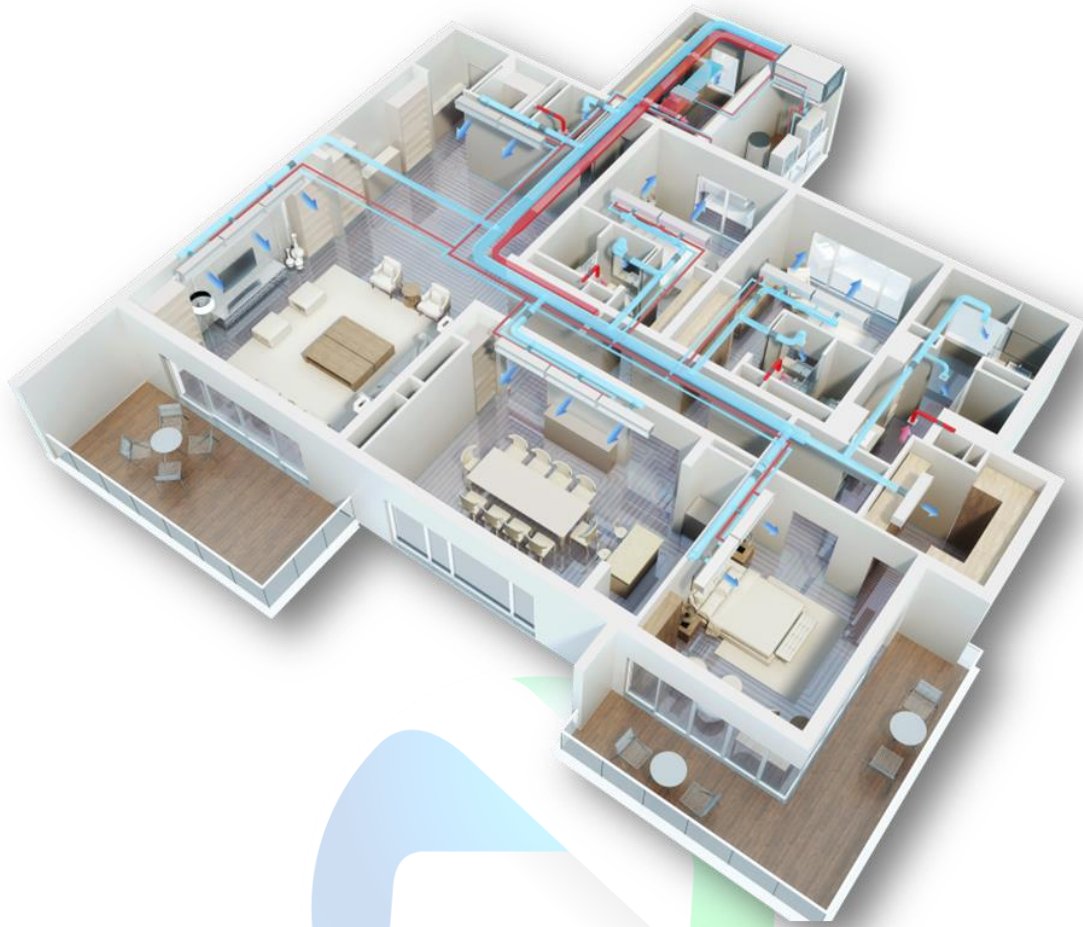
Based on years of precipitation in the field of “clean air”, relying on the Zisun “Clean Air” materials and technology, the comfort and dust-free air conditioning system has been launched. This system has many advantages such as low energy consumption, quiet operation and dust-free, which can satisfy the public’s yearning for a better life and ensure the “high-quality life”.



The “dust-free “comfort residential air conditioning system refers to the use of Zisun clean air materials and technologies to efficiently remove airborne particulate pollutants and gas pollutants and ensure that there is no dust accumulation in the air conditioning pipeline, and there is no need for pipeline ash removal and other maintenance like the traditional central air conditioning system.

Compared with conventional fan-coil unit or the central air conditioning system of multi variable units, Zisun dust-free comfort air conditioning system for residential has a variety of advantages.

	Traditional home central air conditioning system	Zisun Comfort Air Condition System
<b>IAQ</b>	Air quality cannot be guaranteed, additional fresh air system or air purifier is required	A variety of Zaisheng Technology "clean air" materials and technologies to efficiently remove particulate matter (such as PM2.5) and airborne pollutants (VOCs, etc.).
<b>Air Distribution</b>	The air outlet area of the air conditioner is small, the wind speed is high, and the temperature difference is large. The room temperature is very uneven and the air speed is unevenly distributed.	The air supply temperature is uniform, the air supply temperature difference is small, and the air supply speed is low. The room temperature and air speed are evenly distributed.
<b>Acoustic Environment</b>	There are fans at the end of the room, and the noise is unacceptable for environments with high comfort requirements, such as bedrooms.	It is suitable for rooms with high comfort requirements. There are no fans and moving parts at the end of the air conditioner, and the operation is very quiet.
<b>Hygiene Level</b>	The room is dehumidified by the cold coil, and the condensed water is collected in the condensed water pan, which is easy to breed bacteria, and it is difficult to maintain the furniture and interior decoration. Fresh air volume cannot be guaranteed.	The terminal runs in dry conditions without generating condensed water; the fresh air is accurately distributed to each room after filtering, dehumidification, etc., to create a healthy and comfortable indoor environment.
<b>Air Flow</b>	There is lack of unified planning for supply and return air, and no orderly air pressure gradient established across the rooms.	There is organized ventilation, air flows from the comfort zone to the auxiliary function zone, and controls the scent of odor and humid air.



(Fig of Zisun Residential Comfort & Dust-Free Air Conditioners)

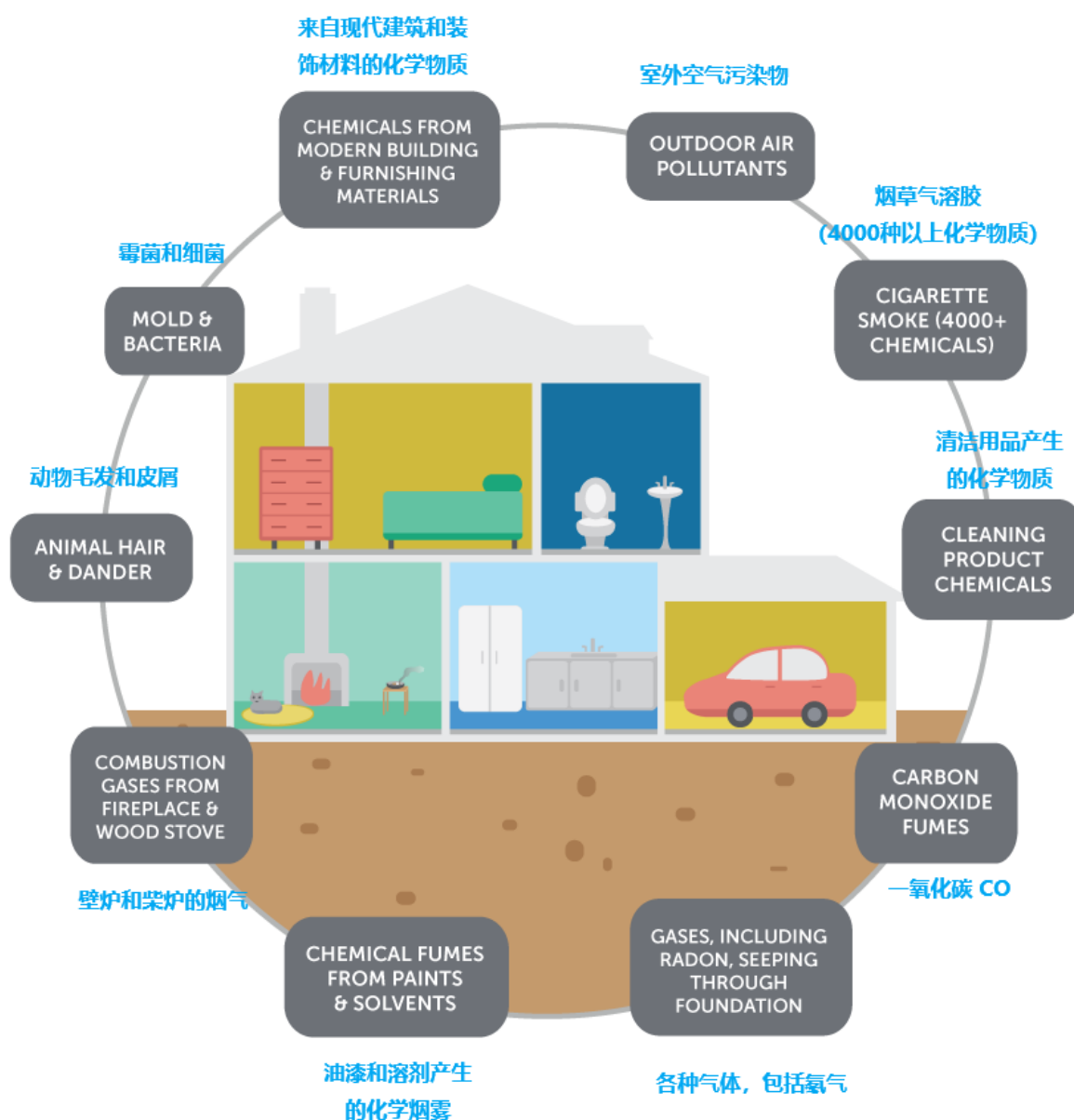
Zisun residential comfort & dust-free air conditioners provide targeted solutions for the needs of air quality, thermal comfort and noise levels in indoor environments.

### **1. Solution of Indoor Air Quality**

Hong Kong of China is the first area to propose legislation on indoor air quality (IAQ). According to the information provided by the Hong Kong Environmental Protection Department. Humans need to breathe every second and clean air is very important for our health. We spend most of our time indoors in our homes, schools, offices and shopping malls. A polluted indoor environment can cause headaches, itchy eyes, breathing difficulties, skin irritation, vomiting and fatigue. Children, the elderly and people with respiratory or heart conditions are more vulnerable to indoor air

pollutants. Improving indoor air quality can improve the health, productivity and psychological well-being of indoor populations.

Indoor air pollutants originate from the external environment and indoor activities. As shown in the figure below, the composition of indoor air pollutants in rooms with different external environments and different functions is different. If the air conditioning system does not have the function of “clean air”, polluted outside air will be continuously introduced into the room, and many pollutants in the room cannot be discharged, thus deteriorating the indoor air quality.



(Picture from International WELL Building Institute)

Zisun clean air materials are empowered to efficiently purify the indoor air, remove particulate pollutants, gas pollutants, and ensure individual fresh air volume. According to specific design requirements, constant air volume variable air volume terminals are used to control different rooms and fresh air volume accurately and automatically in the area.

## 2. Solution of Thermal Comfort

Thermal comfort is a state of mind and an expression of people's ideological satisfaction with heat and cold. Dr. P.O. Fanger proposed an evaluation index characterizing the human thermal response, and this index represents the average value of the hot and cold sensations of most people in the same environment. The factors influencing thermal comfort include thermal radiation, heat and cold, humidity, blowing sensation, clothing, and metabolism, of which the first four indicators are directly related to the air conditioning system.

Based on the thermal comfort standard EN ISO 7730, the indoor comfort level is evaluated by the airflow dissatisfaction DR, which is related to the wind speed, temperature, and vortex intensity in the area where personnel stay. The comfort level is divided into three grades A, B and C, corresponding to DR values of 10%, 20% and 30%. When the grade is B, it indicates that more than 80% of the personnel are satisfied with the indoor environment. TROX has four different air conditioning technologies, based on various technical principles such as Kanda effect, thermal plume effect, natural convection and radiation cooling, to meet users' thermal comfort needs, analyze airflow distribution characteristics, optimize indoor airflow organization by optimizing air delivery, increase indoor radiant heat transfer surface, ensure uniform indoor air speed and temperature distribution, and control the range of vertical temperature gradient fluctuation and cold air sensation.



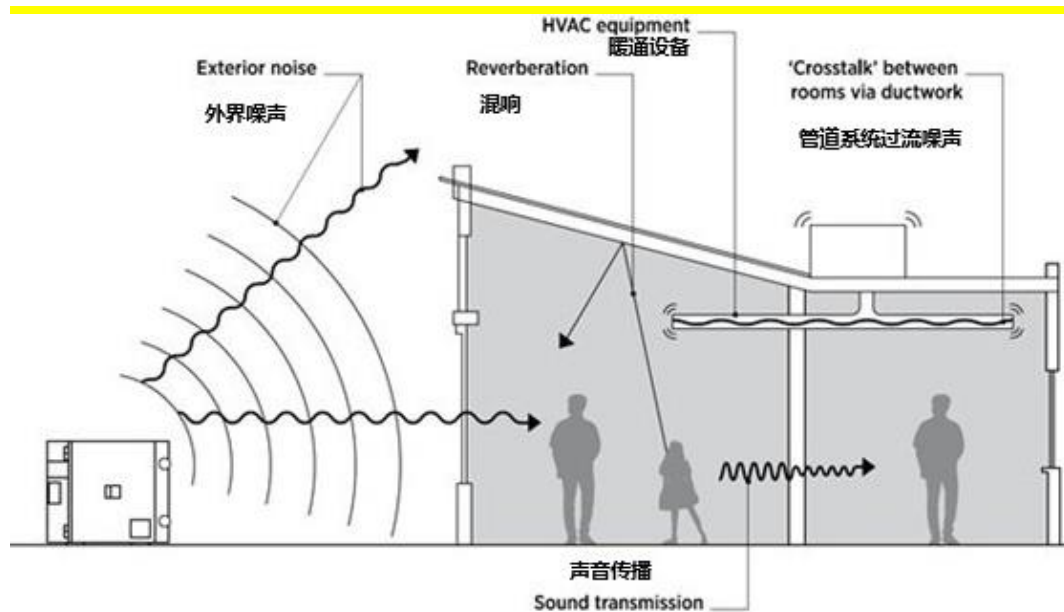


(Picture from Simulationhub)

### 3. Solution of Indoor Noise

According to the “Burden of Disease due to Noise Pollution Report” released by the World Health Organization, noise is second only to air pollution in terms of harm and has become an invisible killer affecting human public health. Studies have shown that prolonged exposure to a noisy environment may lead to delayed reactions, increased annoyance, and harm to the human cardiovascular system, endocrine system, and nervous system. Therefore, a good acoustic environment is vital, which not only enhances people’s attention, but also reduces mental stress and improves sleep.

No fans or other mechanical equipment at the end of the room to ensure no sense of cold air, no noise and temperature balance in the room, and silent operation all year round. The operation of ordinary air conditioning system generates airflow noise, radiation noise and over-flow noise, which will interfere with the hearing of indoor people and affect the comfort of life.



(Picture from TROX)

In accordance with ISO 3741, Trox has built the world's most advanced acoustic laboratory. The lab is an irregular structure with an overall suspended partition design, which accurately measures airflow noise, radiated noise and insertion loss of HVAC equipment by the reverberation method, and combines the measured sound power with the evaluation standard ARI 885 to provide NC noise values for the indoor occupancy area.

The diffuser, valves and other products of Zisun residential comfort & dust-free air conditioning products conform to the aerodynamic principle to avoid airflow noise; products such as mufflers and flow-overs are made of environmentally friendly materials and have excellent noise reduction functions; products are designed with no moving parts, to achieve a good quiet effect.

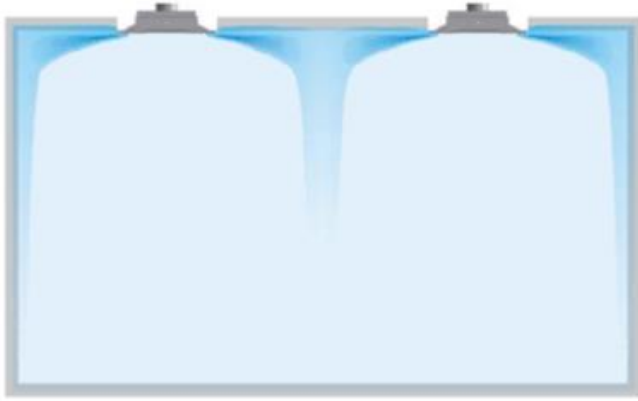
Zisun residential comfort & dust-free air conditioning can achieve low air speed, low temperature difference, low noise and mild air supply, ensuring no cold air feeling, no noise and balanced temperature in the room, and a variety of product appearance to meet the needs of various interior design styles, which can provide users with a state of “wind and sunshine”.

### **1.Variable air volume system**

The residential comfort dust-free air conditioning system has a unique variable air volume adjustment system, which can be adjusted intelligently according to user needs through the change of air supply volume to achieve room cooling and heating adjustment; there is no need to install fan parts indoors again, combined with reasonable air outlet arrangement to ensure orderly indoor airflow organization and low operation noise; to meet the requirements of different air supply methods, and can achieve independent temperature and humidity control in each room.

The VAV system ensures that the direction and flow rate of airflow in the room are carefully calculated to avoid the sense of blowing wind, so that the house can ensure micro-positive pressure relative to the outdoors and avoid the outside polluted air or humid air from directly penetrating into the room, and also realize the flow of indoor air from the comfort area to the auxiliary function area, and control the odorous air and humid air in the room can be discharged in an organized manner and not scattered.

TROX provides residential RSD diffuser with special blade structure, through the airflow simulation and experiment, comprehensive air supply, air supply angle and installation height and other factors, to achieve the best air supply, to avoid cold air sense blowing sense, High level of user comfort. The series has exquisite appearance, various styles, easy to decorate with, to meet the personalized aesthetic needs of users.



冷梁送风温度均匀度: 冷梁系统通过小温差(送风温度与室内设定温度之差)和低风速送风, 能实现室内温度均匀度达到设定温度 $\pm 0.5$ 度的高均匀度。

应用冷梁系统的房间温度分布图



风机盘管(FCU)和多联机(VRV)产品由于高风速, 大温差送风, 房间温度非均匀度可超10度。

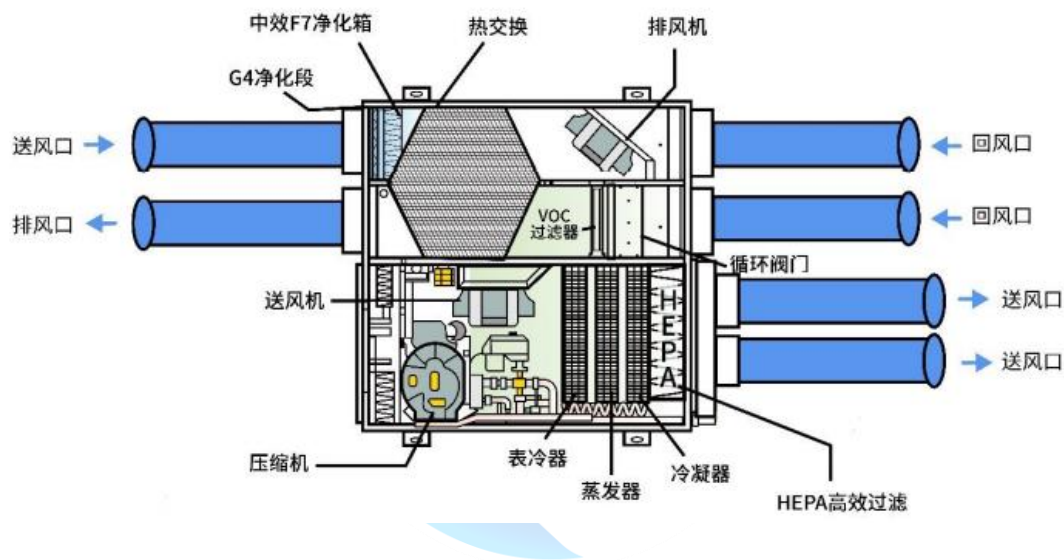
应用VRV系统的房间温度分布图



## 2. HEPA Purification

Zisun residential comfort and dust-free air conditioning system has been customized with Zisun “clean air” materials, technology, equipment, to ensure that the indoor air quality into the excellent, to eliminate particles, aerosols, germs and other pollutants, to achieve HEPA (99.97% @0.3um) above the purification effect.

The common pipes of traditional central air-conditioning systems accumulate dust and produce a breeding ground for harmful microorganisms such as bacteria, mold, etc., resulting in secondary pollution of indoor air; Zisun residential dust-free and comfortable air-conditioning system pipes are protected by HEPA level to keep dust-free and clean. There is secondary pollution.



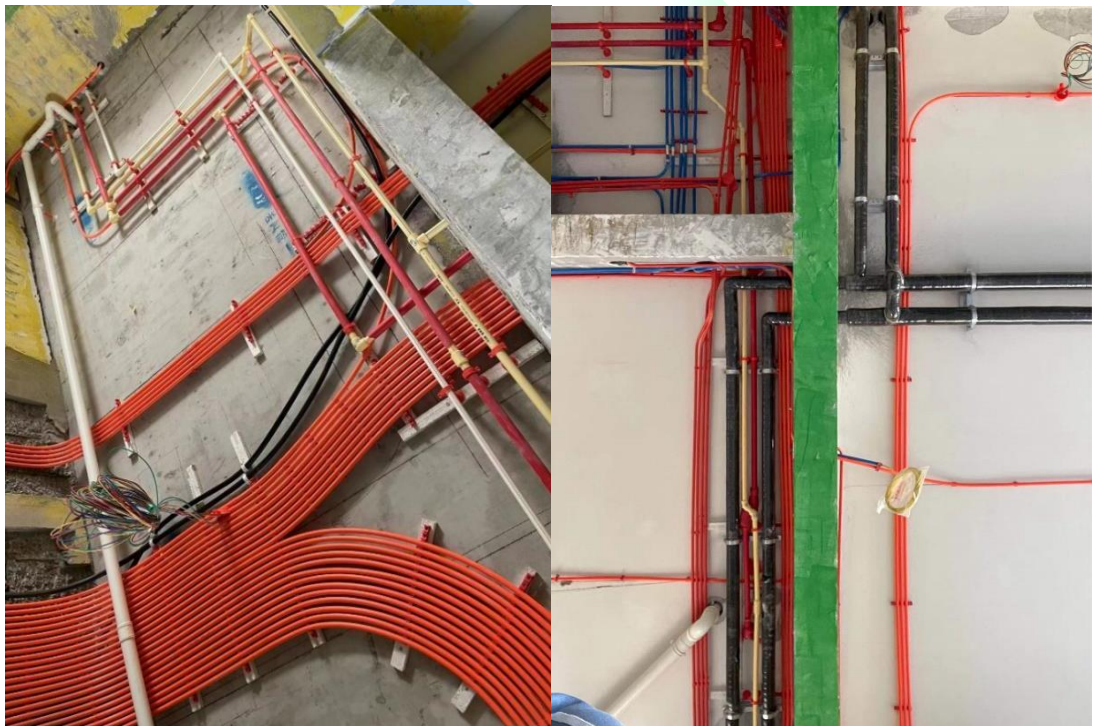
### 3. Low Operating Energy Consumption

Zisun residential comfort and dust-free air conditioning system replaces the traditional HVAC system's cooling and heating function, floor heating and fresh air system and other systems.

During the construction stage, the system was upgraded to reduce the floor height occupation of the house and save the indoor floor height for users.

In the actual use stage, the system not only provides users with a high-comfort indoor space, but also consumes less energy than traditional multiple systems.



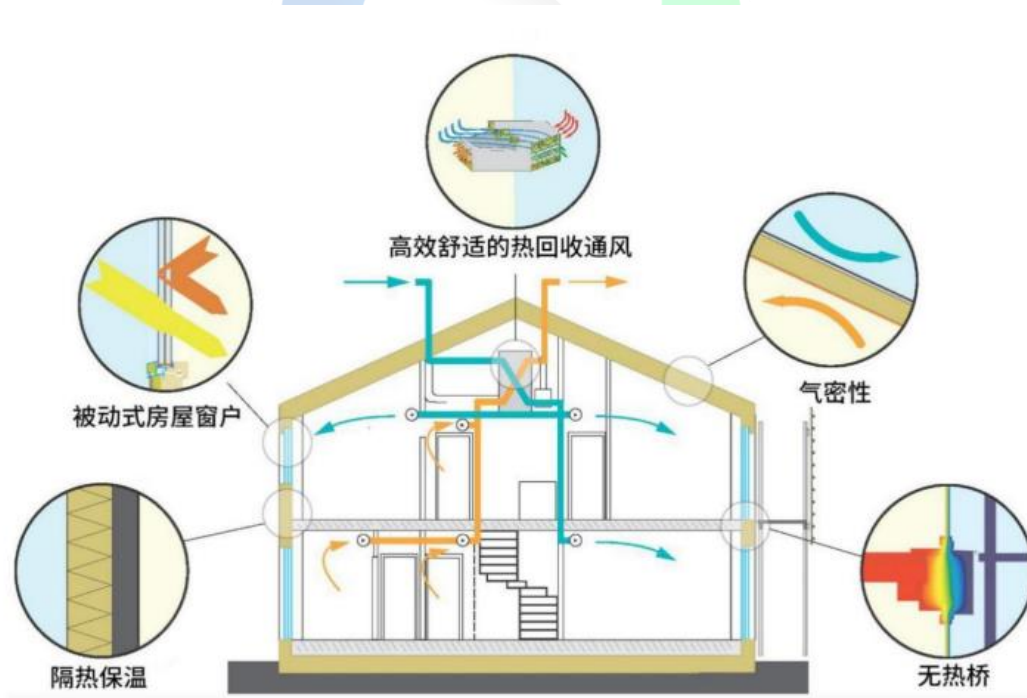


(Project scene of Zisun residential comfort and dust-free air conditioning system)

In a comprehensive manner, the Zisun dust-free and comfort air conditioning system can run all year round and is supported by an intelligent control system to ensure that the user's indoor environment maintains the following environment all year round.

- Indoor temperature distribution uniformity: set temperature plus or minus 0.5K
- Indoor wind speed distribution uniformity: 0.2m/s to 0.3m/s
- Noise level <NV30 Fresh air supply >40cmh/person
- PM2.5 <25u/m3

Zisun residential dust-free and comfort air conditioning system can be organically combined with its thermal insulation glass product line to create a comfortable and pleasant living environment, excellent indoor air quality, and near-zero energy consumption. Considering the needs of building layout, orientation, shape factor and use function and the climatic conditions of the building, the thermal insulation glass product is used in the non-transparent maintenance structure of the building to optimize the overall air tightness of the building and improve the thermal insulation performance of the building, reduce indoor and outdoor energy transfer, reduce building cooling and heating



As the construction of ecological civilization in China continues to progress, the concept, awareness and demand for green buildings are gradually increasing throughout the society. Zisun will follow the direction of the policy, pay close attention to



technology improvement, increase product capacity, and continuously meet the market demand for green building.

## **(2) Mobile Space Field Such as New Energy Vehicles**

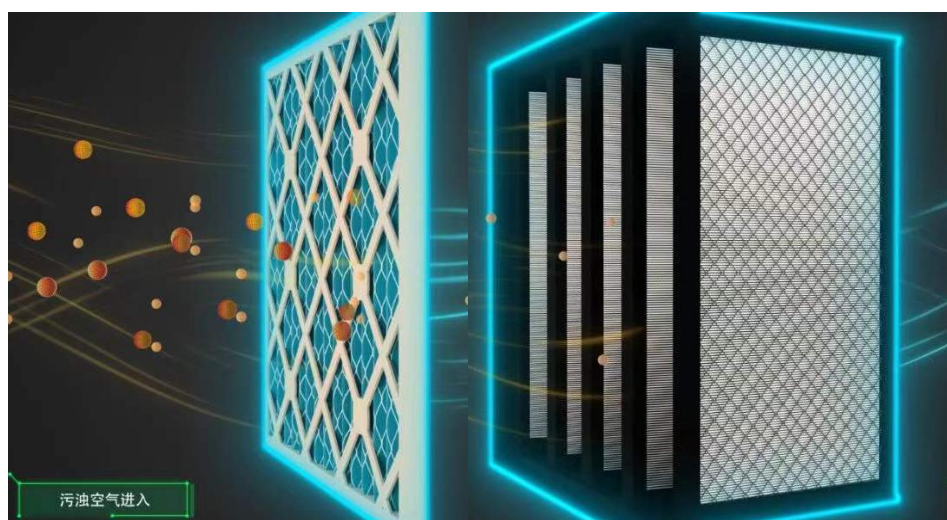
Zisun has set up Chongqing Langzhirui New Material Technology Co., Ltd. to focus on the research and development of high-performance, long-life, anti-biochemical weapons-grade automotive air conditioning filter element, which can effectively filter fine particles, gas pollutants, as well as bacteria, viruses, dust, aerosols, plant pollen, mold spores, dust mite excrement, etc. The filtration effect of particles  $\geq 0.3\mu\text{m}$  can reach 99.97% and above, allowing drivers and passengers to enjoy clean and healthy air in the car. It can also prevent dust from accumulating inside the air conditioning system and prolong its service life.

The high-efficiency PTFE membrane products produced by Baoman New Materials, a subsidiary of Zisun, have been adopted by well-known international companies and applied to the air-conditioning filter elements of automobile cabins, providing stable, efficient and reliable “clean air” guarantee for many users.

We will persistently explore the application prospects of various “clean air” materials and technologies in the field of new energy vehicles, and strive to provide “clean air” cabin environment protection for new energy vehicle users worldwide.

## **(3) Animal Husbandry**

Zisun has developed a special filter material with high efficiency, low resistance, high temperature and high humidity resistance for  $0.3\mu\text{m}$  particles with a filtration effect of more than 94%, which is the leading level in the world. Our product index is at the international level, which provides reliable application solutions to effectively reduce the spread of virus and solve the key technical problems of preventing and controlling African swine fever.



(Filter for Pig House)

According to users' feedback, Zisun fresh air filter material and equipment for livestock industry have been put into use, which has improved the air quality inside the pig house, accelerated the growth rate of pigs and improved the survival rate of pigs.

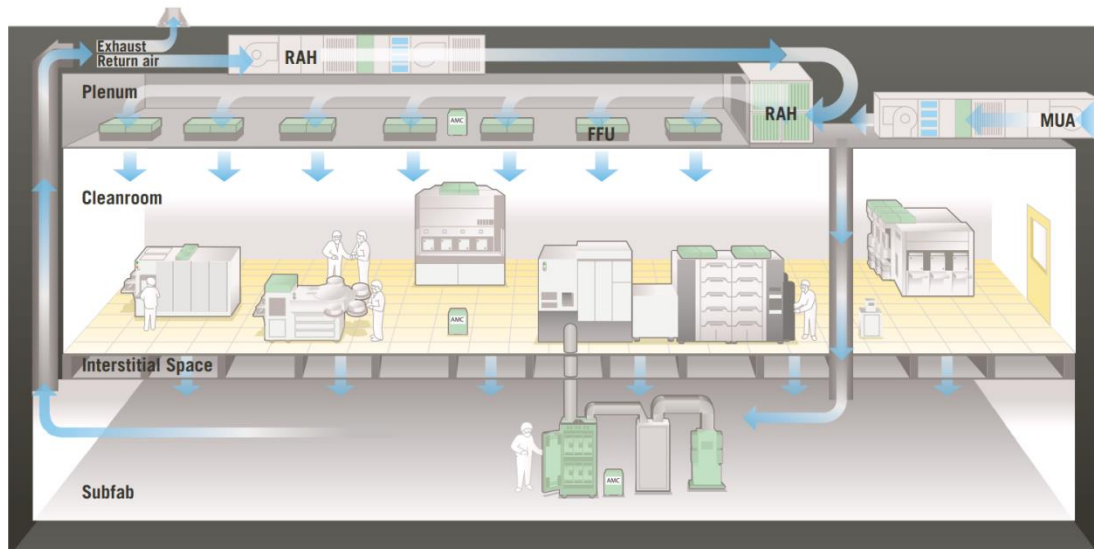
In 2021, Zisun will continue to actively explore and provide “clean air” solutions and quality services to high-end domestic pig suppliers. In the first half of 2021, U-air was awarded the title of Grade 5A supplier of Shepherd Plains, and became the supplier of Xinda Animal Husbandry, and cooperated with Guangxi Nongken Group and Yurun Group.

Affected by the downstream pig cycle expansion progress, the new air application project of sub-pig barn slowed down during the reporting period. Zisun will continue to make efforts to promote the application of clean air core products in the field of animal husbandry, actively promote our products and services through various ways such as industry exhibitions, provide materials and equipment for different customer needs, and strive to improve our profitability.

#### **(4) Advanced Manufacturing Fields (Semiconductors, Panels, Precision Instrument Processing, Biomedicine, And Medical Health etc.)**

For high-end manufacturing fields such as semiconductor, panel, precision instrument processing, biomedical, medical and health care, etc., different links in their

production activities have different requirements for "clean air". The typical application requirements for "clean air" are clean rooms.



(Fig of Typical Clean Room Structure)

A cleanroom is a controlled environment where pollutants like dust, airborne microbes, and aerosol particles are filtered out to provide the cleanest area possible. A cleanroom can be classified into different levels of contamination depending on the amount of particles allowed in the space, per cubic meter. Cleanrooms also control variables like temperature, air flow, and humidity. Most cleanrooms are used for manufacturing products such as electronics, pharmaceutical products, and medical equipment.

Cleanrooms work to remove pollutants, particles, and contaminants from outside ambient air. Outside air is first circulated to a filter system. The filters (either HEPA or ULPA) then clean and decontaminate this outside air according to their specifications. The filtered air is then forced into the cleanroom. Additionally, contaminated air within the cleanroom is forced outside the room by registers, or it is recirculated back into the filters, and the process restarts.

There are a wide variety of reasons that a company may need a cleanroom. for the manufacture of something is easily affected by contaminants or particles in the air. Some common industries that regularly use cleanrooms, such as: high-end

manufacturing, Research facilities, pharmaceutical production, medical laboratories, electronic part production, aerospace industry nanotechnology production, optics and lens manufacturing, military applications.

Zisun has successfully provided “clean air” products and solutions for outstanding enterprises in the industry such as BOE, CSOT, SMIC, Xiamen Tianma, Hefei Jinghe, and ISV. Zisun will continue to dig deep into material properties and continuously improve product quality to meet the increasing application needs of advanced manufacturing fields such as semiconductors, panels, and precision instrument processing.

## V. Analysis of Core Competitiveness in the Reporting Period

Zisun insists on “team building + innovation” to lead the development of the enterprise, consolidate the moat of the enterprise, cast the brand of “clean air” and refine the core competitiveness. Our core competitiveness is subdivided into five major advantages: technical advantages, intelligent manufacturing advantages, overall R&D advantages, brand advantages and management advantages.



### (1) Technology Advantage

Zisun has two research institutes, Chongqing Fiber Research Institute and Chongqing Paper Research and Design Institute, relying on the “National Enterprise Technology Center”, making full use of years of long-period technical practice accumulation, constantly increasing investment in research and development, focusing

on intellectual property protection and quality system construction, and consolidating the enterprise technology.

As of the date of this report, Zisun has obtained 151 patents, including 68 invention patents, 75 utility model patents and 8 design patents; in recent years, we has continuously increased its investment in R&D, and invested 97.7947 million RMB in R&D in 2021, an increase of 31.14% compared with 2021; we has strengthened the construction of professional R&D and design team, and actively introduced professional technical talents from home and abroad to reserve technical strength for the fields of “Clean Air” and “High Efficiency and Energy Saving”, overcome technical barriers, and develop materials and products that can be applied to different environments, conditions and requirements. Zisun strengthens the construction of professional R & D design team, actively introduces professional technical talents from home and abroad, reserves technical strength in the field of “Clean Air” and “High Efficiency and Energy Saving”, tackles technical barriers, develops materials and products that can be applied to different environments, different conditions, and different requirements, and promotes the enterprise in the field of “Clean Air” and “High Efficiency Energy Saving”. We will promote the development of technology and open up new application markets.

## **(2) Intelligent Manufacturing Advantage**

Zisun continues to improve the level of intelligent and smart manufacturing in the production workshop by introducing intelligent production equipment, transforming the automated production system and creating a paperless workshop, using unique processes for green transformation and improving the efficiency of production kiln melting. The construction of intelligent factory not only effectively reduces the production loss, reduces the labor cost elements on the development of enterprises, and stabilizes product quality, but also significantly improves the production efficiency of enterprises, which lays a good foundation for the Company's Continuous Steady and Healthy Development.

### **(3) Collaborative R&D Advantage**

Zisun continues to take advantage of the overall thinking of the clean air industry, industrial systems research and development to serve the needs of clean air afterwards, during and beforehand.

Zisun has strong advantages in research and development of industrial systems. We are a high-tech enterprise with a variety of core filtration materials and technologies, including high-performance glass fiber filter media, low-resistance melt-blown filter media, high-efficiency PTFE, micro-electrostatic filtration materials, nano-filtration materials (under research and development) and other filtration materials and equipment. Relying on two research institutes and overseas R&D platforms, professional R&D and design team, independent R&D system and abundant R&D achievements, we strive to grasp new demands and trends in the industry. Zisun continues to integrate a variety of materials and technologies to provide customized products for different application scenarios.

### **(4) Brand Advantage**

Taking “Enjoy clean air with Zisun Tech” as the brand strategy, Zisun has the advantage of leading the industry brand status, priority benefit industry demand explosion. We take “Clean Air” as its mission and serves global high-quality customers. Its products cover the core material end, intelligent manufacturing end and user service end of clean air, forming a unique business model with leading product scale, quality, and technology in the industry.

### **(5) Management Advantages**

Taking “Enjoy Clean Air, Use Zisun Tech” as the brand strategy, has the advantage of leading the industry brand position, priority benefit industry demand explosion. Zisun takes “Clean Air” as mission, and serves global quality customers, with products covering the core material end, intelligent manufacturing end and user service end of

clean air, forming a unique business model with leading product scale, quality and technology in the industry.

The initial grant portion of the 2019 Stock Option Incentive Plan formulated entered the second exercise period and the reserved grant portion entered the second exercise period. Zisun repurchased 1,124,353 shares from the secondary market in 2020 has been used for the employee stock ownership plan, covering the core technical staff of the company.

The implementation of Zisun Employee Option Incentive Plan and Employee Stock Ownership Plan effectively enhances the happiness and sense of belonging of employees, the cohesion and centripetal force of Zisun, fully mobilizes the enthusiasm of the middle and senior management and key employees, closely combines the interests of middle and senior management and core employees with those of the company and promotes the sustainable development of the company.

## **VI. Main Business Operations During the Reporting Period**

The global economic and political environment is changing, and the epidemic of Covid-19 continues to infest. In 2021, we will insist on focusing on our main business, taking “high quality development” as the starting point, responding efficiently to the market demand for “Clean Air” And “High Efficiency And Energy Saving”, continuing to refine our three major capabilities of “continuous cost reduction, continuous R&D investment and ecological development”, promote the construction of new production capacity, continue to invest in research and development, and insist on new product development.

### **(1) Analysis of The Main Financial Data of The Company**

During the reporting period, Zisun realized an operating income of RMB 1,619,710,800. The main business income was RMB 1,590,257,500, a decrease of RMB 274,307,500 compared with the same period of last year, or 14.71%, of which the



clean air segment operating income was RMB 896,106,500, a 29.55% decrease compared with the same period last year, and the high-efficiency energy-saving segment operating income was RMB 694,151,100, compared with last year, an increase of 17.15% over the same period. Zisun realized a net profit attributable to the parent company of RMB 249,471,400, and net profit attributable to the parent company of RMB 225,618,200 after deducting non-recurring gains and losses.

### 1. Description of the Decrease in Operating Income

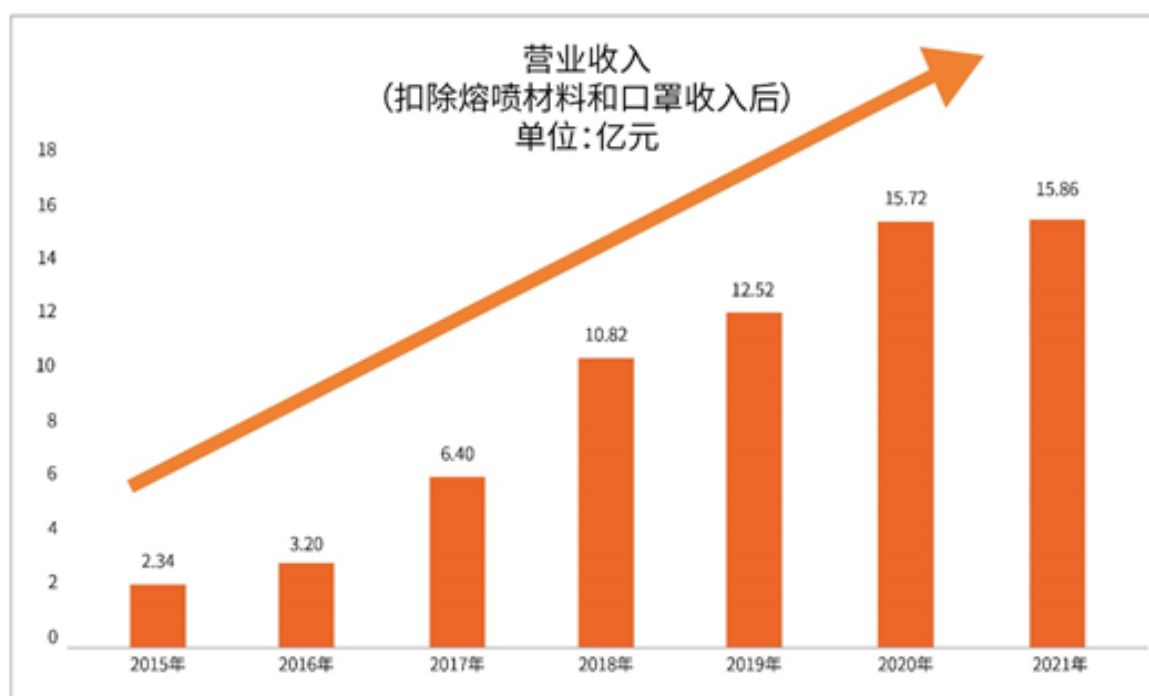
In 2020, the sudden outbreak of Covid-19 in China, Zisun quickly responded to the demand of the government and users and promptly adjusted the company's strategy, relying on the technical strength and production capacity of its subsidiary Shenzhen Zhongfang melt-blown materials, and utilized its clean production workshop to produce a batch of melt-blown materials for individual protective masks and multi-series personal protective masks. The operating revenue of our masks and melt-blown materials in 2020 was RMB312,578,000, accounting for 16.76% of the main business in the period.

In 2021, as the global covid-19 continues, the supply chain and production capacity of other domestic companies have been restored and melt-blown materials and personal protective materials are no longer in short supply. Our masks and melt-blown material operating revenue was \$33,534,100, a significant decrease from the same period last year, accounting for only 2.10% of the main business revenue for the period.

The decline in our operating income in this reporting period is mainly due to the decrease in demand for masks and melt-blown materials. In addition, due to the multiple influences of industrial policy and consumption cycle of pig breeding industry, the demand for fresh air for pig barns from domestic livestock breeding industry customers has slowed down since the second quarter of 2021, and thus the demand for filter materials and equipment for fresh air for pig houses has decreased. For the whole year of 2021, we achieved operating income of RMB100.6123 million from the sales of filter

materials and equipment for fresh air in pig houses, a decrease of RMB 136.9302 million.

Combined with our business strategy, product structure, market demand and other comprehensive situation, after deducting the masks and melt-blown materials for operating income analysis, operating income of Zisun in 2020 is RMB 1,551.968 million and in 2021 operating income is RMB 1,586.1767million. As shown in the chart below, reviewing our operation from 2015 to 2021, our main business remains for continuous growth.

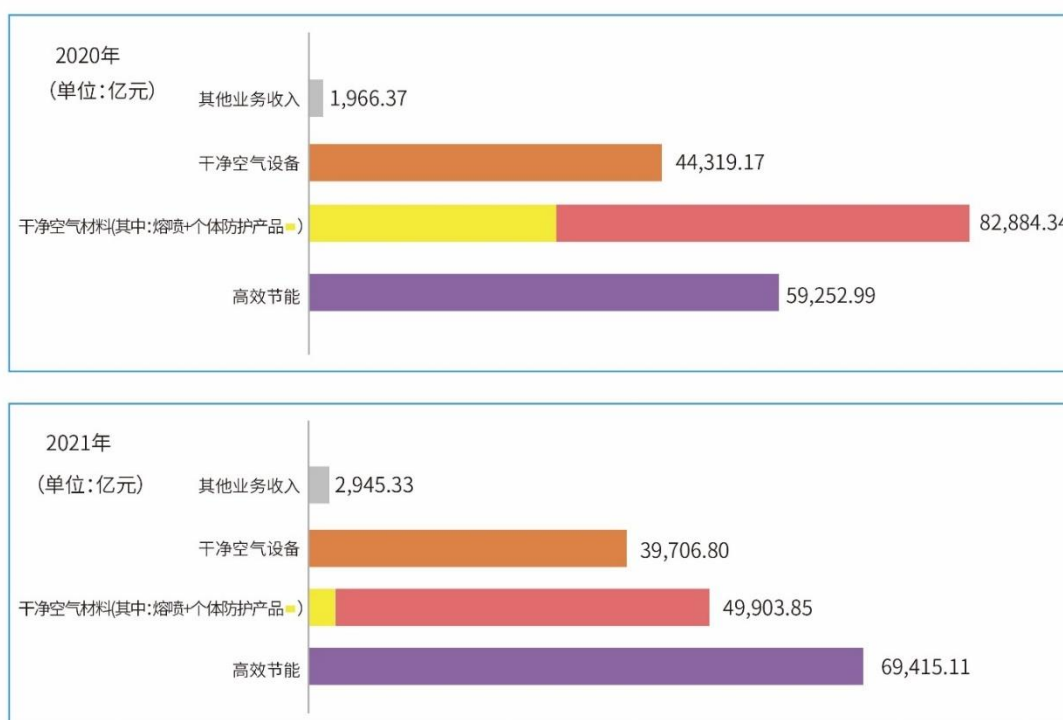


(Fig of the revenue without masks and melt-blown materials)

## 2. 2021 Revenue Analysis

In 2021, the sales revenue of “Clean Air” products was RMB 896.1065 million, accounting for 56.35% of the main business revenue, a decrease of 11.87% compared with the same period last year. The main reason is that the revenue of melt-blown materials and masks drop significantly in 2021. For the more, Clean Air Equipment has been affected by factors such as the fluctuation of the construction cycle of downstream

users whose sales revenue is RMB 397.068 million with a decrease of 10.41% from 2020.



In 2021, “high-efficiency and energy-saving” products achieved sales revenue of RMB 694.1511 million, accounting for 43.65% of the main business revenue, an increase of 11.87% over the same period last year.

Benefiting from the demand for “High-Efficiency and Energy-Saving” products in many application fields around the world, our VIP materials and AGM separators continue to have strong demand. Among them, Chongqing Paper Research Institute efficiently completed the relocation of the AGM separator production line and actively put it into production. In 2021, the AGM separator shipments reached 8,137.11 tons, an increase of 18.06% compared with it in 2020.

### 3.The Superimposed Impact of The Global Shipping Situation on Revenue and Profits

The Ministry of Transport pointed out that, due to the impact of multiple factors, the demand for international container transport has been released centrally since June

2020, and the ship capacity of major liner companies has been basically fully committed to the market except for the necessary repair and maintenance. With the spread of the overseas Covid-19, ports in the United States, Europe and other places have continued to experience severe congestion since the fourth quarter of 2020, resulting in chaos and reduced efficiency of the international logistics supply chain, extensive delays in ship schedules, and seriously affecting operational efficiency. The Suez Canal blocking incident and the outbreak of the Covid-19 in South Asia such as India since March 2021 have exacerbated the contradiction between supply and demand in the logistics supply chain. The tight shipping capacity and rising freight rates have become a global issue.

During the reporting period, the freight-to-value ratio of the export products increased due to the rise in shipping costs. Zisun actively took various ways to cope with the situation, including multiple coordination of container supply, price adjustment and delivery method adjustment, etc., and made every effort to protect the export supply chain and reduce the shipping cost. However, in the context of the sharp rise in global sea freight, the export orders have been delayed and the shipping cost was still higher than the same period last year.

The main export products are “Clean Air” materials and “High Efficiency and Energy Saving” materials. During the reporting period, our overseas sales revenue amounted to RMB 535.0392 million, a decrease of 3.11 % compared with the same period last year.

## **(2) The Proposed Fundraising and Investment Projects Are Progressing**

### **Smoothly, The Product Production Capacity Continues to Expand**

Our board of directors reviewed and approved the “Proposal on the Company’s Public Issuance of A-Share Convertible Corporate Bonds in 2021” in February 2021 and has raised funds to invest in the construction project with an annual output of 50,000 tons of high-performance ultra-fine fiberglass media., 8,000 tons of CLEAN

AIR filter material construction project and clean air filter material upgrade project.

During the reporting period, the construction of the proposed capital raising project advanced as scheduled, production equipment was in place as scheduled, and the overall construction of the proposed capital raising project went smoothly. After the completion of the construction of the proposed project, it will help to meet the growing customer demand and consolidate the security guarantee of production capacity.

### **(3) Continuous Expansion of Products and Application Fields**

Zisun gives full play to its technical, R&D and production advantages in the fields of “clean air” and “high efficiency and energy saving” materials and continues to lay out a variety of new products and new applications.

During the reporting period, t Zisun actively expanded the scope of application of its products around “clean air” and “high efficiency and energy saving” applications through various means such as xx and “introduction” and strived to take the lead in the policy wave of “high-quality production” and “high-quality life”.

Zisun digs deeply into the material characteristics of micro fiberglass fiber and develops and produces fiber glass filter media for oil and gas separation and hydraulic filtration, expanding the application of the products in petrochemical, industrial equipment and other scenes.

Zisun has explored the performance of PTFE membrane and expanded the application of high efficiency PTFE membrane from high-end manufacturing applications to household appliance products. During the reporting period, our PTFE membrane has opened application scenarios in high-end sweeping robots, vacuum cleaners and other household appliances, and the moisture-proof applications of 5G communication base station.

The cooperation between Zisun and MP (Microporous LLC), a world-renowned battery compartment company with deep channel resources and brand awareness in the

European and American markets, is progressing smoothly. Zisun started cooperation with MP in May 2019, and the Zisun AGM separator products have achieved excellent test results and gained recognition from users after two years of severe battery cycle testing. During the reporting period, Zisun has supplied AGM separator products to MP in batches.

During the reporting period, Zisun Platform welcomed new members and established Chongqing Langzhirui New Material Technology Co., Ltd., invested in Sichuan Zisun Building Energy Saving Technology Co., Ltd., and cooperated with Insulation Technology Investment Co., Ltd. to invest in Sichuan Youpusi New Materials Co., Ltd., cultivating products such as “clean air” and “high efficiency and energy saving”. Sichuan Zisun focuses on the application of micro fiberglass products in building energy conservation and thermal insulation, serving the green building market; Sichuan Youpusi deeply explores the synergistic application of micro fiberglass media and aerogel, which has great prospects in the fields of thermal insulation, energy saving and insulation.

#### **(4) Adhere To the Driving Force of High-Quality Development and High-Quality Life**

Achieving carbon peak and carbon neutral is an extensive and profound economic and social systemic change, facing unprecedented difficulties and challenges. Under the background of the carbon policy, Zisun continues to dig deeper into the product performance and improve “internal strength” from management, technology, production and other aspects to maintain a continuous leadership in the industry.

Zisun has maintained “high quality development” for many years and obtained certain technical and economic achievements. We are deeply aware that the results of our high-quality development will continue to be efficiently transformed into services for the people’s “high quality of life”, which is the driving force for our continuous advancement and help for our continuous development.

The “high-quality development” of the people is inseparable from “clothing, food,

housing and transportation”. Zisun “clean air” and “high-efficiency energy-saving” materials and technologies continue to serve various application fields and continue to open new application fields. For example, “clothing” involves industrial production of “Clean Air”, “food” involves “Clean Air” and “High Efficiency and Energy Saving” in agriculture and animal husbandry, and “housing” has a broader scope, ranging from indoor air quality to the pursuit of low energy consumption for building insulation and thermal insulation, and “transportation” is the various application of aircraft, new energy vehicles and other transportation tools.

Zisun will continue to put its various strengths to the service of “high quality of life” with firm determination and strive to continue to gain more and better achievements in the field of “clean air” and “high-efficiency energy-saving”.

Zisun adheres to the organizational structure of the platform transformation of “life, symbiosis, and promotion”, focusing on the future, actively exploring and utilizing the digital technology of the times, continuously optimizing and iterating on the existing production methods and product quality, improving production efficiency, while sharing information, resources and technology with the industry, release huge growth space for the industry, and give full play to the advantages of symbiosis. The layout of the company is centered on the core line of leading enterprise development with science and technology and laying out the Clean Air industry.

## **(5) Forge Ahead with Cooperation and Share Platforms**

### **5.1 Zisun Purification**

During the reporting period, Zisun Purification introduced a new team of comfortable air conditioning, equity participated in Dongxi Home Furnishing. In order to further extend the industrial chain, Zisun launched fresh air purification, cooling and heating, dehumidification and humidification, VAV intelligent monitoring, and intelligent control in one whole house comfort system for the high-end residential market. Combined with the rich “Clean Air” materials, We strive to create energy-



saving, dust-free, quiet, oxygen-rich, beautiful, intelligent management of high-quality whole-house comfort systems for users, and strive to seize the trend of consumer upgrading, the rapid development of the Internet of Things, promote the development of clean air, to the user side of the development, to provide services, to find the right corporate positioning and competitive advantage, and build a system integration ecology in the field of residential comfort.

During the reporting period, the dust-free air conditioning team of Zisun Purification was aggressive and had completed numbers of projects on the ground, which were well received by users.

## 5.2 U-Air

During this reporting period, U-Air Environment actively explored customers in the semiconductor field and provided services to leading companies in the semiconductor industry, including the Huizhou Xinli project, the Hefei Jinghe project, the Xi'an Yiswell project and the Hangzhou Silan project.

U-Air Environment also works for Beijing Kehua photoresist production line transformation project, Riyuexin semiconductor project, Shantou ultrasound project, North Huachuang project, Sunking Asia Pacific semiconductor project, Yuexin Phase II project, Nansha Lianjingxin Energy Phase I Projects, Hefei Tongfu Project, Xuzhou Zhineng Semiconductor Project, Guangdong Pilot Project, Nantong Shennan Circuit Project, Jiangyin Changdian Project, Deqing Advanced Chip Project, Shenyang Xinyuan Project, Shanxi Zhongke Jingdian Project, Star Zhongda Semiconductor Project, INFI Semiconductor, Dongguan Zhongtu Semiconductor, Shandong Yuneng Project, Dongguan Huawei Project, Jiasheng Semiconductor, Zhongkexin Times Project, Jingxin Semiconductor Project, Shanghai BYD Project, Qixing Huachuang Project, Sanmenxia Zhongkexin Times Project. U-Air has provided “clean air” products and solutions for more than 60 well-known domestic semiconductor projects throughout 2021.

At the same time, U-Air Environment actively cooperates with the laboratory projects of major universities, such as the Integrated Circuit Center of Tsinghua University, Hefei University of Science and Technology Laboratory, Zhejiang University Ningbo Campus Laboratory, etc.

Electronic panel industry: During this reporting period, with years of deep cultivation in the air cleaning industry, U-Air Environment continued to provide products and services for BOE's major projects. Up to now, U-Air Environment has served BOE for more than ten major projects one after another. U-Air has also performed well in the TEGA G8.5 ultra-thin glass substrate deep processing project, the bid for Xi'an Yiswei Silicon Industrial Base project, the Shucheng Jingzhuo project, and the bid for Xiamen Tianma's 6th generation flexible AMOLED production line project, contributing a variety of CLEAN AIR solutions for customers. U-Air has won the bids for Huaxing Optoelectronics Huizhou and Guangzhou (T9) projects and Shanghai Hehui Phase II project.

Agriculture and animal husbandry field: U-Air continued to provide pig barn fresh air system solutions and products for Shepherd Group. In the first half of 2021, U-Air was awarded the title of Grade 5A supplier of Shepherd Group. During this reporting period, U-Air became the supplier of Xinda Herding and cooperated with Guangxi Nongken Group and Yurun Group.

Biomedical field: U-Air provided biosafety equipment and BIBO equipment for Liaoning Chengda Bio, which specializes in the R&D, production and marketing of human and veterinary vaccines, and Jinhe Youben P3 large animal room project. 2021, U-Air also won the bidding for the annual clean room replacement project of Huadong Pharmaceutical, the GMP plant purification project of Boshengji cell production base, the Haining Sibai Bio project, the Yunnan Baiyao Shanghai International Center Project and Shenyang Sanjiu Pharmaceutical Project.

Chemical filtration field: U-Air has provided clean air to many data centers to protect customers' data security. U-Air provided chemical filtration equipment for the

data room project of Xinhua Life Insurance Hefei Backup Center.

U-Air has provided clean air solutions for many pulp and paper companies, including Nine Dragons Paper, Jinhai Pulp & Paper, Pingsheng Paper, Dongguan Taichang Paper, Jingui Pulp & Paper, and Asia Pacific Semper, etc. Golden Light Group is a large international paper manufacturing group, and the chemical filter provided by U-Air provides clean air for its automated control room to ensure stable production in the pulp and paper industry.

U-Air provides chemical filters for AMOLED factories such as Nanjing Zhongdian Panda, Jingwang Electronics, China Construction Electronics, Xiamen Meiri Fengchuang, Shanghai Hehui Optoelectronics Co., Ltd., Huaxing T4 Optoelectronics Technology Co., Ltd., etc., for the production process of customers, and provide CLEAN AIR to our customers' production processes, which greatly improves product yields. The chemical filters provided by U-Air also perform well in the semiconductor field, actively adding to the development of the national semiconductor industry and breaking the technological bottleneck of the industry. U-Air has already provided chemical filters for Hefei Jinghe Semiconductor Phase II project.

U-Air's chemical filtration equipment serves customers in the petrochemical industry, including Sinopec, Fujian Petrochemical, Xianglu Petrochemical, Qingdao Steel, etc. In the manufacturing industry of safety glass, typical customers of U-Air's chemical filtration equipment include Wuhan Saint-Gobain. In the data center field, U-Air's chemical filtration equipment has served the Bank of China, China Clearing House, etc.

Emerging application areas: U-Air keeps continues to expand customers in new application areas. During the reporting period, U-Air actively cooperated with JA Technology, a leading enterprise in the photovoltaic industry, to provide guarantee for a clean production environment for solar cells.

### **5.3 Shenzhen Zhongfang**

During the reporting period, Zisun successfully integrated the majority minority shareholding of Shenzhen Zhongfang, and shareholding ratio increased from 73.8672% at the beginning of the period to 98.32%. This equity integration is conducive to further focus management and effectively improve production efficiency. Shenzhen Zhongfang will continue to focus on the development of the demand for CLEAN AIR, vigorously promote the development of melt-blown materials, chemical filtration materials and products in the high-end market, and strive to build the industry's leading chemical filtration materials production base.

#### **5.4 Chongqing Paper Research Institute**

Chongqing Paper Research Institute has efficiently completed the relocation of the production line of the “AGM separator construction project”, grasped the market demand, and continued to supply AGM separator products for mainstream battery manufacturers such as Exide, Narada Power, Chaowei, and Tianneng. After 2 years of battery deep cycle testing, Chongqing Paper Research Institute's AGM separator products have been approved by Microporous, LLC, a U.S. company, and have been supplied in batches during the reporting period.

Chongqing Baoman New Material Co., Ltd., a subsidiary of Chongqing Paper Research Institute, has developed many new high performance products, such as U-class ultra-high efficiency and low resistance PTFE filter media, high efficiency and washable PTFE filter media for vacuum cleaners, low resistance and washable PTFE filter media for household air purifiers, precision liquid filtration filter media, high-end dust removal PTFE filter media, PTFE filter media for atmospheric testing machines, etc.

#### **5.5 Xuanhan Zhengyuan**

Xuanhan Zhengyuan focuses on the R&D, production and manufacturing of high-efficiency and energy-saving products such as micro glass fiber and vacuum insulation panel core material and has the largest production capacity of micro glass fiber in Asia.

In 2021, Xuanhan Zhengyuan promotes the "annual output of 50,000 tons of high-performance ultra-fine micro glass fiber". The project has been implemented on schedule, which fully reflects our management advantages.

Xuanhan Zhengyuan insists on taking technology as the driving force of enterprise development, taking technological innovation as the starting point, and taking the long-term goal of increasing cost and efficiency. In 2021, Xuanhan Zhengyuan will achieve an operating income of RMB 549.0189 million, an increase of 19.03% over the same period last year, and a net profit of RMB 142.3078 million, an increase of 32.53% over the same period last year.

Xuanhan Zhengyuan actively promotes the promotion and application of products to downstream applications and gives full play to the platform advantages of the parent company. During the reporting period, Xuanhan Zhengyuan established two subsidiaries and invested in one company to continue to explore the application of micro glass fiber in new fields.

Based on the geographical advantage of Xuanhan county having the largest marine integrated natural gas field in China, Xuanhan Zhengyuan completed the engineering construction of the Microfiber International Technology Center so that Xuanhan Zhengyuan strongly promotes the Xuanhan government's plan to build China's first full-industry-chain microfiber new material industrial park.

#### **(6) Keep Upright and Innovate, And Move Forward**

During the reporting period, Zisun received various awards and certifications, including the First Prize of Chongqing Science and Technology Progress and Chongqing May Day Labor Certificate. Our high-efficiency air filtration was awarded the single champion product of the Ministry of Industry and Information Technology, and our sound insulation and heat insulation blanket obtained the China Commercial Aircraft Test Qualification Certificate. The company successfully re-evaluated as a second-level enterprise of safety standardization and was also rated as "Environmental Integrity Enterprise", "Chongqing Health Enterprise" and "Yubei District Peaceful

Enterprise Model Unit”. The company won the “Yubei District Mayor Quality Award” and actively participated in the selection of “China Quality Award”.

The company continues to improve its process and manufacturing level internally and actively participates in industry communication and exchange. During the reporting period, the company participated in several industry exhibitions.

#### **(7) Healthy Internal Competition and Self-driven Win-Win**

The company introduced the Competitiveness mechanism, through “setting goals - organization empowerment - evaluation and competitiveness - sharing results”, creating a gold medal culture and other methods to comprehensively enhance employees’ sense of participation, gain and achievement, and rationally allocate and integrate human resources to give full play to employee job potential. The company emphasizes self-driven and win-win, self-management, self-improvement, and refined assessment management such as “daily elite class schedule” to reduce ineffective labor.

#### **(8) Standardized Company Operation and High-Quality Operation Management**

The board of directors, board of supervisors and senior management of the company are all diligent and conscientious in fulfilling their responsibilities, which strictly abide by all laws and regulations. During the reporting period, the company held 8 board meetings, 8 supervisory meetings and 3 shareholders’ meetings.

The company strives to actively establish open, fair, transparent and multi-dimensional investor relations through various channels, enhance investors’ recognition of the company, effectively improve the value and market influence, establish and maintain a good image of the listed company, and promote the long-term healthy development in the capital market.

During the reporting period, the company answered 294 questions from SSE E-interactive investors; participated in 1 online collective reception day for investors in Chongqing in 2021; accepted more than 10 on-site investigations by investors;

participated in dozens of investor exchange calls; kept the investor hotline open and actively answered investor calls.

The management team continues to pay attention to the latest national policy trends, maintain a good operational structure, strengthen internal control supervision and audit, and provide more feasible internal control management demand services and results delivery for the healthy and benign operation, so as to make the internal control system more perfect, reasonable and orderly, guarantee the orderly operation activities, and promote the continuous improvement of corporate governance.





## II Analysis of Main Business

### (1) Analysis Table of Changes in Relevant Items In The Income Statement And Cash Flow Statement

Items	Unit: Yuan Currency: CNY		Change (%)
	Amount in the current period	Amount of the last year	
Operating revenue	1,619,710,842.66	1,884,228,703.44	-14.04
Operating costs	1,118,367,804.01	1,167,101,588.03	-4.18
Selling and distribution expenses	43,617,359.04	48,811,269.44	-10.64
General and administrative expenses	107,248,428.48	107,164,520.12	0.08
Financial expenses	13,209,745.73	14,194,182.53	-6.94
Research and development expenditures	89,510,799.50	72,901,869.46	22.78
Cash flow from operating activities	148,772,678.97	291,270,329.26	-48.92
Cash flows from investment activities	-214,729,467.05	-162,706,081.47	N/A
Cash flows from financing activities	-46,326,348.26	-19,432,987.82	N/A
Other income	39,611,932.99	19,668,353.70	101.40
Investment income	8,917,050.80	7,576,882.93	17.69
Credit impairment loss	-8,850,016.29	-14,686,997.60	N/A

Reasons for changes in operating income : the revenue of masks and meltb-lown materials decreased by 89.27% compared with it in 2020.

Reasons for changes in operating costs : costs are reduced due to lower operating

income

Reasons for changes in selling expenses : employee compensation are reduced due to lower operating income

Reasons for changes in management expenses : basically the same as last year。

Reasons for changes in financial expenses : mainly due to the decrease in interest expenses during the reporting period.

Reasons for changes in R&D expenses : mainly due to the increase in investment in new product research and development during the reporting period.

Reasons for changes in net cash flow from operating activities : : mainly due to the sales of masks and melt-blown materials in 2020 received more money.

Reasons for changes in net cash flow from investing activities : the main reason is that the projects to be raised and invested during the reporting period were successively invested and constructed.

Reasons for changes in net cash flow from financing activities : the main reason is that the bank borrowings obtained in the reporting period decreased compared with it in 2020, and the dividend distribution increased.

Reasons for changes in other income : mainly due to the increase in government subsidies received during the reporting period compared with the same period of last year.

Reasons for changes in investment income : mainly due to the increase in the company's bank principal-guaranteed wealth management income during the reporting period.


reasons for changes in credit impairment losses: mainly because the increase in accounts receivable at the end of the reporting period compared with the beginning of the period decreased compared to the same period last year

## (2) Revenue and Cost Analysis

The operating costs of 2021 decreased by 4.18% over the same period of 2020. Due to the decrease in revenue in 2021, the operating cost decreased accordingly YOY. The decrease of cost in 2021 is smaller than the decrease of revenue (9.86%), mainly because the raw material cost of core products in the current period is at a historically high level

### 1. Main Business by Industry, Product, Region and Sales Model (Unit: RMB YUAN)

#### Main Business by Industry



By Industry	Operating Income	Operating Cost	Gross Margin (%)	Change Of Operating Income Over 2020 (%)	Change Of Operating Costs Over 2020 (%)	Change Of Gross Margin Over 2020 (%)
Clean Air	896,106,459.26	573,374,338.01	36.01	-29.55	-14.71	-11.14 pp
High Efficiency& Energy Saving	694,151,060.63	524,924,180.28	24.38	17.15	8.21	6.25

**Main Business by Product,**

By Product	Operating Income	Operating Cost	Gross Margin (%)	Change Of Operating Income Over 2020 (%)	Change Of Operating Costs Over 2020 (%)	Change Of Gross Margin Over 2020 (%)
Clean Air	896,106,459.26	573,374,338.01	36.01	-29.55	-14.71	-11.14 pp
In Which, The Equipment	397,067,978.58	285,431,171.22	28.12	-10.41	-12.69	+1.88 pp
High Efficiency and Energy Saving	694,151,060.63	524,924,180.28	24.38	17.15	8.21	+6.35 pp

**Main business by region**

By Region	Operating Income	Operating Cost	Gross Margin (%)	Change Of Operating Income Over 2020 (%)	Change Of Operating Costs Over 2020	Change Of Gross Margin Over 2020
Domestic	1,055,218,283.63	711,291,610.91	32.46	-19.75	-10.08	-7.26 pp
Overseas	535,039,236.26	387,006,907.38	27.94	-2.74	5.65	-5.72 pp

**Main business by sales model**

By Sales Model	Operating Income	Operating Cost	Gross Margin (%)	Change Of Operating Income Over 2020 (%)	Change Of Operating Costs Over 2020	Change Of Gross Margin Over 2020
direct sales	1,590,257,519.89	1,098,298,518.29	30.94	-14.71	-5.10	-6.99

**2. Production and sales analysis table**

Main Products	Unit	Production	Sales Volume	Inventory	Change Of Production Over 2020 (%)	Change Of Sales Volume Over 2020 (%)	Change Of Inventory Over 2020 (%)
Filter material	Tons	11,234.26	9,106.28	671.93	-1.74	-12.05	-7.88
Filter equipment	PCS	655,789.00	653,151.00	46,210.00	-49.17	-48.97	6.05
Energy saving material	Tons	76,305.49	56,111.24	3,467.39	8.04	6.83	-25.11

**3. Implementation of major purchase contracts and major sales contracts**

N/A

**4. Cost analysis table**

**Cost analysis table by industry**

By industry	Cost Components	Current Amount	of the total cost (%)	Amount of last year	of total cost in last year (%)	Proportion of changes over previous year (%)	statement
CLEAN AIR	Raw and auxiliary materials, energy and power, labor,	573,374,338.01	52.21	672,247,271.36	58.08	-14.71	
HIGH EFFICIENCY& ENERGY SAVING	manufacturing costs	524,924,180.28	47.79	485,117,635.78	41.92	8.21	

## Cost analysis table by product

By Product	Cost Components	Current Amount	Of The Total Cost (%)	Amount Of Last Year	Of Total Cost In Last Year (%)	Proportion Of Changes Over Previous Year (%)	Statement
Clean Air	Direct Materials	409,477,585.92	71.42	500,359,477.95	74.43	-18.16	产量减少
	Other material	42,038,986.76	7.33	46,373,248.01	6.90	-9.35	产量减少
	labor and manufacturing costs	121,857,765.34	21.25	125,514,545.40	18.67	-2.91	产量减少
High Efficiency & Energy Saving	Direct Materials	347,946,441.06	66.29	316,803,522.19	65.30	9.83	产量增加
	Other material	10,840,565.65	2.07	11,248,607.77	2.32	-3.63	辅助材料回收利用
	labor and manufacturing costs	166,137,173.56	31.65	157,065,505.83	32.38	5.78	产量增加



**5. Changes in the scope of consolidation due to changes in the shareholdings of major subsidiaries during the reporting period**

N/A

**6. Significant changes or adjustments to the company's business, products or services during the reporting period**

N/A

**7. Information on major sales customers and major suppliers**

**A. The main sales customers of the company**

The sales of the top five customers amounted to RMB 414.9122 million, accounting for 25.62% of the total annual sales; among the sales of the top five customers, the sales of related parties amounted to RMB 101.1699 million, accounting for 6.25% of the total annual sales.

During the reporting period, the proportion of sales to a single customer exceeds 50% of the total, and there are new customers among the top 5 customers, or the situation is heavily dependent on a small number of customers

N/A

**B. The main suppliers of the company**

The purchase amount of the top five suppliers was RMB 467,537,700, accounting for 32.37% of the total annual purchase; among the purchase amount of the top five suppliers, the purchase amount of related parties was RMB 195,583,300, accounting for 13.54% of the total annual purchase.

During the reporting period, the proportion of purchases from a single supplier exceeded 50% of the total, and there were new suppliers among the top 5 suppliers or a heavy reliance on a small number of suppliers

N/A

**(4) R&D**

**1. R&D Investment Table**

	<b>Unit: Yuan</b>
Expenditure R&D investment in the current period	89,510,799.50
Capitalized R&D investment in the current period	8,283,905.12
Total R&D investment	97,794,704.62
Proportion of total R&D investment to operating income	6.04%
Proportion of capitalization of R&D investment	8.47%

**2. R&D Personnel Information Table**

The number of R&D personnel in the company	236
The ratio of the number of R&D personnel to the total number of the company	15.71%

**Educational Structure Of R&D Personnel**

Educational Structure Category	Number Of People
PhD	1
Postgraduate	10
Undergraduate	55
College	5
High school and below	164

**Age Structure Of R&D Staff**

Age Structure Category	Number Of People
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Under 30 years old (excluding 30 years old)	52
30-40 years old (excluding 40 years old)	121
40-50 years old (excluding 50 years old)	43
50-60 years old (excluding 60 years old)	20
60 years old and above	0

### (5) Cash flow

Unit: Yuan

Items	Amount of this period	Amount of the last year	Change ratio (%)
Net cash flow from operating activities	148,772,678.97	291,270,329.26	-48.92
Net cash flow from investing activities	-214,729,467.05	-162,706,081.47	N/A
Net cash flow from financing activities	-46,326,348.26	-19,432,987.82	N/A

## IV. Analysis of Assets and Liabilities

### (1) Assets And Liabilities

Item	Closing amount of the current period	The ratio to the total assets (%)	Closing amount of last period	The closing amount of the previous period to the total assets (%)	Changes in the amount compared with the end of the previous period (%)	Statement
Tradable Financial Assets	2,391,632.00	0.08	20,428,616.00	0.74	-88.29	1
Accounts Receivable	630,601,740.67	21.51	487,189,958.67	17.77	29.44	2
Contract Assets	13,133,663.80	0.45	9,821,763.55	0.36	33.72	3
Other Current Assets	12,430,684.45	0.42	8,056,456.66	0.29	54.29	4
Long-Term Equity Investment	85,379,046.38	2.86	39,794,148.03	1.45	114.55	5
Investment In Other Equity Instruments	4,350,000.00	0.15	600,000.00	0.02	625.00	6
Construction In Progress	147,696,378.50	5.04	12,589,767.15	0.46	1,073.15	7

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Long-Term Prepaid Expenses	7,126,744.84	0.24	15,299,957.46	0.56	-53.42	8
Bills Payable	19,085,011.09	0.65	28,333,230.21	1.03	-32.64	9
Other Payables	20,172,881.81	0.69	11,718,151.31	0.43	72.15	10



- 1) Main reasons for changes in financial assets held for trading: mainly due to the redemption of all wealth management products during the reporting period.
- 2) Main reasons for changes in accounts receivable: mainly due to the increase in the company's shipments at the end of the year, and the relatively long order cycle for large projects.
- 3) Main reasons for changes in contract assets: mainly due to the increase in the quality assurance fund receivable within one year during the reporting period.
- 4) Main reasons for changes in other current assets: mainly due to the report expects to increase the deductible value-added tax
- 5) Main reasons for changes in long-term equity investments: mainly due to additional investment in participating companies during the reporting period.
- 6) Main reasons for changes in investments in other equity instruments: mainly due to the increase in foreign investment during the reporting period.
- 7) Main reasons for changes in construction in progress: mainly due to the increase in the construction of projects to be raised and invested in the reporting period.
- 8) Main reasons for changes in long-term deferred expenses: mainly due to the increase in plant decoration costs during the reporting period.
- 9) Main reasons for changes in notes payable: mainly due to the payment of notes due during the reporting period
- 10) Main reasons for changes in other payables: mainly due to the increase in retirement payments paid on behalf of the Company during the reporting period.

## **(2) Overseas Assets**

The overseas assets are 791,999.49 (unit: yuan currency: RMB), accounting for 0.03% of the total assets.

## **(3) Restrictions On Major Assets as At the End of The Reporting Period**

At the end of the period, there were mortgages, pledges, freezes, etc. with restrictions on use of RMB 8,402,697.94. All that are all other monetary funds, which

were bank acceptance bill deposits and guarantee deposits.

## **V. Analysis of Industry Operating Information**

### **VI. Analysis of Investment Status**

#### **(1) Significant equity investment**

N/A

#### **(2) Significant non-equity investments**

N/A

#### **(3) Financial assets measured at fair value**

N/A

#### **(4) The specific progress of major asset restructuring and integration during the reporting period**

N/A

### **VII. Significant Assets and Equity Sales**

N/A

### **VIII. Analysis of major holding companies**

**Refer to the original Chinese version report.**

### **IX. The Company's Discussion and Analysis on The Future Development of The Company**

All details refer to Chapter 3 in this report.



#### (四)可能面对的风险

##### 1. Risk of Changes in Raw Material Costs

In the cost composition of micro glass fiber, natural gas costs account for a relatively high proportion of the total cost, and the price of natural gas has a greater impact on the price of micro glass fiber.

Fluctuations in natural gas prices in the future will directly cause fluctuations in the price of micro glass fiber. If the price and production cost of micro glass fiber fluctuate significantly in the future, it will directly affect the company's net profit.

##### 2. Risk of Changes In Export Tax Rebate Policy.

Our export sales revenue accounted for about 33.77% of the total combined main business revenue of 2021.

With the changes in the country's economic situation, the country may adjust the relevant export tax rebate policies in the future.

If the export tax rebate rate of our main products is reduced or cancelled, it may have an adverse impact on the net profit.

##### 3. Risk of exchange rate changes.

Due to the large proportion of our export business, the current exchange rate in the international market fluctuates frequently.

If the exchange rate fluctuation of RMB against the US dollar and the euro continues to increase in the future, the company will face the risk of exchange loss due to exchange rate fluctuations.

##### 4. The Risk of Large Book Balance of Accounts Receivable.

Zisun implements a consistent and prudent credit policy, and the increase in the book balance of accounts receivable is mainly due to changes in the sales revenue and customer structure.

However, if the book balance of accounts receivable continues to rise sharply in the future, on the one hand, the operating cash flow will continue to decrease, which will put the company under greater financial pressure, which may lead to the risk of not being able to raise funds in time for necessary research and development and investment in fixed assets. On the other hand, the possibility of bad debts in the company's accounts receivable increases, increasing the risk of uncollectible accounts receivable.

5. The risk of talent shortage.

The rapid growth of the company is accompanied by the growing demand for talents, especially the demand for high-end technical talents and management talents is obvious in the short term.

6. Goodwill impairment risk.

There is a large goodwill in the process of merger and acquisition. If the performance of the acquired party develops in an unfavorable direction in the future, there may be impairment of goodwill, which will have a certain impact on the company's performance.

## Chapter 4 Company Governance

### I. Description of Corporate Governance

During the reporting period, according to the relevant laws and regulations such as the Company Law, the Securities Law, and the Corporate Governance Guidelines for Listed Companies, as well as the requirements of the Articles of Association, Zisun has continuously improved its corporate governance structure and internal control system. The powers and responsibilities among the powers, decision-making bodies, supervisory bodies and management are clearly defined, and the operation is standardized, effectively protecting the legitimate rights and interests of the company and shareholders.

At present, Zisun, in accordance with the requirements of listed companies, has established a corporate governance structure with clear rights and responsibilities, mutual checks and balances, and an effective internal control system for supervision. Zisun operates in strict accordance with the law. The actual status of company governance complies with the requirements of relevant laws and regulations. Zisun does not have the problem that the regulatory authorities require rectification within a time limit.

#### **(1) About Shareholders and the General Meeting of Shareholder:**

Strictly following the regulations and requirements of the Articles of Association and the Rules of Procedure for the General Meeting of Shareholders, Zisun regulates the convening, convening and deliberation procedures of the general meeting of shareholders, and hires lawyers to issue legal opinions on the legality of the general meeting of shareholders. Zisun ensures the equal status of all shareholders, especially small and medium shareholders, and fully exercises the legitimate rights and interests of shareholders. Zisun guarantees the shareholders' right to know, participate and vote on the company's major issues.

#### **(2) The Relationship Between the Controlling Shareholder and the Listed**

## Company

The controlling shareholder of the company, who did not directly or indirectly interfere in the company's decision-making and business activities beyond the general meeting of shareholders exercises the rights of the investor through the general meeting of shareholders. The company is separated from the controlling shareholder in terms of personnel, assets, finance, organization and business.

Zisun has independent and complete business and independent management capabilities. Our board of directors, supervisory board and management are capable to operate independently. During the reporting period, Zisun did not provide guarantee for the controlling shareholder and its affiliated enterprises, nor did the controlling shareholder occupy the company's funds for non-operational purposes.

### **(3) Regarding The Directors and The Board of Directors and The Professional Committees of The Board of Directors**

Zisun selects and appoints directors in strict accordance with the provisions of the “Articles of Association”. The number and composition of directors comply with relevant laws and regulations. All directors are able to perform their duties conscientiously and diligently by actively participating in relevant business training and earnestly learning relevant laws and regulations. The rights, obligations and responsibilities of company directors are clearly defined.

### **(4) Supervisors and the Supervisory Committee**

The Supervisory Committee performs its duties diligently and responsibly, in strict accordance with relevant laws and regulations and the relevant provisions of the Articles of Association. The board of supervisors supervises the operation of the company in accordance with the law including supervising the company's board of directors and senior management to exercise their powers, supervising the company's related transactions, financial status and the preparation of regular reports.

### **(5). Relevant Stakeholders**

Zisun fully respects the legal rights of customers, employees, suppliers and partners, the public and other stakeholders. Zisun strives to actively cooperate with stakeholders and jointly promote the sustainable and healthy development of the company. We take into account the simultaneous improvement of the economic and social benefits of the company.

### **(6) Information Disclosure and Transparency**

Zisun has formulated the “Information Disclosure Management System” and “The Accountability System for Major Errors in Information Disclosure in Annual Reports” etc., which clarify the person responsible for information disclosure, and fulfill the obligation of information disclosure in a true, accurate, complete and timely manner. The company discloses the latest information of the company in the newspapers, periodicals and websites designated by the Zisun, so that all shareholders have an equal right to know.

Both the company and its controlling shareholders have formulated a registration and filing system for insiders of inside information in accordance with the requirements of the regulatory authorities, which regulates the management of inside information by the company and controlling shareholders, strengthens the confidentiality of inside information, and maintains the principle of fairness in information disclosure.

During the reporting period, the company strictly followed the “Inside Information Insider Management System” to keep the inside information confidential and the insider's registration and filing work, and strictly control the insider to the minimum scope and ensure that the major information will not be leaked during the window period.

Our directors, supervisors, and senior managers did not use inside information to buy or sell the company's stock during the sensitive period. Corporate governance is a long-term task for enterprises. Zisun will continue to improve the corporate governance structure, the internal control mechanism of the company, and further enhance the company's directors, supervisors and senior management staff's awareness of

standardized operation and risk control, and promote the company's sustainable, stable and healthy development.

**Whether there is a material difference between corporate governance and laws, administrative regulations and the Zisun regulations on listed company governance; if there is a material difference, the reasons shall be explained**

N/A

**II. The Specific Measures Taken by The Controlling Shareholder and Actual Controller of The Company to Ensure the Independence of The Company's Assets, Personnel, Finance, Organization, Business, Etc., As well as the solutions, work progress and follow-up work plans that affect the company's independence.**

N/A

**If the controlling shareholder, actual controller and other units controlled by it are engaged in the same or similar business as the company.**

**The impact of horizontal competition or major changes in horizontal competition on the company, the resolution measures that have been taken, the progress of the resolution and the follow-up resolution plan**

N/A

**III. Brief Introduction to The General Meeting of Shareholders**

Session	Date	Search Index	Disclosure Date	Meeting Outcome
2021 1st Extraordinary Meeting	2021-4-30	www.sse.com.cn	2021-4-30	Announcement No. 2021-044
2020 Annual Meeting	2021-5-18	www.sse.com.cn	2021-5-19	Announcement No. 2021-049

2021 2nd Extraordinary

2021-9-13

www.sse.com.cn

2021-9-14

Announcement No. 2021-078

General

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Preference shareholders with restored voting rights request to convene an extraordinary general meeting

N/A

Description of the General Meeting of Shareholders

N/A





#### IV. Information of Directors, Supervisors and Senior Management

(1) Changes in shareholding and compensation of the current and resigned directors, supervisors and senior executives during the reporting period Current and resigned directors, supervisors and senior management during the reporting period.

Name	Job Title	Age	Term Start	Term End	Shares Held at The Beginning of The Year	Shares Held at The End of The Year	Changes In Shares During the Year	Total Pre-Tax Remuneration (Ten Thousand Yuan)
Mr. GUO Mao	Chairman	52	2020/4/23	2023/4/23	265,758,863	265,758,863	0	134.54886
Mr. LIEW Xiaotong	Director, General Manager	51	2020/4/23	2023/4/23	180,180	180,180	0	120.00
Ms. LIU Xiuqin	Vice Chairman	50	2020/4/23	2023/4/23	204,800	254,800	50,000	101.846431
Mr. TAO Wei	Director	47	2020/4/23	2023/4/23	68,300	170,789	102,489	16.598560
Mr. Yi Wei	Director	35	2020/4/23	2023/4/23	0	110,419	110,419	147.758137
Ms. GUO Sihan	Director	27	2020/4/23	2023/4/23	0	0	0	15.548912
Dr. JIANG Jihai	Independent Director	47	2020/4/23	2023/4/23	0	0	0	9.60

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Dr. LIU Bin	Independent Director	60	2020/4/23	2023/4/23	0	0	0	9.600
Dr HUANG Zhong	Independent Director	40	2020/4/23	2023/4/23	0	0	0	9.60
Mr. ZHENG Kaiyun	Supervisor	44	2020/4/23	2023/4/23	0	0	0	29.782962
Mr. DU Delu	Supervisor	56	2020/4/23	2023/4/23	0	0	0	24.383257
Ms. ZENG Ying	Supervisor	32	2020/4/23	2023/4/23	0	0	0	31.968873
Mr. QIN Dajiang	Deputy General Manager	41	2020/4/23	2023/4/23	136,500	150,100	13,600	74.932770
Ms. ZHOU Lingya	Deputy General Manager	40	2020/4/23	2023/4/23	136,500	131,500	-5,000	199.835438
Mr. YU Yangming	Deputy General Manager	43	2020/4/23	2023/4/23	116,104	87,104	-29,000	64.509967
Mr. YANG Jinming	Deputy General Manager, Chief Financial Officer	36	2020/4/23	2023/4/23	27,430	169,062	141,632	35.164249
Ms. XIE Jia	Deputy General Manager, Board Secretary	36	2020/4/23	2023/4/23	50,000	144,732	94,732	105.632611
TOTAL	/	/	/	/	266,678,677	267,157,549	478,872	1,131.311027

**(2) Employment of current and outgoing directors, supervisors and senior management during the reporting period**

A. Employment in shareholder

N/A

B. Employment in other organization

<b>Name</b>	<b>Company Name</b>	<b>Positions</b>	<b>Term Start Date</b>	<b>Term End Date</b>
Mr. TAO Wei	Matsushita Vacuum Energy Saving New Material (Chongqing) Co.	President and Vice President	2016/08/	
Dr. JIANG Jihai	College of Economics and Business Administration, Chongqing University	Professor	2013/09	
Dr. JIANG Jihai	Chongqing Baiya Sanitary Products Co.	Independent Directors	2021/08	
Dr HUANG Zhong	Southwest University of Political Science and Law, School of Civil and Commercial Law	Professor, Doctoral Supervisor	2007	
Dr HUANG Zhong	Chongqing Qinsuo Lian Plastic Co. Ltd	Independent Directors	2017/08	
Dr HUANG Zhong	Xin Anjie Environmental Sanitation Co. Ltd	Independent Directors	2020/09	

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Dr HUANG Zhong	Shandong Mining Machinery Group Co. Ltd	Independent Directors	2021/05
Dr HUANG Zhong	Chongqing Ant Consumer Finance Co. Ltd	Independent Directors	2021/06
Dr. LIU Bin	College of Economics and Business Administration, Chongqing University	Professor, Doctoral Supervisor	1994/04
Dr. LIU Bin	Chongqing Department Store Co. Ltd	Independent Directors	2016/01
Dr. LIU Bin	Chongqing Xiaokang Industrial Group Co. Ltd	Independent Directors	2017/04
Dr. LIU Bin	Chongqing Hualong Network Group Co. Ltd	Independent Directors	2016/12
Dr. LIU Bin	Sichuan Gaojin Co., Ltd	Directors	2020/07
Dr. LIU Bin	Chongqing Cultural Tourism Creative Development Co., Ltd.	Directors	2019/1
Ms. LIU Xiuqin	Chongqing Hongjiu Fruit Products Co. Ltd	Independent Directors	2020/07
Description of employment in other units	N/A		

### (3) Remuneration of Directors, Supervisors and Senior Management

Decision-making procedures for compensation of directors, supervisors and senior management	Directors, supervisors and senior executives are organized and assessed by the Remuneration and Assessment Committee of the Company's Board of Directors in accordance with the Articles of Association and the relevant internal regulations of the Company.
The basis for determining the compensation of directors, supervisors and senior management	The remuneration of directors, supervisors and senior management personnel is determined and distributed in accordance with the provisions of the "Working Rules of the Remuneration and Appraisal Committee" of the company's board of directors, in combination with their business performance, work ability, job rank, and annual performance targets.
Actual payment of compensation to directors, supervisors and senior management	Refer to the table of VI (1)
Total actual remuneration received by all directors, supervisors and senior management at the end of the reporting period	1131.311027 million

**(4) Changes in directors, supervisors and senior management of the company**

N/A

**(5) Explanation on Punishments by Securities Regulatory Authorities in the Past Three Years**

N/A

## V. Information about the Board of Directors held during the reporting period

Session	Date	Meeting Resolution refer to
The 8th meeting of the 4th Board of Directors	2021-2-8	the Announcement 2021-006
The 9th meeting of the 4th Board of Directors	2021-4-13	the Announcement 2021-017
The 10th meeting of the 4th Board of Directors	2021-4-19	the Announcement 2021-023
The 11th meeting of the 4th Board of Directors	2021-6-1	the Announcement 2021-053
The 12th meeting of the 4th Board of Directors	2021-7-6	the Announcement 2021-064
The 13th meeting of the 4th Board of Directors	2021-8-25	the Announcement 2021-067
The 14th meeting of the 4th Board of Directors	2021-10-27	the Announcement 2021-083
The 15th meeting of the 4th Board of Directors	2021-12-08	the Announcement 2021-092

## VI. Directors' Performance of Duties

### (1) Directors' participation in the board of directors and shareholders' general meetings

Name	Board Meetings					General Meetings
	Number Of Meetings to Attend	Attendance In Person	Attendance By Means of Communication	Delegated Attendance	Absence	Number Of Meetings to Attend
Mr. GUO Mao	8	8	4	0	0	3
Mr. LIEW XIAOTONG	8	8	4	0	0	3
Ms. LIU Xiuqin	8	8	4	0	0	3
Mr. TAO Wei	8	8	4	1	0	3

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Mr. YI Wei	8	8	4	0	0	3
Ms. GUO Sihan	8	8	4	0	0	3
Dr. JIANG Jihai	8	8	4	0	0	3
Dr. LIU Bin	8	8	4	0	0	3
Dr HUANG Zhong	8	8	4	0	0	3

No. of board meetings held during the year: 8

Of which,

No. of on-site meetings: 4

No. of meetings held by means of communication: 4

No. of meetings held on-site combined with communication methods: 0

### **(2) Objections raised by directors on matters related to the company**

N/A

### **(3) Others**

N/A

## **VII. Special Committees Under the Board of Directors**

### **(1) Special Committees under the Board of Directors**

- The Audit Committee: Dr. LIU Bin, Dr. JIANG Jihai, Ms. LIU Xiuqin
- Nomination Committee: Dr. HUANG Zhong, Dr. JIANG Jihai, Mr. YI Wei
- Remuneration and Appraisal Committee: Dr. HUANG Zhong, Dr. LIU Bin, Ms. GUO Sihan
- Strategy Committee: Ms. GUO Mao, Mr. TAO Wei, Dr. JIANG Jihai

**(2) During the reporting period, the Audit Committee held 4 meetings**

**(3) During the reporting period, the Remuneration and Appraisal Committee held 2 meetings**



(4). During the reporting period, the Strategy Committee held 3 meetings

(5). The specific circumstances of the objection: N/A

### VIII. Explanation of The Supervisory Board Finding That the Company Has Risks

The Supervisory Committee has no objection to the supervision matters during the reporting period.

### IX. At the End of The Reporting Period, Employees Of The Parent Company And Major Subsidiaries

#### (1) Employee Information

- Number of current employees of parent company: 440
- Number of current employees of major subsidiaries: 1056
- The total number of active employees: 1496
- Number of retirees for which the parent company and its major subsidiaries are required to bear the expenses: 0

#### Employees by Profession

Type	Number
Production personnel	920
salesperson	98
technician	235
financial personnel	43
Administrative staff	200
Total	1496

#### Employees by Education Level

Level	Number
-------	--------

Master's degree and above	25
Undergraduate	225
College	152
High school and below	1094
Total	1496

## (2) Salary Policy

Salary policy is a full reflection of the reward for the employee's work. The company is based on the principle of contribution reflecting the corresponding remuneration, and the overall goal is to motivate talents to work hard to create better economic and social benefits.

Zisun salary categories include basic salary, job salary, performance bonus, allowance, subsidy, assessment award, etc. In accordance with The Labor Law, combined with the economic level of each subsidiary and the industry wage level, Zisun has formulated the company's salary scale table, and set the company's departments at all levels and various types of work salary standards to fully stimulate the enthusiasm and creativity of employees.

According to the development stage, Zisun has formulated the employee equity incentive plan and employee stock ownership plan, so as to deepen the company's incentive system, built a long-term effective incentive and restraint mechanism, further improve the company and employees' benefit sharing mechanism, and enhance the company's cohesion and competitiveness, which is beneficial to the company sustainable development.

## (3) Training Program

The training program is divided into internal training and external training. Internal training includes, but is not limited to, employee job skills training, team performance management training, special production safety training, and target management and execution improvement training. External training includes, but is not

limited to, job certificate training and professional skills training.

Staff job skills training. It includes induction training, job skills education, safety knowledge training, intellectual property training, legal training, etc. The company's enterprise management department cooperates with various departments and factories to carry out

Team performance management training. The purpose is to guide the organization to pursue excellent performance, improve the quality of products, services and operations, improve the level of enterprise management, and enhance the competitive advantage.

Special training on production safety, conducted by the enterprise management department which regularly organizes special training for each factory, aiming to strengthen employees' awareness of standardized operation and safe production, no less than twice a year.

Target management and training to improve execution is to improve the efficiency of enterprise management and operation and to ensure that the business objectives of the enterprise are decomposed and implemented at every level.

Job license training. For positions that require certification, organize employees to participate in license training, review and annual audit training.

Professional skills training. It is to organize people with the positions acquiring higher professional skills to participate in professional training. The training topics include marketing, on-site management, enterprise structure, production technology, etc.

The purpose is to strengthen the professional foundation of each professional team of the company, cultivate teamwork awareness, broaden professional ideas and enhance market competitiveness.

#### **(4) Outsourcing of Labor Services**

Total man-hours for labor outsourcing: 1,393,255.70 hours

Total remuneration paid for labor outsourcing: RMB 27,492,767.36

## **X. Profit Distribution or Capital Reserve Conversion Plan**

### **(1) The Formulation and Adjustment of The Cash Dividend Policy**

#### **A. Formulation and adjustment of the cash dividend policy**

During the reporting period, no adjustment was made to the Company's cash dividend policy. The current cash dividend policy was considered and approved by the first extraordinary general meeting of the Company in 2014 on May 6, 2014, and the specific profit distribution policy is detailed in the relevant articles of profit distribution in the Articles of Association. During the reporting period, the Company's profit distribution plan strictly implemented the provisions of the relevant dividend distribution policy.

In order to further plan the profit distribution and cash dividend matters of the Company and guide shareholders to establish long-term investment and rational investment concepts, the Board of Directors of the Company formulated the "Proposal on the Company's Shareholder Return Planning for the Next Three Years (2015-2017)", which was voted by the Company at the First Extraordinary General Meeting in 2015. The Company held the fourteenth meeting of the third session of the Board of Directors on April 19, 2018, and considered and approved the Proposal on the Company's Shareholder Return Plan for the Next Three Years (2018-2020), which was voted by the Company at the 2017 Annual General Meeting. The company held the eighth meeting of the fourth session of the board of directors on February 8, 2021 and considered and passed the Zisun shareholder return plan for the next three years (2021-2023)", which was considered and passed at the shareholders' meeting of the company's first extraordinary shareholders' meeting in 2021.

#### **B. Implementation of cash dividend policy**

The 2021 profit distribution and capital reserve conversion plan: the company plans to use the total share capital on the equity registration date when the profit distribution plan is implemented as the base and use the capital reserve to transfer 4

shares for every 10 shares to all shareholders. All shareholders will distribute a cash dividend of RMB 1.05 (tax included) for every 10 shares.

If there is a change in the company's total share capital before the equity registration date for the implementation of equity distribution, it is proposed to maintain the distribution amount per share unchanged, and the total distribution amount will be adjusted accordingly. The remaining undistributed profits are carried forward for distribution in subsequent years. The above profit distribution plan is yet to be reviewed and approved at the company's 2021 annual general meeting.

- Whether it complies with the provisions of the company's articles of association or the requirements of the resolution of the general meeting of shareholders  
-Yes
- Whether the dividend standard and ratio are clear and clear  
-Yes
- Whether the relevant decision-making procedures and mechanisms are complete  
-Yes
- Whether the independent directors performed their duties and played their due role  
-Yes
- Whether minority shareholders have the opportunity to fully express their opinions and demands, and whether their legitimate rights and interests have been fully protected  
-Yes

**(3) If it is profitable during the reporting period and the parent company's profit available to shareholders for distribution is positive, but no cash profit distribution plan has been proposed, the company shall disclose the reasons in detail and the purpose and use plan of the undistributed profits.**

N/A

## **XI. Status and Impact of Company Equity Incentive Plans, Employee Stock Ownership Plans or Other Employee Incentives**

**(1) Relevant incentive matters have been disclosed in the temporary announcement and there is no progress or change in the subsequent implementation.**

All details refer to the Announcement of 2021-031, 032, 033, 034 on April 4<sup>th</sup>, 2021, the Announcement of 2021-054 on June 2<sup>nd</sup>, 2021, the Announcement of 2021-063 on July 7<sup>th</sup>, 2021, the Announcement of 2021-067 on August 26<sup>th</sup>, 2021, the Announcement of 2021-078 on September 14<sup>th</sup>, 2021, and the Announcement of 2021-090 on November 24<sup>th</sup>, 2021.

**(2) Incentives not disclosed in the temporary announcement or with follow-up progress**

N/A

**(3) Share incentives granted to directors and senior executives during the reporting period**

**(4) The evaluation mechanism for senior management personnel and the establishment and implementation of the incentive mechanism during the reporting period**

## **XII. Construction and Implementation of Internal Control System During the Reporting Period**

In order to strengthen and standardize the internal control of enterprises, improve the level of enterprise management and risk prevention, the company continues to optimize and improve the construction of the company's internal control system, strengthen the Internal Audit Oversight.

The company established the "Chongqing Zisun Technology Co., Ltd. Internal Audit System", which aims to improve the comprehensive risk management

mechanism, improve the company's internal control system, strengthen the company's self-discipline, improve business management, ensure the healthy development of the company's production and business activities, and improve economic benefits, to realize the preservation and appreciation of the company's assets. Continuously inspect and evaluate the integrity, rationality and effectiveness of the company's internal control system, and continuously monitor the legality, compliance, authenticity and integrity of the company's economic activities. Assist in the establishment and improvement of the anti-fraud mechanism, determine the key areas, key links and main contents of anti-fraud, and focus on reviewing the integrity of the internal control system for matters such as external investment, purchase and sale of assets, external guarantees, related transactions, use of raised funds, and information disclosure. the validity, rationality and effectiveness of implementation. In order to adapt to the changing external environment and internal management requirements.

The company has a legal review and supervision department to supervise the implementation of the company's management philosophy, corporate culture, strategic planning, and annual goals. Supervise R&D design, marketing management, etc., improve management opinions and rectification measures, and supervise the implementation of inspections. Continuously promote and enhance the company's culture and level of supervision and execution and improve the company's own risk management and control capabilities.

During the reporting period, the aforesaid internal control system was well implemented, the implementation of internal control was basically effective, and there was no significant legacy.

Explanation on material defects of internal control during the reporting period:

N/A

### **XIII. Management and Control of Subsidiaries During the Reporting Period**

Zisun has built an internal control system construction system based on the

headquarters system and implemented by all subsidiaries, centers and departments.

As of the end of the reporting period, the company continued to check and evaluate the completeness, rationality and implementation effectiveness of the internal control systems of its subsidiaries, and conducted inspections on the legality, compliance, authenticity and integrity of its economic data and economic activities. Audits, including financial reports, performance flashbacks, voluntary disclosures of forward-looking financial information, etc.

The company continues to supervise the operation and management of each subsidiary company's due diligence, manages and supervises matters such as project investment, production and operation, and continuously improves the standard operation level of the subsidiary companies.

The internal audit department of the company regularly conducts on-site inspections on the system construction and business activities of the branch companies and tracks the problems existing in the inspection process and urges rectification. Strengthen the internal management control and coordination of branch companies and improve the operation and management level of branch companies.

#### **XIV Relevant Information on The Internal Control Audit Report**

At the Sixteenth Meeting of the Fourth Session of the Board of Directors of the Company, the "Proposal on the Confirmation of the Company's 2021 Annual Self-Evaluation Report on Internal Control" was considered and approved, the full report is available on the Shanghai Stock Exchange at [www.sse.com.cn](http://www.sse.com.cn) 披露的内容 on March 10, 2022.

**Whether to disclose the internal control audit report:**

- YES

**Type of opinion on the internal control audit report:**

Standard unqualified opinion



**XV. Listed companies governance special action self-examination problems  
rectification**

N/A



## Chapter 5 Environmental and Social Responsibility

### I. Environmental information

#### (1) Explanation On the Environmental Protection of The Company and Its Main Subsidiaries That Are Key Pollutant Discharge Units Announced by The Environmental Protection Department

Zisun attaches great importance to environmental protection work, strictly implements and implements the Environmental Protection Law of the People's Republic of China and other relevant laws and regulations. Adhering to the company vision of "working hard for energy conservation and cleanliness, and striving for the happiness of future generations", Zisun continues to carry out standardized management of environmental protection and pollution prevention.

During the reporting period, the company did not have any environmental pollution accident, was not subject to environmental administrative penalties, and discharged the three wastes up to the standard.

The company has passed the ISO14001:2015 environmental management system certification and passed the clean production audit. In recent years, the company has successively won the title of Environmental Credit Evaluation and Environmental Integrity Unit.

Zisun has achieved the standard treatment and comprehensive utilization of wastewater, meets the requirements of environmental protection laws and regulations and the production and reuse water standards, reduces environmental pollution and social impact, protects and improves environmental quality, and meets the needs of clean production and water conservation.

Zisun continues to improve the production line process, reduce the use of natural gas, improve production efficiency, reduce energy consumption, and continue to carry out standardized management of environmental protection and pollution prevention.

#### A. Pollution Information

- Exhaust Emission Standards : During the reporting period, Zisun strictly follows the regulations and discharges up to the standard, and there is no excessive discharge.

- Wastewater Discharge Standard :

Main monitoring indicators: pH, suspended solids, COD, ammonia nitrogen, total phosphorus, animal and vegetable oils.

Number of discharge outlets: 1; distribution

Location: next to the dormitory building.

Monitoring results: monitoring does not exceed the standard. Sewage discharge into the park sewage treatment plant.

- Noise Emission Standard :

Main source: Equipment operation.

Monitoring results: The monitoring does not exceed the standard.

## **B. Construction and Operation of Pollution Prevention and Control Facilities**

Xuanhan Zhengyuan adopts a variety of pollution prevention and control facilities and ensures that the environmental protection facilities are in good operation.

## **C. Environmental Impact Assessment of Construction Projects And Other Environmental Protection Administrative Permits**

Xuanhan Zhengyuan conducts environmental impact assessment in strict accordance with regulations, and obtains project acceptance and discharge permits, and obtains project approval documents respectively.

## **D. Contingency Plan for Unexpected Environmental Incidents**

In order to implement the requirements of relevant laws, regulations and rules such as the Environmental Protection Law of the People's Republic of China, the Emergency Response Law of the People's Republic of China, the National Emergency Response

Plan for Environmental Emergencies and the Interim Measures for the Management of Emergency Response Plans for Environmental Emergencies, the company has established and improved the emergency rescue system for environmental emergencies, so as to improve the prevention, emergency response and disposal capability of environmental emergencies.

The company avoids and reduces the occurrence of environmental emergencies as much as possible by implementing effective preventive and monitoring measures. By responding quickly to environmental emergencies and carrying out effective emergency actions, the company effectively eliminates and reduces the pollution hazards of environmental emergencies. The company has prepared a contingency plan for environmental emergencies, which has been filed with the environmental protection department of Xuanhan County.

**E. Environmental Self-Monitoring Program**

N/A

**F. Administrative Penalties for Environmental Issues During the Reporting Period**

N/A

**G. Other Environmental Information That Should Be Made Public**

N/A

**(2) Explanation On Environmental Protection of Companies Other Than Key Pollutant Discharge Units**

N/A

**(3) Relevant Information That Is Conducive to Protecting Ecology, Preventing and Controlling Pollution, And Fulfilling Environmental Responsibilities**

N/A

#### **(4) Measures Taken to Reduce Carbon Emissions During the Reporting Period and Their Effects**

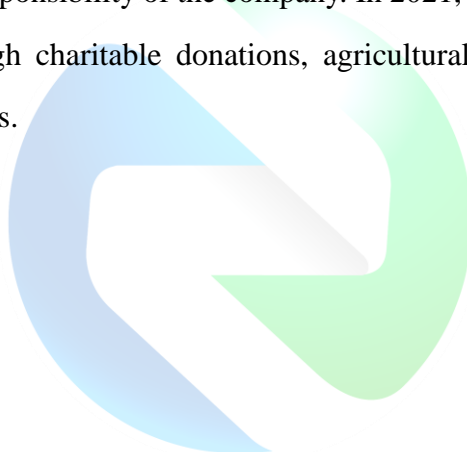
N/A

## **II. Social Responsibility Work**

For details, please refer to our ESG report 2021.

## **III. Consolidate and Expand the Achievements of Poverty Alleviation and Rural Revitalization**

Zisun is well aware of the social responsibility of the company and actively undertakes the social responsibility of the company. In 2021, Zisun has invested a total of 378,600 yuan through charitable donations, agricultural product assistance, and funding for poor students.



## Chapter 6 Important Matters

### I. Fulfillment of Commitments

#### **(1) Commitments Made by The Company's Actual Controller, Shareholders, Related Parties, Acquirers And The Company And Other Relevant Parties During The Reporting Period Or Continuing To The Reporting Period.**

All details refer to SSE website (<http://www.sse.com.cn/disclosure/credibility/supervision/promisho/>)

#### **(2) There Is a Profit Forecast for The Company's Assets or Projects, And the Reporting Period Is Still In The Profit Forecast Period, The Company's Assets Or Projects Are Still In The Profit Forecast Period.**

N/A

#### **(3) Completion Of Performance Commitments and Its Impact on Goodwill Impairment Testing**

During the reporting period, Suzhou U-air, Papermaking Institute , Shenzhen Zhongfang had no goodwill impairment in the evaluation test.

**II. During the Reporting Period, Non-Operating Capital Occupation by The Controlling Shareholder and Other Related Parties**

N/A

**III. Violation of Guarantee**

N/A

**IV. Explanation of The Board of Directors of The Company on the "Non-Standard Opinion Audit Report" of the Accounting Firm**

N/A

**V. The Company's Analysis and Explanation on The Reasons and Effects of Changes in Accounting Policies, Accounting Estimates or Correction of Major Accounting Errors**

(1) The company's analysis and explanation on the reasons and impact of changes in accounting policies and accounting estimates

N/A

(2) The company's analysis and explanation on the reasons and impact of the correction of major accounting errors

N/A

(3) Communication with the former accounting firm

N/A

(4) Others

N/A

## VI. Appointment and Dismissal of Accounting Firms

### Current appointment

Name of domestic accounting firm	Baker Tilly China Certified Public Accountants (Baker Tilly China) (Special General Partnership)
Remuneration of domestic accounting firms	57
Audit period of domestic accounting firm	12
Name of overseas accounting firm	N/A
Remuneration of overseas accounting firms	N/A
Audit period of overseas accounting firm	N/A

	Name	Remuneration
Internal Control Audit Accounting Firm	Baker Tilly China Certified Public Accountants (Baker Tilly China)	20
Financial Consultant	Huafu Securities Co.	15
Sponsor	Huafu Securities Co.	0

### Description of Appointment and Dismissal of Accounting Firms

The Company held the second meeting of the Audit Committee of the Fourth Session of the Board of Directors for 2021 on April 16, 2021, and reviewed the professional competence, investor protection capability, independence, integrity status and other information of TIANZHI International CPA Firm (Special General Partnership), and considered that it could follow the professional standards of independence, objectivity and impartiality and carry out the audit work independently, and agreed to re-appoint Baker Tilly China Certified Public Accountants (Baker Tilly China) (Special General Partnership) as the auditor of financial report and internal control of the Company for 2021.



The company held the 2020 annual general meeting on May 18, 2021, and considered and approved the proposal on the renewal of the appointment of the accounting firm.

**Explanation on the change of the accounting firm during the audit period**

**VII. Situations at Risk of Delisting**

N/A

**VIII. Bankruptcy and Reorganization Related Matters**

N/A

**IX. Major Litigation and Arbitration Matters**

**(1) Litigation and arbitration matters have been disclosed in temporary announcements and there is no subsequent progress**

All details refer to the announcement No. 2019-068 on August 14<sup>th</sup> 2019 and the announcement No. 2019-075 on October 11<sup>th</sup> 2019.

**(2) Litigation and arbitration that were not disclosed in the interim announcement or that have follow-up progress**

N/A

**X. The Listed Company and Its Directors, Supervisors, Senior Managers, Controlling Shareholders and Actual Controllers Are Suspected of Violations of Laws and Regulations, Punishments and Rectifications**

N/A

**XI. Explanation on The Integrity of The Company and Its Controlling Shareholder and Actual Controller During the Reporting Period**

N/A

**XII. Significant Related Transactions**

**(1) Related Party Transactions Related to Daily Operations**

A. Matters that have been disclosed in the interim announcement and have no progress or change in subsequent implementation

N/A

B. Matters that have been disclosed in the interim announcement but have progress or changes in subsequent implementation.

All details refer to the Announcement on the 2020 Annual Related Party Transactions and the 2021 Annual Related Party Transactions Expectation (No. 2021-025) on April 20<sup>th</sup>, 2021.

C. Matters not disclosed in the interim announcement

N/A

**(2) Affiliated Transactions Arising from The Acquisition and Sale of Assets or Equity**

N/A

**(3) Significant Connected Transactions Involving Joint Foreign Investment**

A. Matters that have been disclosed in the interim announcement and have no progress or change in subsequent implementation

All details refer to the announcement No. 2021-010 on February 9<sup>th</sup> 2021, the announcement No. 2021-045 on May 8<sup>th</sup>, 2021, the announcement No. 2021-037 on February 9<sup>th</sup>, the announcement No. 2021-060 on July 1<sup>st</sup> 2021.

B. Matters that have been disclosed in the interim announcement but have progress or changes in subsequent implementation

N/A

C. Matters not disclosed in the interim announcement

N/A

**(4) Credit And Debt Transactions with Related Parties**

N/A

**(5) Financial business between the company and the financial company with an associated relationship, the financial company controlled by the company and the related party**

N/A

**(6) Others**

N/A

### **XIII Significant Contracts and Their Performance**

**(1) Entrustment, Contracting and Leasing Matters**

N/A

**(2) Guarantee**

<b>External Guarantee</b>	<b>Amount</b>
Total amount of guarantees to subsidiaries during the reporting period	203,500,000.00
Total balance of guarantees to subsidiaries at the end of the reporting period	124,385,133.81
Total Guarantee	124,385,133.81
The ratio of total guarantees of the company's net assets	6.27%

**(3) Entrusting others to manage cash assets**

**A. Entrusted Financial Management**

a. Overall Situation of Entrusted Financial Management

**Unit: Ten Thousand Yuan Currency: RMB**

Type	Resource	Amount	Outstanding Balance	Overdue Amount Not Recovered
Bank wealth management products	Idle raised funds	1,800.00	0	0

b. Individual Entrusted Financial Management

**Unit: Ten Thousand Yuan Currency: RMB**

Trustee	Type	Amount	Start Date	End Date	Sources	Investment Type	Remuneration Determination Method	Annualized Rate of Return	Actual Profit or Loss	Actual Return on Investment
CCB	Capital Guaranteed	400	2018/11/21	2021/5/12	raised funds	Bank wealth management products	Annualized yield by bank	2.99%	29.541918	withdrawn
CCB	Capital Guaranteed	1,400	2018/11/21	2021/8/30	raised funds	Bank wealth management products	Annualized yield by bank	2.89%	112.425753	withdrawn

c. Provision for impairment of entrusted wealth management

N/A

Entrusted loans

N/A

**XIV. Explanation of Other Major Events That Have a Significant Impact on Investors' Value Judgments and Investment Decisions**

N/A



## Chapter 7 Changes in Shares and Shareholders

### I. Changes in Share Capital

#### (1) Statement Of Changes in Shares

##### 1. Statement of Changes in Shares

	Before this change		Increase or decrease in this change ( + , - )				After this change		
	Quantity	Proportion (%)	New Shares Issued	Bonus Shares	Transfer Of Provident Fund to Shares	Other	Subtotal	Quantity	Proportion (%)
Restricted shares	0	0							
1 State holdings									
2 State-owned legal person holding									
3 Other domestic holdings									
Of which: Shares held by domestic non-state-owned legal persons									
Of which: Domestic natural person holding									
4 Foreign holding									

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Of which: Shares held by foreign legal persons

Of which: Shares held by foreign natural persons

Unrestricted shares	718,994,343	100		6,036,663	6,036,663	725,031,006	100
1 RMB ordinary shares	718,994,343	100		6,036,663	6,036,663	725,031,006	100
2 Domestically listed foreign capital							
3 Overseas listed foreign shares							
4 Others							
Total number of shares	718,994,343	100		6,036,663	6,036,663	725,031,006	100

## **2. Description of Changes in Shares**

During the reporting period, 6,036,663 shares of Zisun 2019 Stock Option Incentive Plan were exercised, and the total number of shares of the company increased from 718,994,343 shares at the beginning of the period to 725,031,006 shares at the end of the reporting period.

## **3. The impact of changes in shares on financial indicators such as earnings per share and net assets per share in the last year and the latest period (if any)**

During the reporting period, due to the exercise of 2019 Stock Option Incentive Plan, the total number of shares of the company increased by 6,036,663 shares from 718,994,343 shares at the beginning of the period to 725,031,006 shares at the end of the reporting period.

## **4. Other contents deemed necessary by the company or required by securities regulators to disclose**

N/A

### **(2) Changes in restricted shares**

N/A

## **II. Securities Issuance and Listing**

### **(1) Securities issuance as of the reporting period**

N/A

### **(2) Changes in the total number of shares of the company and changes in shareholder structure and changes in the company's asset and liability structure**

N/A

### **(3) Existing internal staff shares**

N/A



### III. Shareholders and Actual Controllers

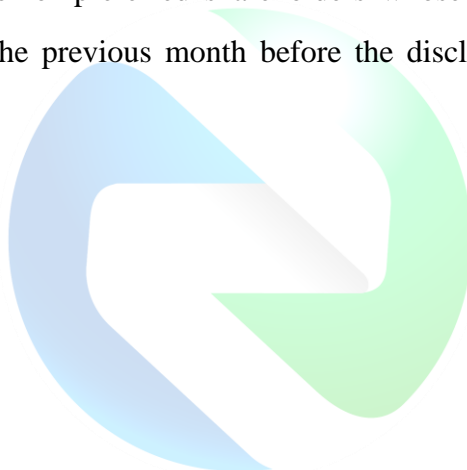
#### (1) Total number of shareholders

1.Total number of common shareholders as of the end of the reporting period:  
26,547

2. The total number of ordinary shareholders at the end of the previous month  
before the disclosure date of the annual report : 29,337

3.The total number of preferred shareholders whose voting rights have been  
restored by the end of the reporting period:0

4. The total number of preferred shareholders whose voting rights have been  
restored at the end of the previous month before the disclosure date of the annual  
report:0



(2) As at the end of the reporting period, the shareholding situation of the top ten shareholders and the top ten tradable shareholders (or shareholders without restrictions on sales) as of the end of the reporting period.

**Situation Of the Top Ten Shareholders**

Shareholder name (Full name)	Changes in 2021	quantity of shares at the end of the period	Proportion (%)	Restricted shares held
Mr. Guo Mao	0	265,758,863	36.65	0
Hong Kong Securities Clearing Company Limited	15,154,818	45,433,279	6.27	0
上海广岑投资中心（有限合伙）	0	44,924,880	6.20	0
兴业银行股份有限公司－天弘永利债券型证券投资基金	13,632,134	19,673,965	2.71	0
UBS AG	19,653,009	19,653,009	2.71	0
南京融京汇聚股权投资合伙企业（有限合伙）	0	17,600,013	2.43	0
中国建设银行股份有限公司－景顺长城环保优势股票型证券投资基金	-1,139,298	12,278,896	1.69	0
中国银行股份有限公司－景顺长城优选混合型证券投资基金	-1,947,495	9,827,582	1.36	0
MERRILLYNCHINTERNATIONAL	7,114,792	9,114,710	1.26	0
施罗德投资管理（香港）有限公司－施罗德环球基金系列中国 A 股（交易所）	0	8,681,104	1.20	0

## Shareholdings Of the Top 10 Shareholders with Unrestricted Shareholding

Shareholder name (Full name)	quantity of unrestricted shares held
Mr. Guo Mao	265,758,863
Hong Kong Securities Clearing Company Limited	45,433,279
上海广岑投资中心（有限合伙）	44,924,880
兴业银行股份有限公司－天弘永利债券型证券投资基金	19,673,965
UBSAG	19,653,009
南京融京汇聚股权投资合伙企业（有限合伙）	17,600,013
中国建设银行股份有限公司－景顺长城环保优势股票型证券投资基金	12,278,896
中国银行股份有限公司－景顺长城优选混合型证券投资基金	9,827,582
MERRILLYNCHINTERNATIONAL	9,114,710
施罗德投资管理（香港）有限公司－施罗德环球基金系列中国 A 股（交易所）	8,681,104

Description of the special account for repurchase among the top ten shareholders

N/A

Explanation of the above-mentioned shareholders' entrusted voting rights, entrusted voting rights and abstention from voting

N/A

Explanation of the related relationship or concerted action of the above shareholders

N/A

Description of preferred shareholders with restored voting rights and the number of shares they hold

N/A

(3) Strategic investors or general legal persons become the top 10 shareholders due to placement of new shares

N/A



## IV. Controlling Shareholders and Actual Controllers

### (I) Controlling Shareholders

1. legal person

N/A

2. Natural Persons

Name	Mr. Guo Mao
Nationality	China
Whether to obtain residency in other countries or regions	No
Main occupation and position	Chairman Of Zisun

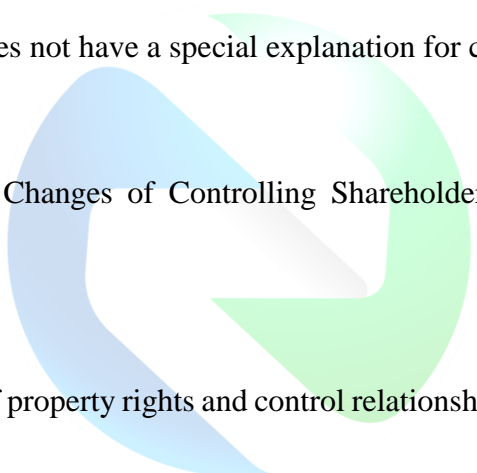
3. The company does not have a special explanation for controlling shareholders

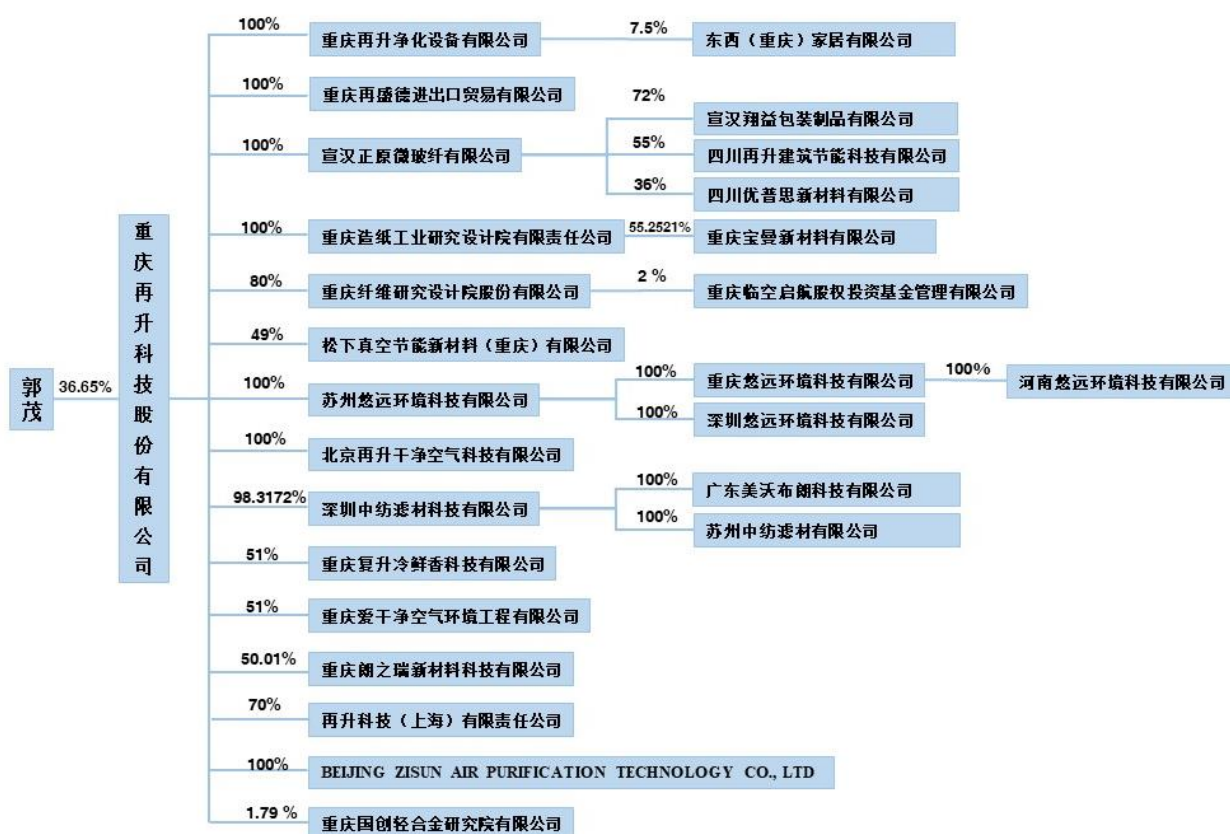
N/A

4. Explanation on Changes of Controlling Shareholders during the Reporting Period

N/A

5. Block diagram of property rights and control relationship between company and controlling shareholder





## (2) Information about the actual controller

### 1. legal person

N/A

### 2. Natural Persons

Name	Mr. Guo Mao
Nationality	China
Whether to obtain residency in other countries or regions	No
Main occupation and position	Chairman Of Zisun

Domestic and overseas listed companies that have held controlling interest in the past 10 years

N/A

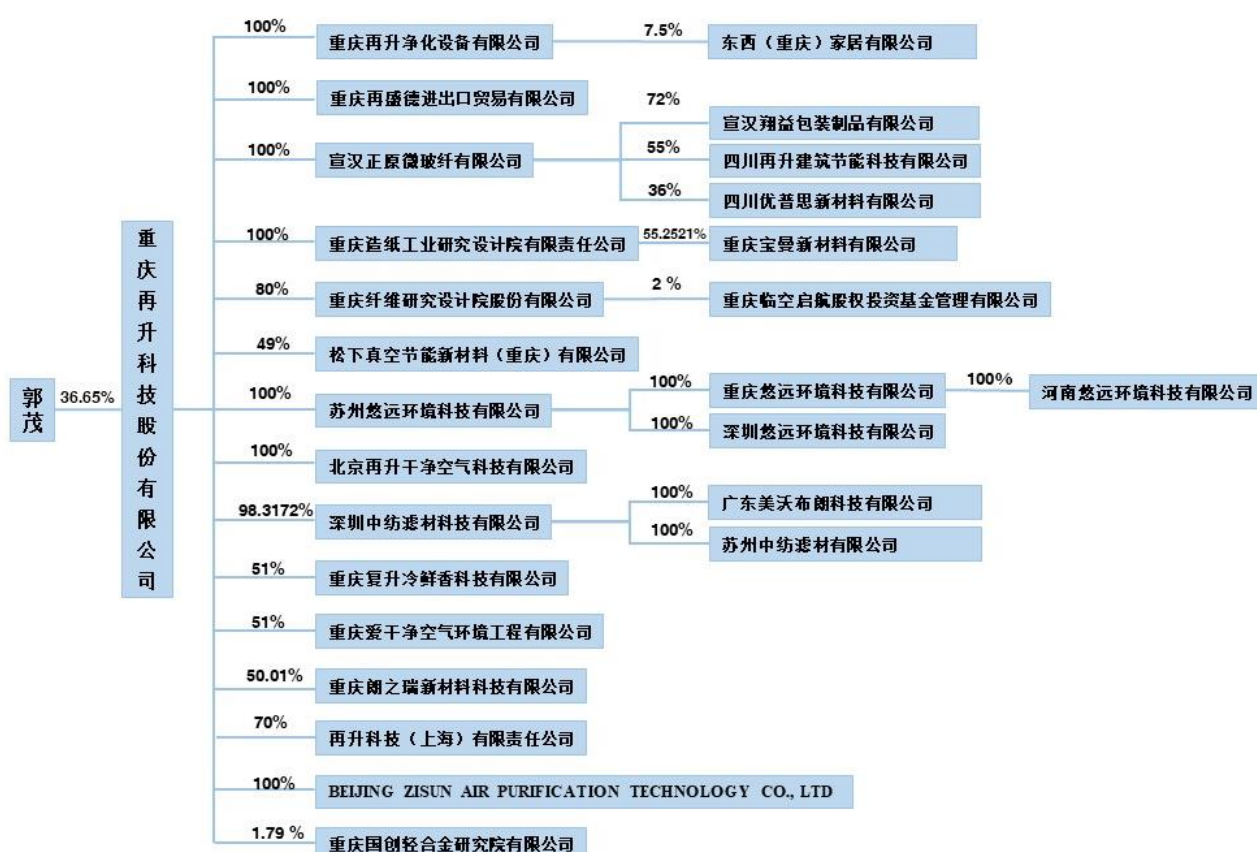
### 3. Special explanation on the fact that the company has no actual controller

N/A

4. Explanation on the change of the company's control during the reporting period

N/A

5. Block diagram of the property rights and control relationship between the company and the actual controller



6. The actual controller controls the company through trust or other asset management methods

N/A

### (3) Other Information on Controlling Shareholders and Actual Controllers

N/A

## V. The Controlling Shareholder or The Largest Shareholder of The Company and

**Its Persons Acting in Concert Have Accumulatively Pledged Shares That Account for More Than 80% Of the Company's Shares Held by Them**

N/A

**VI. Other Legal Person Shareholders Holding More Than 10% Of the Shares**

N/A

**VII. Explanation on Share Restriction and Reduction**

N/A

**VII. Specific Implementation of Share Repurchase During the Reporting Period**

N/A





## Chapter 9 Financial Report

### Consolidated Balance Sheet

As at December 31, 2021

Prepared by: CHONGQING ZAISHENG TECHNOLOGY CO., LTD

Unit: Yuan Currency: CNY

Items	As at December 31,2021	As at December 31,2020
Monetary funds	310,812,258.76	432,479,722.16
Settlement provisions		
Lending funds		
Held-for-trading financial assets	2,391,632.00	20,428,616.00
Derivative financial assets		
Notes receivable	57,812,297.68	80,228,584.59
Accounts receivable	630,601,740.67	487,189,958.67
Receivables financing	82,675,886.76	94,794,793.11
Advances to suppliers	14,302,242.83	16,022,970.18
Premiums receivable		
Reinsurance accounts receivable		
Reserves for reinsurance contract receivable		
Other receivables	22,564,580.85	29,863,885.12
Including: Interest receivable		
Dividend receivable		
Financial assets purchased under agreements to resell		
Inventories	178,193,155.62	154,512,208.69
Contract assets	13,133,663.80	9,821,763.55
Assets held for sale		
Non-current assets due within one year		
Other current assets	12,430,684.45	8,056,456.66
Total current assets	1,324,918,143.42	1,333,398,958.73
<b>Non-current assets:</b>		
Disbursement of loans and advances		
Debt investment		
Other debt investments		

## Zisun Annual Report of 2021

Long-term receivables		
Long-term equity investments	83,817,327.91	39,794,148.03
Other equity instrument investment	4,350,000.00	600,000.00
Other non-current financial assets		
Investment properties		
Fixed assets	804,101,316.51	798,935,379.91
Construction in progress	147,696,378.50	12,589,767.15
Productive biological assets		
Oil and gas assets		
Right-of-use assets	31,004,504.23	
Intangible assets	183,372,910.73	199,183,483.65
Development expenditures	8,283,905.12	
Goodwill	280,180,513.05	280,180,513.05
Long-term deferred expenses	7,126,744.84	15,299,957.46
Deferred income tax assets	12,745,153.99	13,991,153.12
Other non-current assets	43,877,399.60	48,415,754.54
Total non-current assets	1,606,556,154.48	1,408,990,156.91
Total assets	2,931,474,297.90	2,742,389,115.64
<b>Current liabilities:</b>		
Short-term borrowings	344,353,954.85	342,484,860.80
Borrowings from the Central Bank		
Borrowing funds		
Held-for-trading financial liabilities		
Derivative financial liabilities		
Notes payable	19,085,011.09	28,333,230.21
Accounts payable	232,910,068.38	226,965,722.65
Advances from customers		
Contract liabilities	21,960,749.50	27,769,100.54
Financial assets sold for repurchase		
Deposits from customers and interbank		
Acting trading securities		
Acting underwriting securities		
Payroll payable	30,827,314.55	38,780,379.70

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Tax payable	14,569,705.01	18,361,636.35
Other payables	20,172,881.81	11,718,151.31
Including: Interest payable	49,305.55	
Dividends payable		
Fees and commissions payable		
Dividend payable for reinsurance		
Liabilities held for sale		
Non-current liabilities due within a year	3,291,571.22	
Other current liabilities	54,352,356.88	54,160,084.65
Total current liabilities	741,523,613.29	748,573,166.21
<b>Non-current liabilities:</b>		
Reserve fund for insurance contracts		
Long-term borrowings	50,000,000.00	
Bonds payable		
Including: preferred stock		
Perpetual bond		
Lease liabilities	19,985,845.41	
Long-term payables		
Long-term payroll payable		
Estimated liabilities		
Deferred income	71,716,919.44	75,920,386.03
Deferred income tax liabilities	17,407,696.89	19,741,032.58
Other non-current liabilities		
Total non-current liabilities	159,110,461.74	95,661,418.61
Total liabilities	900,634,075.03	844,234,584.82
<b>Owners' equity (or shareholders' equity):</b>		
Paid-in capital (or share capital)	725,031,006.00	718,994,343.00
Other equity instruments		
Including: preferred stock		
Perpetual bond		
Capital reserves	477,168,526.93	434,828,330.55
Less: treasury stock	7,847,983.94	15,681,209.18
Other comprehensive income		

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Special reserves		
Surplus reserves	100,039,481.14	91,006,800.95
General risk preparation		
Undistributed profits	688,446,262.59	592,105,809.35
Total owners' equities attributable to the owners of parent company	1,982,837,292.72	1,821,254,074.67
Minority equity	48,002,930.15	76,900,456.15
Total owners' equity (or shareholders' equity)	2,030,840,222.87	1,898,154,530.82
Total liabilities and owners' equity (or shareholders' equity)	2,931,474,297.90	2,742,389,115.64



## Consolidated Income Statement

January to December in 2021

Unit: Yuan Currency: CNY

Items	2021	2020
I. Total operating revenue	1,619,710,842.66	1,884,228,703.44
Including: Operating revenue	1,619,710,842.66	1,884,228,703.44
Interest income		
Premiums earned		
Fee and commission income		
II. Total operating cost	1,387,931,782.21	1,429,334,938.02
Including: operating costs	1,118,367,804.01	1,167,101,588.03
Interest expenses		
Fee and commission expense		
Surrender value		
Net amount of compensation payout		
Net reserves for insurance liabilities		
Policy holder dividend expense		
Reinsurance expenses		
Taxes and surcharges	15,977,645.45	19,161,508.44
Selling and distribution expenses	43,617,359.04	48,811,269.44
General and administrative expenses	107,248,428.48	107,164,520.12
Research and development expenditures	89,510,799.50	72,901,869.46
Financial expenses	13,209,745.73	14,194,182.53
Including: interest expenses	9,896,426.11	11,069,698.09
Interest income	2,879,879.64	2,329,029.40
Plus: other incomes	39,611,932.99	19,668,353.70
Income from investment (loss expressed with “-”)	8,917,050.80	7,576,882.93
Including: Income from investment of joint venture and cooperative enterprise	7,497,374.09	7,757,245.82
Income from derecognition of financial assets measured at amortized cost		
Exchange gain (loss expressed with “-”)		
Net exposure hedging gain (loss expressed with “-”)		

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Income from fair value changes (loss expressed with “-”)	-36,984.00	1,541,374.19
Credit impairment losses (loss expressed with “-”)	-8,850,016.29	-14,686,997.60
Assets impairment losses (loss expressed with “-”)	-1,394,658.13	651,785.25
Income from disposal of assets (loss expressed with “-”)	-127,483.11	747,450.43
III. Operating profits (loss expressed with “-”)	269,898,902.71	470,392,614.32
Plus: non-operating income	933,194.04	979,922.79
Less: non-operating expenditure	800,342.15	714,688.75
IV. Total profits (total loss expressed with “-”)	270,031,754.60	470,657,848.36
Less: income tax expenses	18,728,984.29	76,110,628.24
V. Net profits (net loss expressed with “-”)	251,302,770.31	394,547,220.12
(I) Classified by business continuity		
1.Net profits from ongoing operation (net loss expressed with “-”)	251,302,770.31	394,547,220.12
2.Net profits from discontinuing operation (net loss expressed with “-”)		
(II) Classified by ownership		
1.Net profit attributable to the shareholders of parent company (net loss expressed with “-”)	249,471,352.03	359,677,001.99
2.Minority interests (net loss expressed with “-”)	1,831,418.28	34,870,218.13
VI. Net of tax of other comprehensive income		
(I) Net amount of after-tax other comprehensive income attributable to the owners of the parent company		
1. Other comprehensive income that can't be reclassified into profit and loss		
(1) Remeasure the variation of net indebtedness or net asset of defined benefit plan		
(2) Other comprehensive income that can't be reclassified into profit and loss in the invested enterprise under equity method		
(3) Fair value change of other equity instrument investments		
(4) Fair value change of enterprise credit risks		
2. Other comprehensive income that will be reclassified into profit and loss		

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(1) Other comprehensive income that will be reclassified into profit and loss in the invested enterprise under equity method		
(2) Fair value change of other debt investments		
(3) Amount of financial assets reclassified into other comprehensive income		
(4) Provision for credit impairment of other debt investments		
(5) Cash flow hedging reserve		
(6) Translation reserve		
(7) Others		
(II) Net of tax of other comprehensive income attributable to the minority shareholders		
VII. Total comprehensive income	251,302,770.31	394,547,220.12
(I) Total comprehensive income belonging to parent company	249,471,352.03	359,677,001.99
(II) Total comprehensive income belonging to minority shareholders	1,831,418.28	34,870,218.13
VIII. Earnings per share:		
(I) Basic earnings per share (Yuan/share)	0.3461	0.5037
(II) Diluted earnings per share (Yuan/share)	0.3438	0.4971

Consolidated Statement of Cash Flows

January to December in 2021

Unit: Yuan Currency: CNY

Items	2021	2020
I. Cash flow from operating activities:		
Cash from selling commodities or offering labor	1,228,519,393.00	1,553,552,497.86
Net increase of customer deposit and deposit from other banks		
Net increase of borrowings from central bank		
Net increase of borrowing funds from other financial institutions		
Cash from obtaining original insurance contract premium		
Net cash received from reinsurance business		
Net increase in the deposits and investment of insured		
Cash from interest, handling charges and commissions		
Net increase of borrowing funds		
Net increase of repurchase of business funds		
Net cash from acting trading securities		
Refund of tax and levies	73,126,199.17	40,534,473.79
Other cash received related to operating activities	90,688,737.48	69,148,583.57
Subtotal cash inflows from operating activities	1,392,334,329.65	1,663,235,555.22
Cash paid for goods purchased and services received	861,091,149.59	923,564,877.51
Net increase of customer loans and advances		
Net increase of amount due from central bank and interbank		
Cash paid for original insurance contract claims payment		
Net increase of lending funds		
Cash paid for interest, handling charges and commissions		
Cash paid for policy dividend		
Cash paid to and for employees	185,877,779.40	159,745,102.82
Taxes and fees paid	103,397,485.56	184,765,044.03
Other cash paid related to operating activities	93,195,236.13	103,890,201.60



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Subtotal cash outflows from operating activities	1,243,561,650.68	1,371,965,225.96
Net cash flows from operating activities	148,772,678.97	291,270,329.26
<b>II. Cash flows from investment activities:</b>		
Cash from investment withdrawal	18,000,000.00	274,250,000.00
Cash from investment income	1,817,461.59	2,242,958.63
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	75,610.00	956,990.00
Net cash from disposal of subsidiaries and other business units		
Other cash received related to investment activities		
Subtotal cash inflows from investment activities	19,893,071.59	277,449,948.63
Cash paid for purchase of fixed assets, intangible assets and other long-term assets	158,847,282.49	94,206,030.10
Cash paid for investments	75,775,256.15	213,950,000.00
Net increase in hypothecated loan		
Net cash paid for obtaining subsidiaries and other business units		
Other cash paid related to investment activities		132,000,000.00
Subtotal cash outflows from investment activities	234,622,538.64	440,156,030.10
Net cash flow from investment activities	-214,729,467.05	-162,706,081.47
<b>III. Cash flows from financing activities:</b>		
Cash from absorption of investments	51,626,545.64	37,085,076.08
Including: cash received from subsidiaries' absorption of minority shareholders' investment	9,009,500.00	1,472,750.00
Cash received from borrowings	430,829,000.00	473,625,052.72
Other cash received related to financing activities	7,847,983.94	
Subtotal cash inflows from financing activities	490,303,529.58	510,710,128.80
Cash repayments of amounts borrowed	376,212,202.72	410,984,550.00
Cash paid for distribution of dividends, profits or interest expenses	155,390,093.96	83,378,630.70
Including: dividends and profits paid by subsidiaries to minority shareholders		
Other cash paid related to financing activities	5,027,581.16	35,779,935.92
Subtotal cash outflows from financing activities	536,629,877.84	530,143,116.62
Net cash flows from financing activities	-46,326,348.26	-19,432,987.82
<b>IV. Impact of exchange rate movements on cash and</b>	<b>-1,326,818.37</b>	<b>-3,446,228.00</b>

## Zisun Annual Report of 2021

cash equivalents		
V. Net increase of cash and cash equivalents	-113,609,954.71	105,685,031.97
Plus: beginning balance of cash and cash equivalents	416,019,515.53	310,334,483.56
VI. Ending balance of cash and cash equivalents	302,409,560.82	416,019,515.53

