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2022 Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd.
Sustainable Development Report

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三友集团
Sanyou Group

CONTENTS

01

Introduction

01/
About this Report

Release Cycle

The Report is the third enterprise's sustainable development report issued by Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. The Report is published annually.

Time Period

The disclosure period of the Report is from January 1, 2022 to December 31, 2022, covering some historical data.

Report Scope

The organization scope of the Report covers Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. and its subsidiary - Tangshan Sanyou Yuanda Fiber Co., Ltd. Part of its content involves the parent company - Tangshan Sanyou Group Co., Ltd. and other subsidiaries.

Compiling Principles

The Report is compiled in accordance with the China Sustainability Reporting - Guidelines for Apparel and Textile Enterprises (2008 Edition) (CSR-GATEs: 2008), the Social Responsibility Guidelines for Chinese Industrial Enterprises and Industrial Associations (Second Edition) and with reference to the core program of the Sustainability Reporting Standards by the Global Reporting Initiative (GRI) and the UN Sustainable Development Goals (SDGs).

Information Sources

The data and information in the Report are mainly from the official documents and statistical reports provided by Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd.and its subsidiaries, and partly from Tangshan Sanyou Group Co., Ltd. and other subsidiaries.

Report Verification

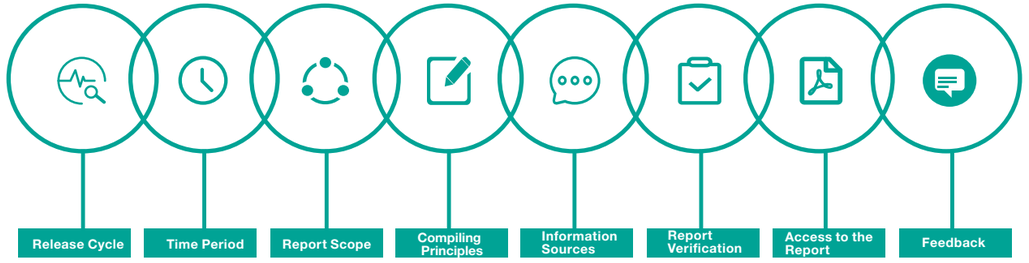
The Report has been subject to reasonable review and verification by the Office for Social Responsibility of China National Textile and Apparel Council with reference to the China Sustainability Reporting Verification Rules and Instructions CSR-GATEs (2008), and the objectivity, appropriateness and responsiveness of the Report has been verified.

Access to the Report

The Chinese version of the Report shall prevail. The Chinese/English electronic version of the Report can be downloaded from the official website of Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. Website: http://www.ts-sanyou.com.cn

Feedback

If you have any suggestions and comments, or questions about the content of the Report, you can send an email to syhx002@sanyouhx.com.



02/
Chairman's Message — Baishan Zheng

This is an era that emphasizes the harmonious coexistence of nature and human beings, and human beings are in the core position in drawing the picture of harmonious coexistence between human beings and nature. As chemical fiber people who shoulder the responsibilities and keep in mind the missions, we are committed to promoting the sustainable development of the industry, so that all sectors of society can fully hear the green voice from the textile industry.

In 2022, influenced by the COVID-19, the Russian-Ukrainian war and the tension between China and the United States, the international political and economic situation became more complicated and changeable, which accelerated the evolution of the centennial changes in this world. The European and American economies operated in the context of inflation throughout the year, and insufficient demand in Europe and the United States led to sluggish exports of the textile industry. Under this difficult situation, Sanyou Chemical Fiber keeps in mind its responsibilities and missions to serve the market.

Based on the company's vision of "carbon peaking and carbon neutrality" - "We will strive to reduce carbon emissions per unit product by 30% by 2030 and achieve carbon neutrality by 2055", the implementation plan for peak carbon dioxide emissions is formulated.
We adhere to the concept of low carbon, develop the next generation of fiber products (Next-gen MMCF fiber) with waste textiles as raw materials, and promote the serial development and large-scale application of low-carbon environmentally-friendly fibers.

We apply green technology, explore Lyocell efficient spinning technology and bath lotion purification technology, and apply efficient acid bath concentration technology and other energy-saving and consumption-reducing technologies to promote closed-loop production.

With our own technical advantages, we have formulated the "19+N" differentiated product strategy to serve the market with products with high technology content and high added value such as Modal and bamboo charcoal fiber.

With the theme of "About Tangcell®", we have organized Tangcell brand publicity in the textile-industry gathering places, accelerated the integration of the industry chain with the brand as the medium, and built a new ecology for industry development.

Living close to nature and protecting nature is our common mission. Sanyou Chemical Fiber will make persistent efforts, continue to implement the national "Variety-Quality- Brand" strategy, adhere to the concept of sustainable development, and empower the development of the industry chain with innovative technology and green brand concept; with high-quality products and reliable services, we strive to win market recognition, let green and sustainable products enter thousands of households, and create a greener and sustainable future.

03/ Key Performance

Total annual sales — 8.68 billion yuan

Output of regenerated cellulose fiber — 650.2 thousand tons

Total number of employees — 5220 people

Investment in environmental protection funds — 425 million yuan

Total sulfur recovery rate — 93.63%

Na_2SO_4 recovery rate — 58.1%

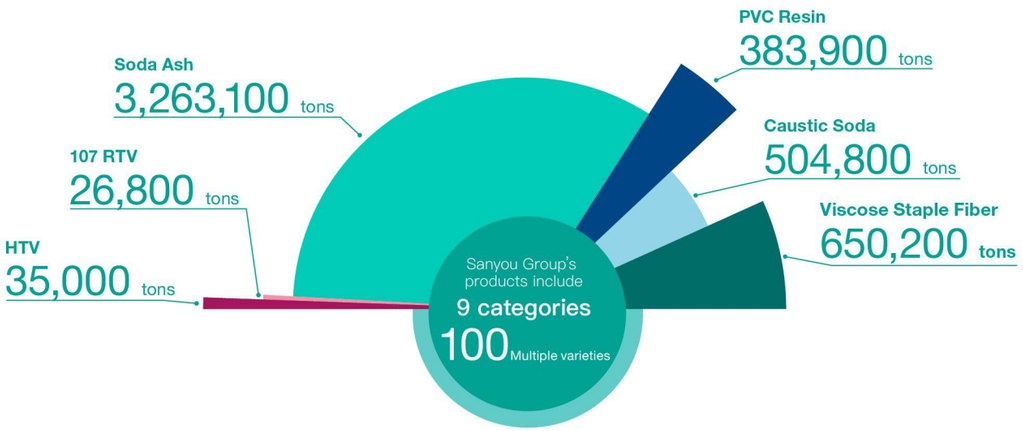
Comprehensive energy consumption — 661.1 Kgce/t

02

About Sanyou

01/
Sanyou Group

Tangshan Sanyou Group, located in Tangshan City, Hebei Province, China, has developed from a single sodium carbonate business at the beginning of its establishment to a group-type enterprise under a circular economy model with the characteristic of sodium carbonate, chlor-alkali, and chemical fiber, and has realized the transformation and upgrading from inorganic chemical industry to organic chemical industry and from basic chemical industry to fine chemical industry. Its leading products are sodium carbonate, viscose staple fiber, caustic soda, PVC and organosilicone.



Products are exported to 5 continents and more than 120 countries and regions

The company has nearly 20,000 employees

Total assets in 2022 27.61 billion yuan

Operating income 23.68 billion yuan

Regional Circular Economy

From salt to sodium carbonate, chemical fiber, chlor-alkali and organosilicone, Tangshan Sanyou Group organically links the textile industry chain with the upstream chemical industry chain through the globally original circular economy development model of sodium carbonate, chlor-alkali, and chemical fiber, and realizes the regional circular economy by organically combining resources, products and wastes from multiple industrial categories, so as to interweave multiple industry chains, minimize the environmental impact of the whole system, achieve the unity of environmental benefits, social benefits and economic benefits, and start a unique green, circular and low-carbon development road.

The annual operating revenue of Sanyou Chemical Fiber has reached more than 36% of the total operating revenue of Sanyou Shares, which is the largest sector of the Group and an important link of Sanyou Group's transition from upstream chemicals to consumer goods, and naturally becomes the core node of Tangshan Sanyou Group's circular economy system. Therefore, in the process of promoting sustainable development, Sanyou Chemical Fiber not only pursues to reduce the environmental impact of the factories, but also creatively uses the by-products or wastes produced by one enterprise as the raw materials of another enterprise by taking advantage of its own industrial network, realizing the closed-loop utilization of materials and multi-level utilization of energy, and creating a circular economy system with collaborative innovation with multiple industry chains.

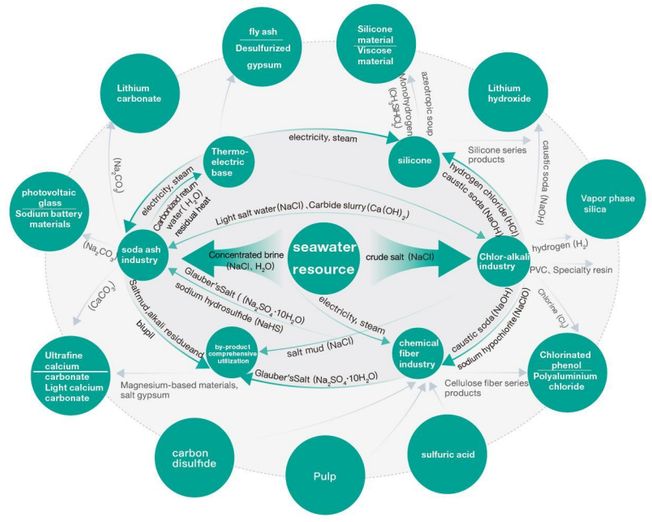
Seawater desalination. Sanyou Group initiated a new process of directly using concentrated seawater for sodium carbonate production in China. The concentrated salt seawater after seawater desalination is used as a raw material to produce sodium carbonate, which effectively solves the pollution problem of concentrated seawater discharged into the sea after seawater desalination, and also provides a stable supply of some fresh water resources for the parks.

Chlor-alkali (NaOH) industrial cycle. NaOH is an essential raw material for viscose fiber production. The NaOH produced by Sanyou Group can be directly transported to the chemical fiber factories through pipelines, without storage tank areas, which can reduce the risk of leakage and the carbon emission during transportation. The waste calcium carbide slurry produced by the NaOH production is used for sewage treatment in viscose factories to realize waste recycling.

Technological innovation in combined heat and power generation. The heating and power plants in the industrial parks not only supply electricity and steam necessary for industrial production, but also undertake the task of district heating. Through continuous optimization of process flow and a series of transformation projects, the boilers in heating and power plants have reached the ultra-clean emission standard in China. In addition, the waste alkali residue produced by Sanyou Sodium Carbonate Company is used as a desulfurizer in the heating and power plant for efficient recycling, turning waste into treasure.

Recycling of Na_2SO_4. Na_2SO_4, a by-product of viscose fiber production, has been concerned by stakeholders in recent years. However, its low economic value limits its recycling. Relying on the circular economy system of the Group, Na_2SO_4 solution can be reused in sodium carbonate production, reducing the steam/electricity consumption of Na_2SO_4 crystal recovery.

The internal circulation of Sanyou closed-loop production



Schematic diagram of the "two alkali and one chemical" circular economy industry chain

02/ Sanyou Chemical Fibre

Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. is subordinate to Tangshan Sanyou Group and is a chemical fiber enterprise engaged in the production of three generations of regenerated cellulose fiber - viscose staple fiber, Modal and Lyocell. The company has been rated as a national high-tech enterprise, a national technological innovation demonstration enterprise and a national R&D base for new cellulose fiber products. In 2022, it won the honors of “Green Factory in Hebei Province”, “Top 100 Brands of Textile and Apparel under Key Cultivation”, “Recognition Award of China Grand Awards for Industry” and “Top 100 Foreign Trade Enterprises in Hebei Province”.

The company has total assets of about 9 billion yuan, covers an area of 1,700 acres and employs more than 5,200 people. The first production line was introduced from Austria. In the past 20 years, the company has carried forward the enterprise spirit of “making dedicated efforts to start and keep the business”. Through digestion, absorption and re-innovation, eleven large-scale production lines and three experimental lines have been successfully built. At present, the company’s viscose staple fiber production capacity is 830,000 tons/year, and the product market share is about 17%, which enjoys an important speaking right and influence in the industry.

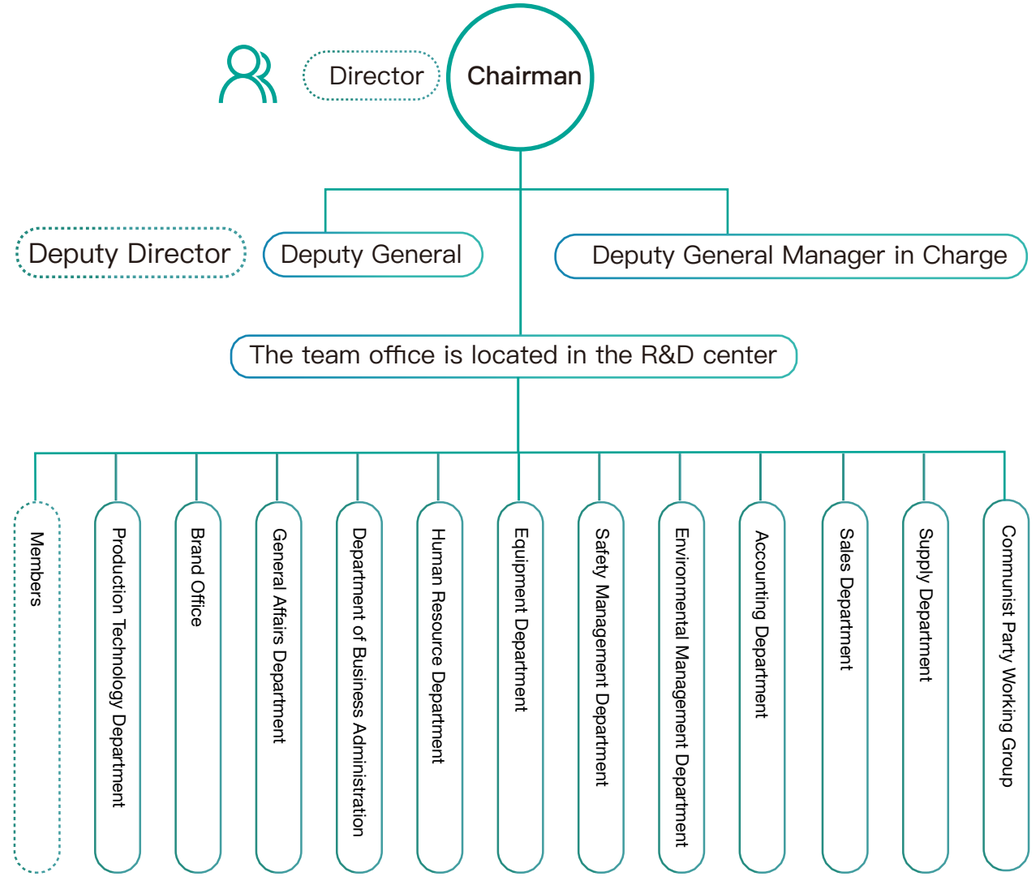
For many years, the company has always adhered to the core values of “principle, responsibility and integrity”, continuously focused on customer needs and its own social responsibility, and realized the whole-chain and whole-process ecological supervision from raw materials to products. the company’s viscose staple fiber always adheres to the high-end and differentiated development route. There are more than 100 kinds of differentiated products, which can meet the individual needs of different customers, and many products have been selected into the “China Fiber Fashion Trend”. The regenerated cellulose fiber products produced by the company sell well in more than 40 countries and regions in Asia, Africa, Europe, America and Australia. In 2022, the annual export volume of viscose staple fiber exceeded 120 thousand tons.

Sustainable Development Strategy

Sanyou Chemical Fiber takes “happiness created together and the fruits of labor shared together” as the starting point, unswervingly implements the new development concept of innovation, coordination, green, openness and sharing, strengthens the circular economy, enriches the green connotation of products, and provides low-carbon and green textile raw materials for the textile industry chain based on the regenerated cellulose fiber with the spirit of “origination in nature and returning to nature”, and contributes to the realization of a harmonious society where people and nature live in harmony.

Enterprise Management Structure

According to the company’s sustainable development management demands, the Sustainable Development Management Committee of Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd.was established, with the following members:



03/
Low-carbon Development

30·60 Net-Zero Acceleration Plan

In the context of carbon peaking and carbon neutrality, since it formally coordinated the transformation, upgrading and carbon reduction process in 2021, Sanyou Chemical Fiber has offificially joined the “30·60 Net-Zero Acceleration Plan” in the same year, and under the leadership of the Offifice for Social Responsibility of CNTAC and Collaboration for Sustainable Development of Viscose (CV), continued to promote low-carbon energy, green materials, clean production and low-carbon products, taking a leading role in addressing global climate change in the industry and the country.

According to the overall work arrangement of the “30·60 Accelerated Action on Carbon Neutrality in China's Textiles and Clothing”, Tangshan Sanyou will further organize climate training camps, regular carbon verifification and information disclosure, and further develop a more specific plan and roadmap for the carbon peaking and carbon neutrality initiative on the basis of its offificial release of the vision for carbon peaking and carbon neutrality.

Development Vision of Carbon Peaking and Carbon Neutrality

Sanyou Chemical Fiber, as a member of CV, has made continuous progress in the fields of raw material management, closed-loop production, product innovation and carbon footprint with reference to the assessment requirements of CV Roadmap 2025, and participated in the communication with domestic and foreign stakeholders and the preparation and revision of relevant standards/guidelines. Relying on CV platform, the company carries out extensive cooperation with third-party organizations and continues to carry out carbon verification and other related tasks.

“30·60 Accelerated Action on Carbon Neutrality of Textile and Apparel in China”

Climate change is a global challenge. The promotion of peak carbon dioxide emissions and carbon neutrality has become a strategic choice for countries around the world to deal with climate change. As a major emitter of greenhouse gases, China has also announced more ambitious emission reduction targets: “striving to achieve peak carbon dioxide emissions by 2030 and carbon neutrality by 2060”, and is comprehensively and systematically promoting related work.

The textile industry is closely related to people’s livelihood, and it has always been concerned by all walks of life at home and abroad. In the field of climate change, the textile industry is still the focus of attention, and it is also one of the first industries in the world to carry out climate actions. As a major textile country, China’s textile industry has assumed the responsibility and mission as a major country in dealing with climate change.

In recent years, under the guidance and promotion of the Office for Social Responsibility of China National Textile and Apparel Council (a special organization of the China National Textile and Apparel Council to promote the sustainable development of the industry), China’s textile industry has been at the forefront of China’s manufacturing industry in climate actions.

In 2017, the Office for Social Responsibility of China National Textile and Apparel Council launched the “Carbon Management Innovation 2020 Action”, which was the first to put forward the grand vision of realizing a zero-carbon industry by 2050.

In 2018, the China National Textile and Apparel Council, as a contracting party, signed the United Nations Fashion Industry Charter for Climate Action, which defines the phased emission reduction target of the fashion industry, that is, reducing carbon emissions by 30% in 2030 (relative to the emission benchmark in 2015).

In 2019, the Office for Social Responsibility of China National Textile and Apparel Council launched the “Fashion Industry Climate Innovation 2030 Action” on the basis of integrating the previous work, aiming to gather all forces to jointly promote the realization of emission reduction targets of the fashion industry and make industrial contributions to global climate governance.

In order to implement the national peak carbon dioxide emissions and carbon neutrality strategy, accelerate the “Climate Innovation 2030 Action” and speed up the green and low-carbon transformation of the industry, the Office for Social Responsibility of China National Textile and Apparel Council officially launched the “Climate Innovation Carbon Neutrality Acceleration Plan of China Fashion Brands” (hereinafter referred to as the “30·60 Net-Zero Acceleration Plan”) on June 1, 2021, and will screen and support 30 key brand enterprises and 60 manufacturing enterprises to carry out climate innovation actions under the guidance of relevant departments and the support of technical institutions, and guide key industrial clusters to demonstrate climate innovation action carbon neutrality in advance.

04/ Introduction of Products

05/ Identification of Stakeholders

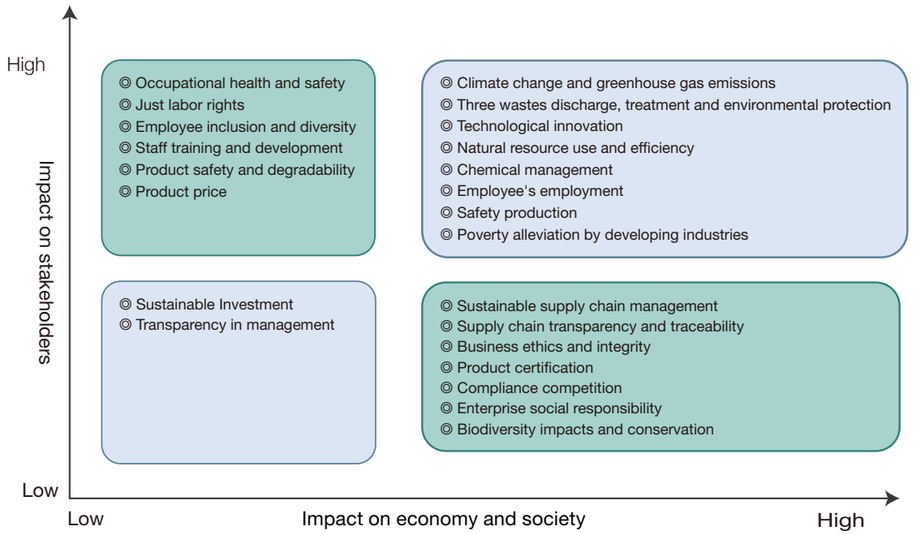
Analysis of Substantive Issues

During the reporting period, Sanyou Chemical Fiber continued to improve the identification, analysis and sequencing of sustainable development-related issues, and strengthened the management of important issues to promote the company's sustainable development.

Analysis Process of Substantive Issues:

Data collection and issue identification: A list of substantive issues determined through communication with stakeholders, background investigation and peer benchmark comparison.
Analysis and sequencing of issues: The importance of different issues to stakeholders is known through questionnaires and in-depth interviews. Background investigation, the results of feedback from stakeholders, and the opinions of senior management are important bases for determining the priority of the theme.
Importance matrix: Sequencing is conducted for different key issues according to the results of investigations, surveys and interviews to make an importance matrix to provide the basis for disclosure in the Report.

The importance of substantive issues is comprehensively analyzed from two aspects - the influence on the business development of Sanyou Chemical Fiber and the importance to stakeholders, so as to obtain the importance evaluation matrix of key issues. The Report will refer to the importance assessment matrix and disclose the key issues in detail.



Importance matrix of key issues

Identification and Communication of Stakeholders

Sanyou Chemical Fiber actively communicates and interacts with internal and external stakeholders, listens to the opinions of stakeholders, and actively uses relevant standards, guidelines and norms recommended by the stakeholders to promote the continuous improvement of sustainable problems faced by social, environmental and economic enterprises. As an important link of interaction with stakeholders, Sanyou Chemical Fiber has published a sustainable report every year since 2021, so that stakeholders can better understand its sustainable development status and help the company make more effective management decisions.

Stakeholders		Issues of concern	Communication and response channels
Main categories	Main representative		
• Government organizations	• National ministries and commissions • Local governments	• Preservation and appreciation of state-owned assets • Safe production • Industrial assistance • Discharge of three wastes,environmental protection andtreatment • Staff employment • Product safety • Greenhouse gas emissions	• Participation in local economic and social construction • Environment and safety supervision, audit and management • Disclosure of pollutant emission data • Participation in the formulation of industry standards
• Business operators and investors	• Senior management personnel of enterprises and affiliated companies • Investors	• Profitability • Information disclosure • Labor protection • Public opinion environment • Sustainable development capacity • Innovative technology development	• working conferences • Large forums • Company website • Company journals • E-mail, telephone and other social media
• Employees		• Salary • Working environment • Promotion mechanism • Labor protection • Cultivation mechanism • Payment types	• Working conferences and training • Staff congress and team building activities • Company website and journals • Various recruitment activities on social media such as e-mail, telephone and WeChat.
• Suppliers	• Pulp suppliers Chemical suppliers	• Pricing mechanism • Delivery time • Source of raw materials • Compliance management • Innovation • High-quality raw material supply • Delivery time/source	• Assessment of suppliers • Production and sales supervision chain system for suppliers • Audit and evaluation • Field investigation • Meeting, e-mail and telephone communication • Product exhibitions • Industry seminars
• downstream customers	• Yarn enterprises • Fabric	• Payment types • Product pricing mechanism • Delivery time • Operation compliance • Chemical management • Green supply chain • Transparent supply chain • Innovative service • Product quality and product innovation	• Visits and communication • Cooperative research and development • Customer satisfaction survey • Company website and journals • Meeting, e-mail, telephone, etc. • Product exhibitions • Industry seminars
• Terminal brands	• Clothing brands • Home textile brands • Wet wipes brands, etc.	• Sustainability of suppliers • Product safety • Product carbon footprint • Traceability Degradability	• Conference exchange • Testing, authentication and report disclosure • Strategic cooperation • Special joint working groups
• NGOs/industry associations	• Standardization organizations • Third-party institutions • Industry associations	• Climate change • Biodiversity protection • Energy management • Water source management • Environment management • Transparency and traceability of the supply chain • Biodegradable products • Promotion of innovative technology • Product innovation • Discharge of three wastes • Compliance publicity • Safe production	• Industry survey and research report • Disclosure of environmental pollutant emission data • Audit and evaluation of production and sales supervision chain system • Industry survey and research report • Participation in the formulation of industry standards • Product exhibitions and industry seminars • Meeting, e-mail, telephone, etc.
• Universities/ research institutes		• Technological innovation (raw materials, production process, circular economy, and differentiated products)	• Cooperative R&D mechanism • Strategic cooperation in personnel training • Academic and industry research reports
• Surrounding communities		• Waste water and waste gas treatment • Corporate social responsibility	• Community visit • Public open day activities • Public mailbox for complaints and feedback • Community activities and daily communication
• Other stakeholders	• Other manufacturers	• Compliant competition • Environmental protection communication • Goals and channels • Joint development • Patent protection	• Technical exchange • Cooperative research and development • Product exhibitions and industry seminars • Industry survey and research report • Participation in the formulation of industry standards

06/
Corporate Honors in 2022

No.	Name	Awarding Unit
1	Competitive Superior Enterprise of China Textile and Apparel Brand in 2022	China National Textile and Apparel Council
2	Top 100 Foreign Trade Enterprises in Hebei Province	Hebei Provincial Department of Commerce
3	Dark green ranking in the 2022 Hot Button Ranking	Canopy
4	Top 100 Brands of Textile and Apparel under Key Cultivation	The Ministry of Industry and Information Technology
5	Hebei Provincial Green Factory	Industry and Information Technology Department of Hebei Province
6	Hebei Science and Technology Progress Award (Second Prize)	The People's Government of Hebei Province
7	5·4 Red Flag Youth League Committee of SASAC of Hebei Province	SASAC of Hebei Province
8	Demonstration Enterprise of Provincial Safety Culture Construction	Department of Emergency Management of Hebei Province
9	Second Prize of Scientific and Technological Progress in Production Technology and Product Development of Lyocell with High Efficiency and Low Consumption	China National Textile and Apparel Council
10	Strategic New Product of Recycled Pulp Viscose Fiber	Bureau of Industry and Information Technology of Tangshan City
11	Strategic New Product of Viscose Staple Fiber for High-speed Vortex Spinning	Bureau of Industry and Information Technology of Tangshan City
12	Demonstration Site of Tangshan Grass-roots Party Organization	Organization Department of Tangshan Municipal Party Committee
13	Group's Model Worker Home	Labor Union of Tangshan Sanyou Group

03

Closed-loop Production

Introduction

Under the background of global sustainable development, Sanyou Chemical Fiber adheres to the strategy of green sustainable development and is committed to promoting the sustainable development of enterprises through innovative technologies and green products. The company insists on starting from the source and the details, and implements the concept of green development through daily production and operation management. It has invested more than RMB500 million, successfully breaking through technical problems such as semi-fiber separation and high-value utilization, waste gas biochemistry and wastewater biochemistry, and is committed to reducing the consumption of natural resources in the production process. At the same time, the company constantly abides by the relevant standards at home and abroad, and implements the advanced concept of green sustainability into the actual production of the enterprise. The production energy consumption and water consumption of the company's products have reached the international advanced level.

The company continuously improves the green level of the factories and products according to the standard requirements of the Evaluation Requirements for Green Factories in Viscose Fiber Industry (T/CNTAC 144) and the Technical Specification for Evaluation of Green Design Products (T/CNTAC 96). In 2022, "Tangcell® Viscose Staple Fiber" was awarded as a green design product, and Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd.was awarded as a "Green Factory" in Hebei Province (excluding Yuanda). For details, see Chapter Four.

01/
Production Process

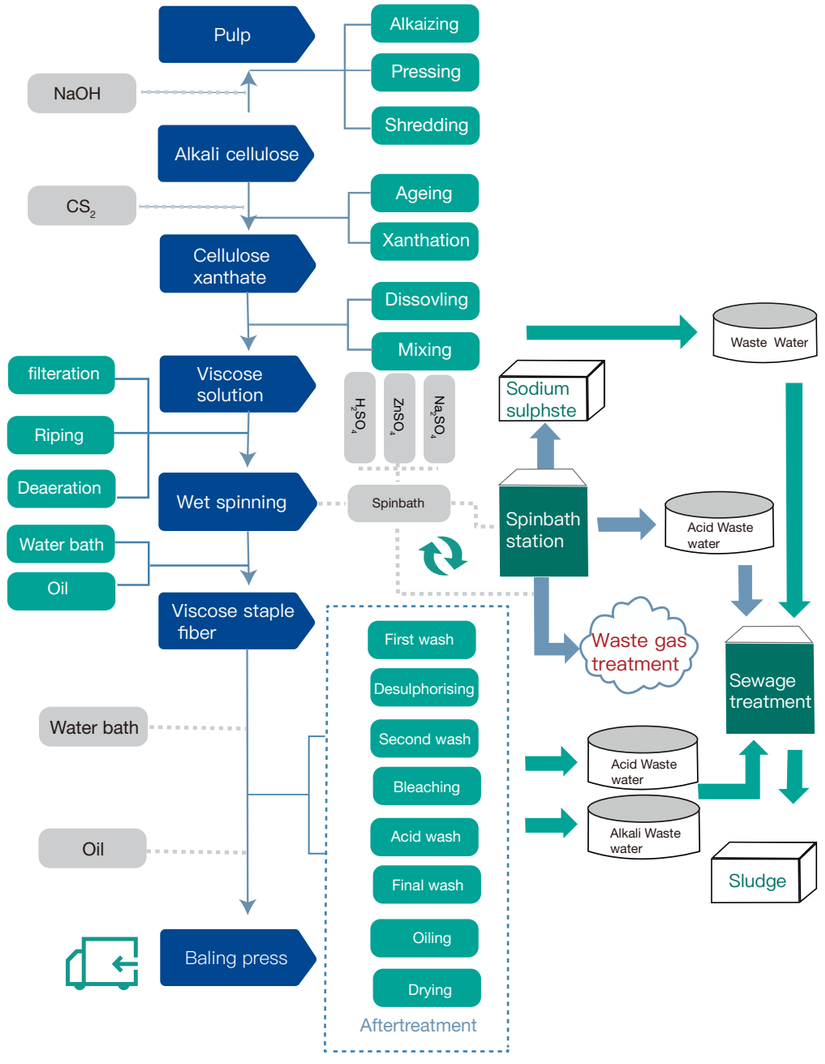
Since the industrial production of viscose fiber in 1905, although the process equipment has been continuously improved and the single-line capacity has been continuously increased, the basic principle and core links of the viscose method almost have no changes.

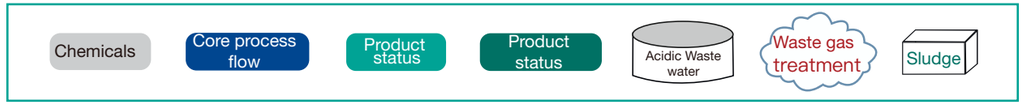
Generally, viscose fiber manufacturing can be divided into the following steps.

① Soak pulp in caustic soda solution to produce alkali cellulose, and generate alkali cellulose with a certain degree of polymerization after pressing, crushing and aging.
② React alkali cellulose with carbon disulfide to produce cellulose sulfonate.
③ Dissolve cellulose sulfonate in dilute alkali solution to produce viscose solution, and use a spinning machine for forming through filtration, de-foaming, and maturation.
④After wet spinning and forming, the viscose solution is dried and packaged into finished products through a series of post-treatment technologies.

In addition to the above-mentioned core technologies, considering the economy of the whole process, the acid treatment plants of viscose enterprises are also in the core process section, and their function is to circulate, blend and recover the coagulating bath. Through the effective circulation, recovery, blending and filtration of the coagulating bat, the water and alkali brought into the coagulating bat during the spinning process are removed, so that the production can be carried out normally. In recent years, with the increasing global attention to environmental issues, the problem of “three wastes” emissions in viscose fiber production has attracted more and more attention, and the industry is constantly optimizing related processes and technologies.

Production Process



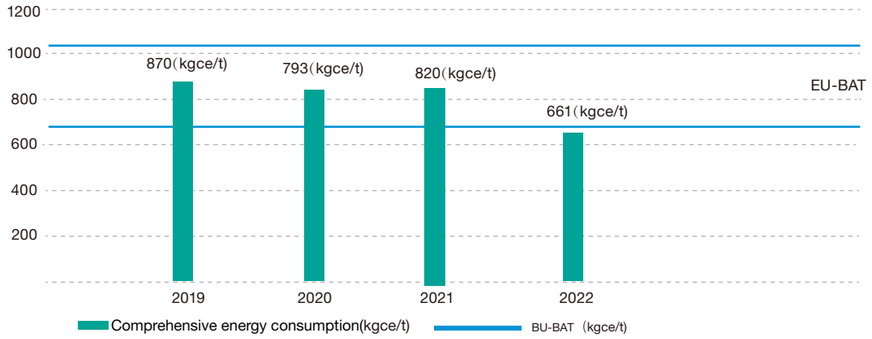


02/
Key Performance Disclosure

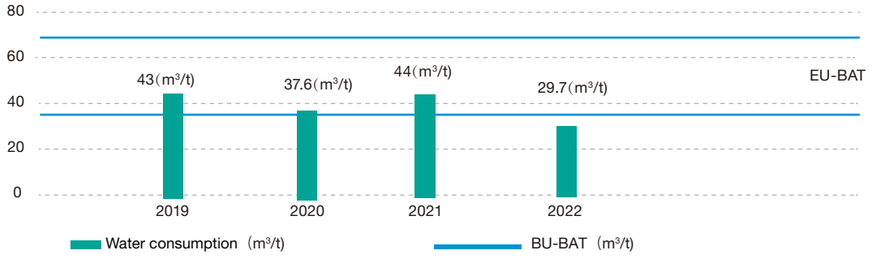
Sanyou Chemical Fiber, as the director unit of CV, by referring to the requirements of CV Roadmap 2025, and abiding by the requirements of domestic and foreign advanced standard systems, continuously improves the clean production level in viscose production, and promotes industrial closed-loop production.

Comprehensive energy consumption

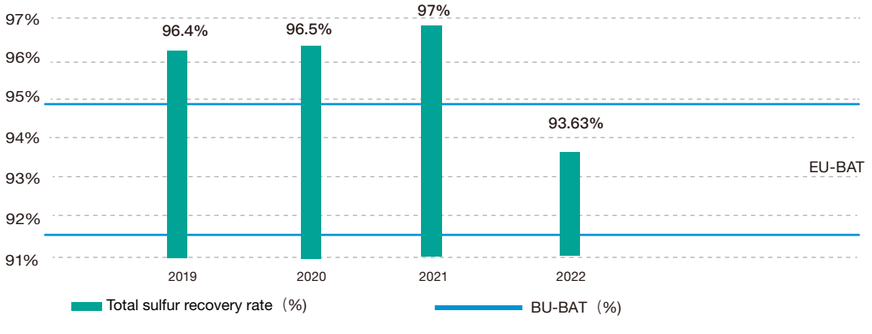
1、Comprehensive energy consumption



2、Water consumption



3、Total sulfur recovery rate



Third-party Certification

EU-BAT

FSLM certificate

Higg FEM certificate

RCS

FSLM-Green

Higg FEM-Green

OEKO-TEX® STeP
Certificate of Sustainable Textile
Production Certification

TUV Certificate of Soil Biodegradability Certification

Certificate

AEO Certificate

OEKO-TEX®
Standard 100 Certification

PEFCCertification of Forest
Production and Sales

FSC Certificate of Forest
Production and Sales Supervision
Chain Certification

Certificate of Intellectual Property
Management System Certification

Certificate of Management
System for Energy

Quality Management
System Certificate

Occupation Health & Safety
Management System Certificate

Environmental Management
System Certificate

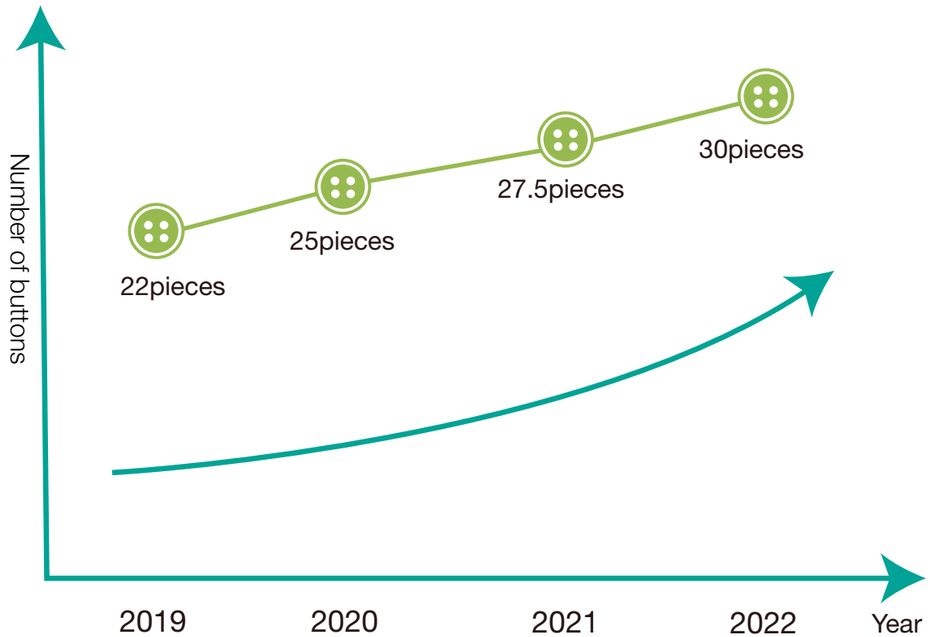
03/
Green Purchasing

In 2022, Sanyou Chemical Fiber continued to strengthen purchasing management, further improve the Management Measures for Supplier Evaluation and Access and the Pulp Procurement Policy, and make a comprehensive evaluation of suppliers. In the sales contract signed between the pulp purchaser and the supplier, the requirements for purchasing FSC-certified pulp and recycling cotton pulp after consumption are indicated. In 2022, the procurement of FSC-certified pulp reached 137,170 tons and the procurement of recycled pulp reached 1,390 tons. In the procurement of mechanical and electrical equipment, it is proposed that the motor energy efficiency meets the requirements of GB18613-2020 - the motor energy efficiency limit value and energy efficiency Grade I. In addition, according to the Quality Standard for Raw and Auxiliary Materials, the factory has made strict incoming inspection regulations on the inspection and acceptance of purchased raw materials such as viscose pulp, caustic soda, sulfuric acid, carbon disulfide, zinc sulfate, sodium hypochlorite, hydrogen peroxide, oil agent, auxiliary agent, titanium dioxide, defoamer, flame retardant, flocculant, corrosion and scale inhibitor, germicide and algaecide, acetic acid, slurry, hydrochloric acid and liquid zinc sulfate; only after the inspection is qualified and the inspection sheet is issued can those materials be accepted and put into storage.

List of Pulp Suppliers of Sanyou Chemical Fiber

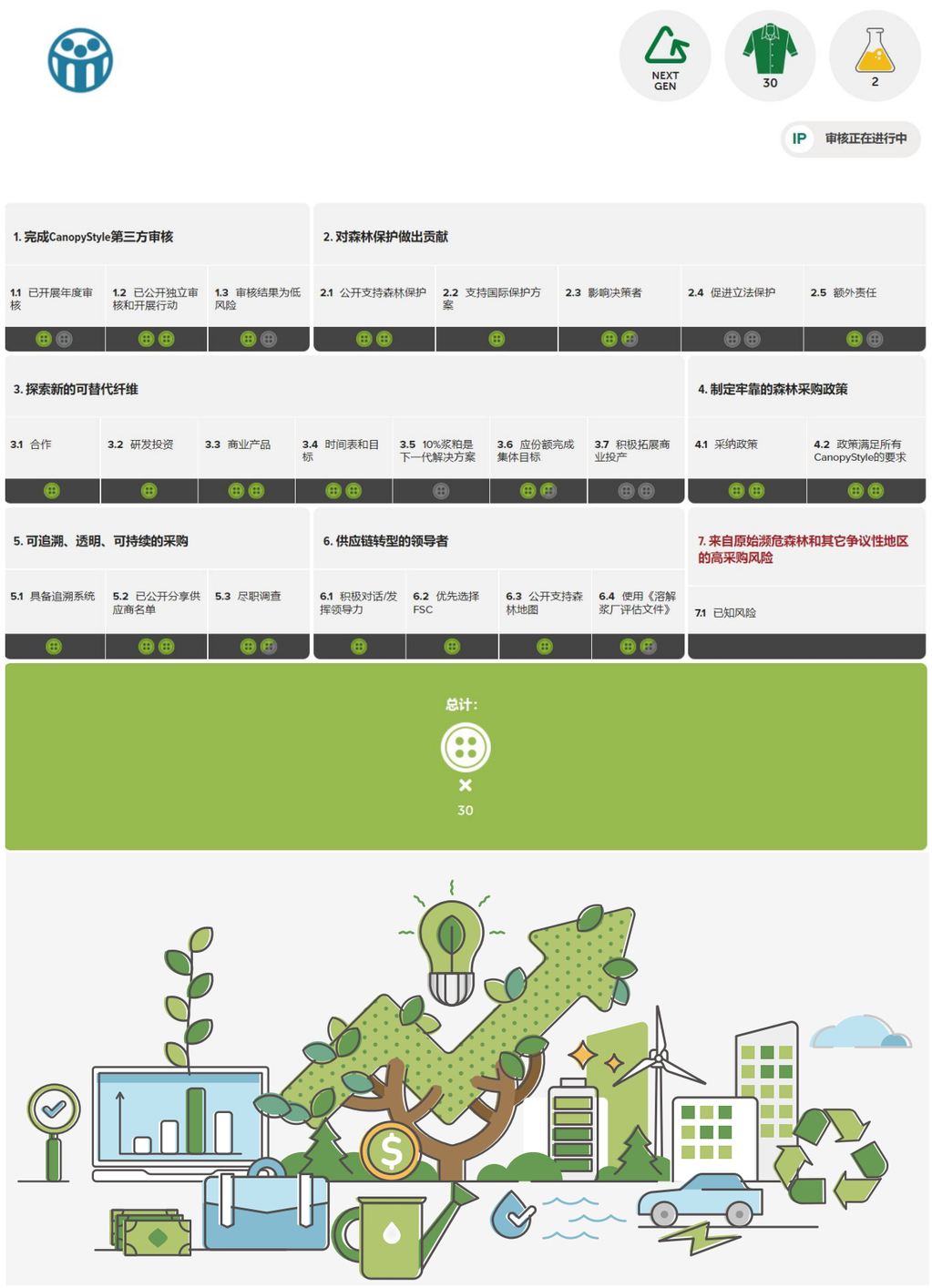
SN	Suppliers	Countries
1	Sodra Mörrum mill	Sweden
2	Caima	Portugal
3	AustroCel	Austria
4	Khon Kaen Mill	Thailand
5	Enocell mill	Finland
6	Port Wentworth mill	USA
7	AVC(Birla AV cell) Atholville Mill	Canada
8	AVN(Birla AV cell) Nackawic Mill	Canada
9	Rayonier Temiscaming	Canada
10	Cosmo Specialty mill	USA
11	ARAUCO CREATE SULFATE	Chile
12	Lenzing Paskov mill	Czech
13	Rayonier Fernandina Mill & Jesup Mill	USA
14	Shandong Sun Paper Co., Ltd.	China
15	Shandong Sun Honghe Paper Co., Ltd.	China
16	Xinxing Pipes (Shanghai) Metal Resources Co., Ltd.	Laos
17	Tianjin Shuotian Textile Trading Co., Ltd.	Laos
18	Hunan Jun Thai New Materials Technology Co. Ltd.	China
19	Fujian Qingshan Paper Industry Co., Ltd.	China
20	Renewcell	Sweden
21	Södra mill	Sweden

"Green Shirts" Ranking



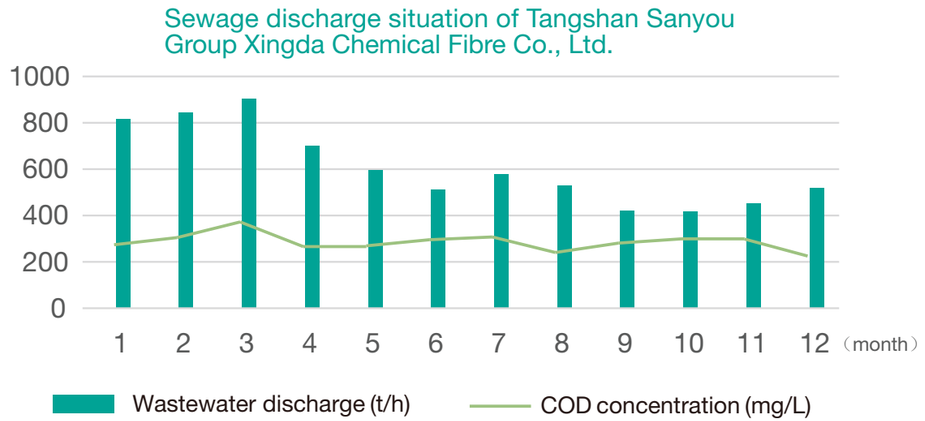
Canopy is an international non-profit environmental protection organization dedicated to protecting forests, species and climate. Canopy has hundreds of partners to jointly develop innovative solutions to improve the sustainability of the fiber supply chain while protecting virgin and endangered forests around the world. CanopyStyle, as an initiative of sustainable fiber procurement, aims to improve the whole cellulose fiber value chain. Its purpose is to confirm whether and when manufacturers confirm that the source of wood pulp procurement is low-risk, that is, whether it comes from virgin endangered forests or controversial raw materials.

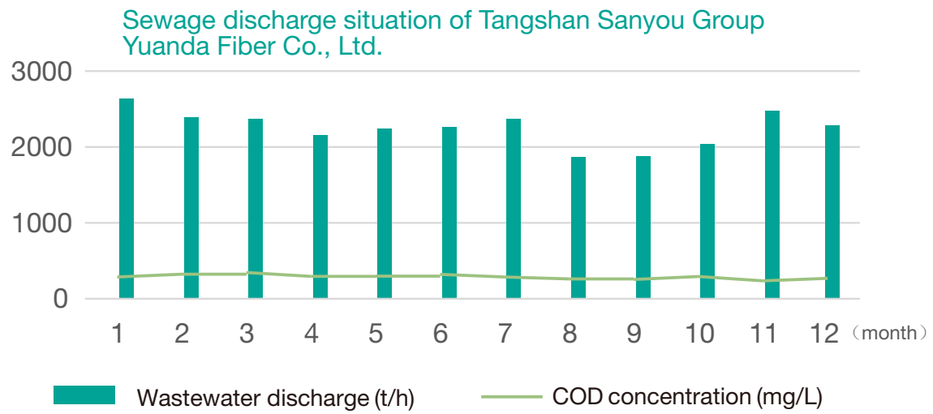
As a professional cellulose fiber manufacturer, Sanyou Chemical Fiber adheres to the sustainable development strategy, and takes actions in raw material procurement, product innovation, sustainable industry chain construction, forest protection and other fields to continuously improve the sustainable development level of the enterprise, and the number of buttons continues to increase in the Canopy Hot Button Ranking Report. In 2022, the Canopy Hot Button Ranking Report was released. Since Sanyou Chemical Fiber joined the Green Shirts Rating in 2019, the number of buttons has increased from 22 to 30 year by year, and it has obtained the highest rating - Dark Green Shirts.



04/
Waste Water Treatment

Main pollutants: Chemical oxygen demand (COD) and ammonia nitrogen. The up-to-standard sewage is discharged into the sewage treatment plant of Nanbao Economic Development Zone after being treated by the company's internal sewage treatment station.
Implementation standard: Class III Standard in Table 4 of the Integrated Wastewater Discharge Standard (GB8978-1996), with COD of 500 mg/L, and the requirements of inflow quality of the sewage treatment plant of Nanbao Economic Development Zone shall be followed.





Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. and Tangshan Sanyou Group Yuanda Fibre Co., Ltd. did not discharge waste water beyond the standard.

IPE 公众环境研究中心 Institute of Public & Environmental Affairs

The PRTR system is a pollutant list or environmental database related to releasing harmful chemicals into the atmosphere, water and soil and transferring them to other places for treatment. Sanyou Chemical Fiber has published the annual PRTR data on the IPE platform since 2019, and the stakeholders can fully understand the corporate environmental performance through the data publicly disclosed by third parties.
The Institute of Public and Environmental Affairs (IPE) is committed to collecting, sorting out and analyzing the environmental information disclosed by the governments and enterprises. In 2013, IPE established a voluntary disclosure platform for PRTR information, and promoted the production enterprises with a high environmental impact to disclose the annual resource and energy use, the total annual discharge and release of wastewater and waste gas pollutants (including hazardous chemicals), and the annual production and transfer of hazardous waste through brands.

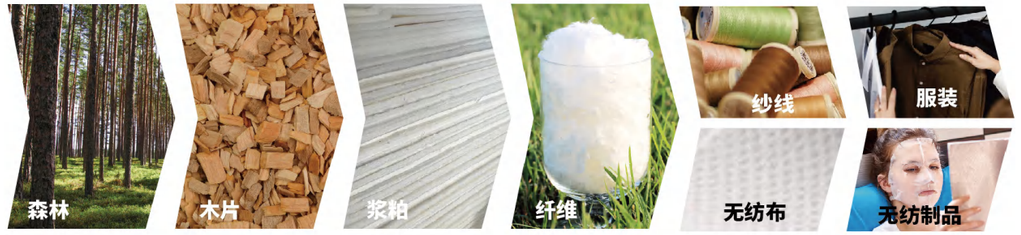
05/
Green Development

01.Transformation of Lyocell production lines

Sanyou Chemical Fiber, with the target of “reducing cost, increasing efficiency, and improving quality”, continuously improves the technological level of Lyocell, and develops differentiated fibers such as cross-linked Lyocell, so as to expand the application field of Lyocell. It conducts research and application of high-capacity spinning machines and related technologies, and the production efficiency of a single spinning machine is improved by 100% compared with the original technology; it conducts research and application of Lyocell spinning bath purification technology to realize on-production-line bath purification and improve the adaptability of Lyocell production system to the diversification of green raw materials; in 2022, Lyocell ultra-short fiber and Lyocell long-staple fiber were put on the market in batches, providing more raw material choices for downstream customers. The annual output increased by 16% compared with 2021, and the consumption continued to decline, making the products more sustainable.

02.Development of environmentally-friendly fiber series products

The construction of the traceability system is to prepare Tangcell® EcoTang® series products by independently developing tracer agent slurry and combining with existing viscose technology, so that this series of fibers and their derivatives can be traced by OSA and other instruments. At present, the output of environmentally-friendly fiber series products is 1.84 times that of last year, and the sales volume has nearly doubled. They have been widely used in more than 30 brands in foreign clothing, home textiles and other fields.



03.Spinning processing technology of waste textile pulp

As an important raw material for producing viscose fiber, pulp has hundreds of different varieties around the world, including wood pulp, bamboo pulp and waste textile pulp from different regions. Due to the different sources of pulp, the performance indexes of pulp are quite different. A comprehensive evaluation of the advantages and disadvantages of various pulps and reasonable matching when selecting raw materials will directly affect the fiber spinning forming and viscose fiber performance.

Sanyou Chemical Fiber has made in-depth research on various kinds of pulp, made research and analysis on the intrinsic indexes of pulp, such as pulp tree species, pulp production technology, pulp alpha cellulose content, polymerization degree, and alkali absorption value, and established pulp data files to screen out the best application scheme of pulp, and improve the ability of enterprises to deal with pulp procurement risks.

Sanyou Chemical Fiber has made in-depth research on various kinds of pulp, and made research and analysis from the aspects of tree species, production technology, intrinsic indexes and production line trial, established pulp data files, worked out the best mixing scheme of different kinds of pulp, and developed a stable production technology by optimizing and adjusting the viscose-making technology and spinning technology. At present, Sanyou Chemical Fiber successfully used a variety of different pulps to produce viscose fiber, and explored the matching process route suitable for waste textile pulp, so as to provide more technical support for the green and sustainable procurement of Sanyou Chemical Fiber’s raw materials.

Based on the construction of an industry chain cooperation mechanism, it promotes the collaborative projects of the waste textile recycling industry chain, establishes the recycling system of waste textiles, and realizes the large-scale development of producing recycled pulp fiber by using cotton waste and other raw materials.

04.Safe Production

The company formulates annual training and drill plans on an annual basis, mobilizes registered safety engineers, process technicians and equipment technicians to extensively participate in safety training and education activities, optimizes safety training teaching materials and educational forms, gives full play to the outstanding advantages of safety information platforms, pays attention to the training effects of observation teaching, practical training and on-line teaching, effectively guarantees the improvement of staff's safety ability and ideological understanding, and promotes emergency forces to perform their respective duties and responsibilities, and resolutely prevents and curbs the occurrence of major accidents.

We have achieved a 100% licensed engagement rate of "three types of personnel", a 100% education rate of external construction personnel, a 100% retraining rate of employees, and 20 hours of safety training for all employees, with a cumulative training of 80,000 person-times; we have organized and held 6 company-level drills, and supervised and guided more than 4,600 post drills in the workshops.

100%

Certificate employment rate

100%

Education rate of external construction personnel

100%

Employee retraining rate

20 hours
Safety training hours per capita

6
Second-rate
Organize company drills

8
10,000/person
cumulative training

4.6
Thousand/person
Exercise participants

On September 20 and 22, 2022, the company organized special warning education and training with a theme of "Strengthening Safety Awareness and Building Safety Defense Line". The lecturer was the Director of the Safety Management Department (registered safety engineer), and the participants included 47 person-times, including the general managers of the branches, the heads of all units, and the first, second and third level experts. In order to strengthen the understanding of safety thoughts of middle and senior management cadres, the warning focus was to specify the safety responsibility, deeply analyze the cause of the accidents and the current safety production situation, improve political positions, mobilize the enthusiasm and initiative of key minority personnel, and resolutely prevent and curb all kinds of accidents.

Each unit has set up a safety training team with the top leader as the team leader to improve the safety training scheme and content of the unit. Each workshop has revised the contents of dual control and safety operation procedures system by system and post by post, required employees to have a high degree of unity in "knowledge and practice" and normalized the work of "revision → training → assessment → inspection". Those who have failed the exams are resolutely not allowed to work on duty, and it is necessary to strive to improve their risk prevention ability and safety standard operation level.

In order to improve the emergency rescue ability of employees, the company specially purchased simulators to carry out simulated rescue training, so that employees can practice CPR techniques and skills of artificial respiration and external chest compression which are close to the real scene.

05.Technological Difficulties Breakthrough

In 2022, with its own technical advantages, Sanyou Chemical Fiber formulated the “19+N” differentiated product strategy to occupy the market with products with high technology content and high added value such as Modal and bamboo charcoal fiber.

The "three transformations" strategy has been implemented at an accelerated pace.

Accelerated implementation of the “Three Transformations” Strategy Six tasks and objectives have been successfully completed, including the “19+N” promotion, the “4+9” major task extension, and the renovation of the Lyocell production line. We have steadily promoted the production capacity of Lyocell, successfully mass-produced ultra-short and high-clean Lyocell, and successfully developed cross-linked Lyocell.

The project efficiency creation is promising.

A total of 36 “short, stable and fast” projects were launched, and 31 were put into use, creating an efficiency of RMB14 million.

Innovation and excellence creation have accumulated potential energy.

We took the opportunity of the special action of “become prosperous in three years and becoming powerful in five years” to promote the first batch of 22 projects efficiently. The production of denim blue fiber has been successfully completed; new varieties such as environmentally-friendly high-whiteness, environmentally-friendly black and kornit have been created; the development of 24-color fiber has been promoted; 7 kinds of colored fiber such as Wish Gray and Loulan Brown have been developed successfully. We have carried out research on efficient recovery of carbon disulfide and treatment of high-concentration wastewater to enhance the development potential.

04

Green Factory

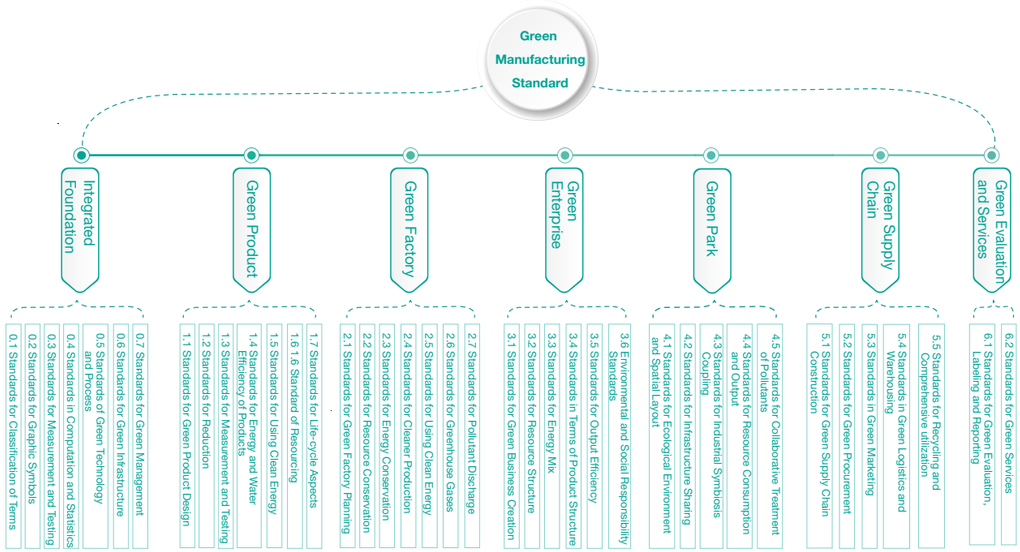
In 2022, the Sanyou Xingda plant (excluding Yuanda) carried out the evaluation of provincial green factories in Hebei Province, and the evaluation year was the whole year of 2021. This chapter covers the historical data for 2021 and before and the latest data for 2022.

01/
Introduction to Green Factory

Background of Green Factory Tasiks

In recent years, China has been actively building a grenn manufacturing system, for the purpose of making full efforts in concept transformation, technical support and standard improvement, speeding up the R&D of core key technologies and promoting the adjustment of industrial structure, so as to build a full green industry chain and create new economic growth points.

The green manufacturing system is a whole life-cycle concept, and a modern manufacturing model that comprehensively considers the coordination of resource efficiency and environmental impact. Its main work includes the construction of green factories, green design products, green parks and green supply chains. As a key link in building the green manufacturing system, the establishment of a green factory is a key task in implementing the green manufacturing project, and it is also an important way to promote the structural optimization, quality improvement and efficiency enhancement of various industries.



《Green Manufacturing Standard System Construction Guide》Green manufacturing standard system framework

Establishment of the green manufacturing system

In 2016, the Ministry of Industry and Information Technology issued the Notice on Developing the Green Manufacturing System, stating that the main work of the green manufacturing system includes the construction of green factories, green design products, green parks and green supply chains. In 2018, the national standard - General Principles for Assessment of Green Factory (GB/T 36132-2018) was officially released, which clarifies the general requirements for green factory assessment in China's industrial sectors.

The standard defines the terms of the green factory, establishes the evaluation indicator system of the green factory system from the aspects of basic requirements, infrastructure, management system, energy resource investment, products, environmental emissions, and performance, and according to the principles of "intensive factory buildings, harmless raw materials, clean production, waste recycling, and low carbon energy", and puts forward the general requirements for green factory evaluation. A green factory is the production unit of the manufacturing industry, the main entity of green manufacturing, and the core supporting unit of the green manufacturing system, focusing on the greening of the production process.

The establishment of a green factory is the core content of the green manufacturing system, aiming to guide and support enterprises to transform to intensive land use, harmless raw materials, clean production, waste recycling and low-carbon energy. Green factory evaluation indicators are divided into first-class indicators and second-class indicators, and the specific requirements include basic requirements and expected requirements. The basic requirements are the mandatory evaluation requirements for the pilot demonstration projects of green factories, and all the basic requirements in the indicator system shall be met before the green factories are declared, that is, one-vote veto, while the anticipatory requirements are the reference targets for the creation of green factories, and local governments are encouraged to put forward higher requirements in combination with the regional development level and with reference to the anticipatory indicators.

Standard evaluation indicators of green factory

Green factory evaluation indicators are divided into first-class indicators (7 categories) and second-class indicators (26), as shown in the following table.

Evaluation Table of Green Factory Evaluation Indicators

Level 1 Indicator/(Weight)	Level 2 Indicator
Basic Requirements / (One-vote Veto)	• Basic compliance and requirements of related parties: Enterprise compliance; no major safety, environmental protection and quality accidents in the past three years; comprehensive energy consumption and water resources utilization meet the current national standards; pollutant discharge conforms to the national standards or local current standards. • Basic management responsibilities: Top management; factory
Infrastructure / (20%)	• Building facilities: Land, energy and water saving; natural ventilation, plant greening • Lighting: Natural light source is used in the special production process of the textile workshop; lighting adjustment and control system • Equipment and facilities: The equipment which shall be eliminated shall be eliminated and updated within a time limit; special equipment
Management system / (15%)	• Basic requirements: Quality management system; occupational health management system

	• Environment and energy management system: Waste gas, waste water and solid waste; selection of equipment and technology; whole process and whole system management
Input of energy resources / (15%)	• Energy input: Gradually increased proportion of non-fossil energy; energy-saving general technology • Resource input: the requirements of water intake quota are met; the gradient utilization of fiber resources is intensified • Procurement, combined heat and power generation, chemicals management
Product / (10%)	• General requirements: Green product requirements; processing quality of textile machinery equipment • Ecological design and intelligent manufacturing: Ecological design product requirements; automation and intelligent production • Energy saving, water saving and carbon footprint
Environmental emissions / (10%)	• Air and water pollutants: National and local regulations are met. • Solid waste: Handled by qualified companies; hazardous wastes • Noise, greenhouse gas
Performance / (30%)	• Intensive land use • Harmless raw materials • Clean production • Waste recycling • Low-carbon energy

Sanyou Xingda Green Factory

Sanyou Chemical Fiber was awarded the provincial-level green factory in 2022, with a score of 98.25, indicating that the green development promoted by Sanyou Chemical Fiber has been affirmed and recognized by the state. The following is the detailed score:

Level 1 Indicator	Infrastru cture	Management system	Input of energy and resources	Product	Environmental emissions	Perfor-mance	Total
Score	19.6	15	14.25	10.0	10.0	29.4	98.25

2022年度河北省绿色制造名单公示

发布时间：2022-10-11 来源：节能与综合利用处

2022年度河北省绿色制造名单公示

根据河北省绿色制清体系建设工作部署和有关规定，经各推荐、我厅审核和征求相关部门意见，拟将石家庄永盛乳业有限公司等106家企业认定为省级绿色工厂，河北涉县经济开发区认定为省级绿色园区，赞星金隅水泥有限公司等9家企业认定为省级绿色供皮链营理企业，河北柏润工贸科技有限公司的政组份环氧防底漆等11个产品认定为省级绿色设计产品。现将名单于以公示（见附件）。如对入选单位、产品有异议，请以实名和书面形式向我们反情，公示期2022年10月11日至2022年10月13日。

联系电话:0311-87800807，87801583(传真)。

附件，拟认定的2022年河北省绿色制渣名单

河北省工业和信息化厅

2022年10月11日

附件

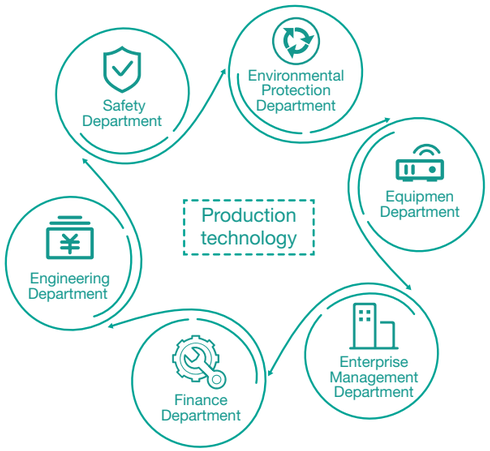
23	河北五维航电科技股份有限公司	北京联合智业认证有限公司	张家口	装备制造
24	河北宜工机械发展有限责任公司	河北省产品质量监督检验研究院	张家口	装备制造
25	张家口市杰星电子科技有限公司	河北省产品质量监督检验研究院	张家口	电子
26	哈电集团(秦皇岛)重型装备有限公司	河北省电子信息技术研究院	秦皇岛	装备制造
27	中铁山桥集团有限公司	中国船级社质量认证有限公司	秦皇岛	装备制造
28	全属星节能保温科技(唐山)有限公司	河北紫旭节能环保技术咨询有限公司	唐山	建材
29	唐山三友集团兴达化纤有限公司	机械工业节能与资源利用中心	唐山	化工
30	金隅天坛(唐山)木业科技有限公司	北京赛西认证有限责任公司	唐山	建材

02/ Green Factory Requirements

Baishan Zheng, the top manager of the factory, made a commitment to the establishment of the green factory management system, including the responsibility for the effectiveness of the green factory; the roles, responsibilities and authorities related to green factories are assigned and exchanged within the factories, including ensuring that the factory construction, operation and maintenance meet the standard requirements.

The factories have set up a green factory leading group, and determined the organizational structure centered on the Production Technology Department, and supplemented by the Safety Department, Environmental Protection Department, Equipment Department, Enterprise Management Department, Engineering Department and Finance Department; they have formulated the planning and objectives of the green factories, including the planning purposes, planning objectives and implementation schemes, safeguard measures, etc.; they have put forward specific implementation schemes, and set specific quantitative and qualitative goals to be achieved by 2030. The

factories actively implement the environmental commitments made to stakeholders, and actively improve the environmental performance of the factories with reference to the requirements of SLCP certification, OEKO-TEX and RCS.



- The applicable laws, regulations and standards in the production process have been strictly observed.
- No abnormal operation in the past 3 years.
- No relatively serious or above major production safety and quality accidents or sudden environmental pollution incidents of Grade III (larger) or above.
- No punishment for violating laws and regulations.
- No serious problems in the central environmental protection supervision and the provincial inspection and patrol notification.
- Not included in the list of industrial energy saving supervision and rectification.
- Not listed as an entity that has lost trust, which meets the evaluation requirements.

03/
Overview of Sanyou Xingda's Performance

Architecture

Control Indicators of the Land for the Construction of Industrial Projects

Indicator	Value	Unit	Indicator	Conformity
Investment intensity	2946.42	RMB10,000/ hectare	RMB12.95 million/hectare	Conformity
Volume fraction	0.93	-	≥0.8	Compliant
Coefficient of building occupation	44.9	%	30	Compliant
Proportion of the land for administrative office and living service facilities	2.12	%	≤7	Compliant
Greening rate	7.3	%	≤20	Compliant

In order to ensure workers' health, Sanyou Chemical Fiber Factories use the interior decoration materials whose content of aldehyde and benzene meets the standard requirements of GB18582 - Indoor Decoration Materials - Limit of Harmful Substances in Interior Wall Coatings.

No.	Material Name	Category	Inspection Items in the Inspection Report	Test Value/Specification-required Value
1	Interior wall coatings	Changhong interior wall latex paint	Free formaldehyde g/kg	0.02/≤0.1
			VOC g/L	94.9/≤200
2	Interior wall coatings	Akzo Nobel Decorative Coatings (Langfang) Co., Ltd. A926 GeeBrite Latex Paint	Free formaldehyde mg/kg	42≤120
			Sum of benzene, toluene, ethylbenzene and xylene mg/kg	Not detected/≤300
3	Wood door	Top coating wood door	Formaldehyde mg/L	0.6/≤1.5

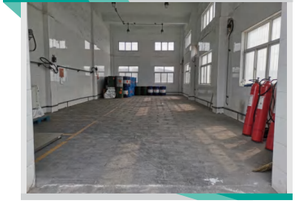
The factory has set up a hazardous waste repository managed by special personnel, which is mainly used to store hazardous wastes such as waste activated carbon and waste mineral oil.

ONE

TWO

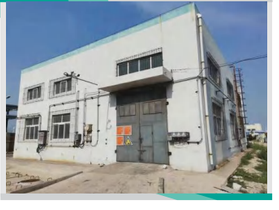
THREE

FOUR



FIVE

SIX



Photos of hazardous waste storage warehouse

List of Key Suppliers of Building Materials

No.	Material Name	Manufacturer	Place of Production
1	Hot-rolled ribbed Grade-II and Grade-III steel bars	Tangshan Iron and Steel Co., Ltd.	TangShan
2	Concrete	Nanbao Economic Development Zone Ruida and Anshan Commercial Concrete Mixing Plants	Nanbao, Tangshan
3	Ceramsite hollow-bloc wall building block	Cement Component Factory in Tangfang Town, Fengnan	Fengnan, Tangshan
4	Flyash brick	Yongcheng Green and Energy-saving Brick Factory in Fengnan District, Tangshan	Fengnan, Tangshan
5	Autoclaved aerated concrete building block	Shunwang New BuildingMaterials Co., Ltd. In Fengnan District, Tangshan	Fengnan, Tangshan
6	Molded polystyrene foam board for thermal insulation	Donggezhuang Thermal Insulation Material Factory in Fengnan District, Tangshan	Fengnan, Tangshan
7	Cement	Tangshan Qixin Cement Co., Ltd.	Tangshan
8	Coating	Tangshan Changhong Coatings Co., Ltd.	Tangshan
9	SBS water proof	Tangshan Desheng Waterproof Co., Ltd.	Tangshan
10	Conch plastic-steel window (Tangshan Conch Profiles Co.,Ltd.)	Tangshan Borong Doors and Windows Manufacturing Co., Ltd.	Tangshan

In order to reduce the energy consumption of building materials in the whole life cycle, local building materials with low energy accumulation, high performance and high durability are selected during factory construction to reduce the energy consumption of building materials in the whole life cycle.

Sanyou Chemical Fiber has built pedestrian corridors between the main buildings for the convenience of workers. At the same time, in order to improve the greening rate of the factories, a large number of native plants and plants with strong weather resistance, such as poplars and holly balls, have been planted. In order to strengthen the utilization of renewable resources and energy, the sanitary appliances in the factory area all adopt water-saving flushing valves for defecation produced by Huida Sanitary Ware Co., Ltd., with a water-saving rate of 42%.

Pedestrian corridor andgreening in the factory area

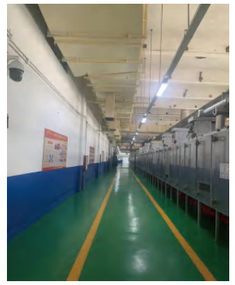
Lighting

In order to effectively reduce carbon emissions, Sanyou Chemical Fiber adopts different hierarchical designs and controls according to the requirements of different sites for light and shade in different rooms, zones, and procedures. Take the spinning workshop of the factory as an example: the spinning, drafting, cutting, refining, drying and packaging processes adopt the LED T8 LED lighting system, and the processes and areas are divided with the control switches in the on-site lighting box; the bath station process adopts energy-saving lamp lighting system, which is divided into areas and controlled by existing lighting boxes in a segmented way.

Multi-storey and multi-group windows are designed on the four walls of the factory buildings to meet the needs of daytime production and make full use of natural lighting.

Natural lighting of the factory buildings

At the same time, LED fluorescent lamps and energy-saving lamps are mainly used in the spinning, stock solution, acid station, power and electric instrument workshops of the factories. Ordinary fluorescent lamps and incandescent lamps are basically no longer purchased, and ordinary fluorescent lamps used in offices are gradually replaced with LED lighting equipment after damages. At present, the use of the energy-saving lighting system in the whole factory area accounts for 70%, and it is increasing year by year.



Picture of LED Lighting Lamps

Summary Table of Lighting Lamps

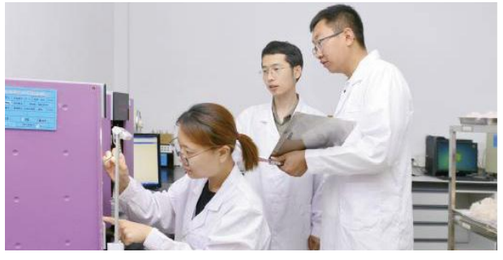
Workshop	LED lamps		Energy-saving lamps		Other lamps	
	Power W	Quantity	Power W	Quantity	Power W	Quantity
Stock solution workshop	16	498	22	391	36	367
	-	-	42	232	100	19
	-	-	-	-	125	10
	-	-	-	-	250	2
Spinning workshop	16	550	22	235	36	430
	18	550	-	-	250	3
Acid station workshop	14	261	22	146	36	110
	-	-	42	567	125	20
	-	-	-	-	250	3
	-	-	-	-	40	5
Power workshop	22	18	42	459	40	308
	-	-	68	131	100	24
Storage Workshop	300	7	42	50	40	120
	-	-	68	152	250	113
	-	-	-	-	120	20
Machining shop	-	-	-	-	250	29
Office building	28	38	22	98	36	272
Total		1922		2461		1855

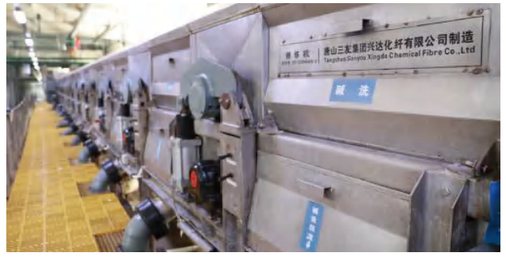
Equipment and Facilities

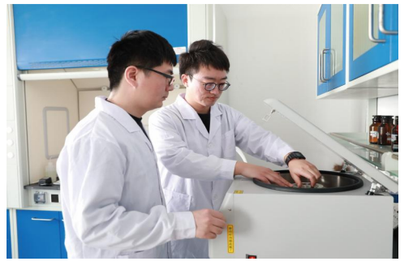
The factories attach great importance to scientific and technological innovation, obtain more than 68 patents and technical authorizations, and use advanced technological advantages and equipment manufacturing capacity to first create the world's largest production line with a single-line capacity of 150,000 tons/year in the industry, realizing the largest single-line capacity, the most advanced equipment, the highest differentiation rate, the best product quality, the lowest comprehensive energy consumption and other industrial tops, which is one of the largest cellulose fiber production and R&D bases in China. A number of technologies won the Hebei Science and Technology Progress Award and the Science and the Technology Award of China National Textile and Apparel Council.

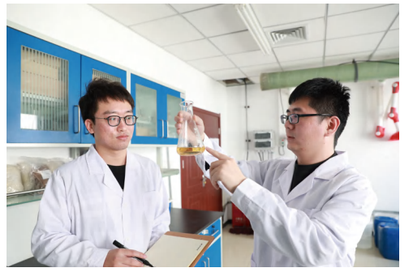
Project Name	Awards Obtained
Key technology of nanometer pigment preparationand stock coloring wet spinning	First Prize of Science and Technology Award of China National Textile and Apparel Council in 2020
Production of alkaline pulping viscose fiber and high-value utilization of hemicellulose in waste liquid	Second Prize of Science and Technology Award of China National Textile and Apparel Council in 2020
Integrated development and industrialization of technology and equipment of regenerated cellulose fiber with a single-line capacity of 150 thousand tons/year	Second Prize of Scientific and Technological Progress in Hebei Province in 2021

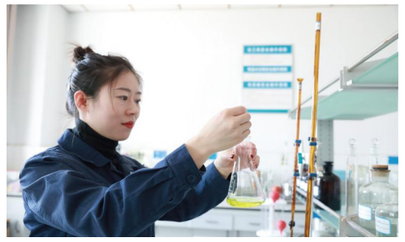
The special equipment of Sanyou Chemical Fiber mostly uses production equipment with high efficiency, a high degree of automation and low pollutant emissions. In the R&D center of the project of "viscose staple fiber for high-speed vortex spinning", by optimizing spinning processes such as viscose making, spinning scouring and coagulating bath, and improving key equipment such as secondary impregnation, spinneret and post-treatment, special oil agents are developed, which optimize the micro-structure of fiber, increase fiber uniformity, reduce fiber friction coefficient and improve fiber's wet and dry strength; a series of special viscose staple fiber for vortex spinning has been developed. On the original viscose staple fiber production device, the industrialization of viscose staple fiber for high-speed vortex spinning with 550m/min has been achieved via optimization and upgrading; the products meet the requirements, and the technology has the value of promotion. The results are identified as: the overall technology has reached the domestic leading level.











In the R&D project of "ultra-clean treatment and resource recycling technology of viscose waste gas by biological methods", the dominant bacteria with high sulfide removal rate have been cultivated, and the biological treatment technology and device for efficiently removing sulfur-containing waste gas have been developed. For the pain point that the sulfur-containing waste gas in viscose production is difficult to reach the standard and recover, the acid-resistant biological method technology is developed, which realizes the ultra-clean treatment of tail gas and the recycling of sulfur, and significantly reduces the material and energy consumption; the biological method device adopts a modular design, which is flexible and simple to operate; the combined fillers adopt porous durable polyurethane and polypropylene, which is not easy to block; acidic filtrate can be used in wastewater treatment to realize "treating waste with waste". The demonstration project of biological treatment of waste gas has been completed, and the treatment air volume of a single set of devices can reach 120,000m³/h, with stable and efficient operation, and the removal rate of hydrogen sulfide and carbon disulfide in low-concentration tail gas is ≥95% and ≥90% respectively. The results are identified as: the technology has reached the domestic leading level.

120000m³/h

The treatment air volume of a single set of devices

The technology has reached the domestic leading level

The results are identified

Removal rate of hydrogen sulfide

Carbon disulfide in low-concentration tail gas

The measuring instruments in the factories are fully equipped, the water for equipment such as the lighting system, water chilling units, and air compressors, and the cooling tower can be measured separately, and the production water and domestic water can also be measured separately.

Measuring Instrument Table

No.	Energy Measurement Category	Unit of Energy Use			Primary and Secondary Energy Use Units			Main Energy Use Equipment (or Unit)		
		Required Quantity (unit)	Actual Quantity (unit)	Equipping Rate (%)	Required Quantity (unit)	Actual Quantity (unit)	Equipping Rate (%)	Required Quantity (unit)	Actual Quantity (unit)	Equipping Rate (%)
1	Electricity meter	4	4	100%	9	9	100%	940	940	100%
2	Water meter	10	10	100%	4	4	100%	43	43	100%
3	Steam	2	2	100%	5	5	100%	52	52	100%
4	Total	16	16	100%	18	18	100%	1035	1035	100%

Management System

General requirements	● Quality Management System
	● Third-party Certification of the Quality Management System
	● Occupation Health & Safety Management System
	● Third-party Certification of the Occupation Health & Safety Management System
Environmental Management System	● Environmental Management System
	● Third-party Certification of the Environmental Management System
Management System for Energy	● Management System for Energy
	● Third-party Certification of the Management System for Energy
Social Responsibility	● Social Responsibility Report

Input of Energy and Resources

1.Input of Energy

He factories optimize the energy consumption structure and reduce the input of non-renewable energy based on ensuring safety and quality. In terms of electricity consumption, solar street lamps are installed to reduce the dependence on municipal electricity, and electric forklifts are used to partially replace diesel forklifts to reduce the use of diesel; in terms of steam use, a number of technical transformation measures have been carried out to make full use of by-product heat and pressure and reduce the use of outsourced steam, such as the gradient utilization of steam, energy-saving transformation of yellowing jacket water in the five lines of viscose making workshop, cooling circulating water connection between new and old power stations, efficient utilization of back-pressure steam in steam turbines, and the application of new technology of thirteen-stage flash-vaporization acid bath evaporation.

The factories have established the enterprise-side software system for on-line monitoring unit energy consumption of key energy consumption units, namely, ECMS. ECMS can realize on-line monitoring of energy consumption, and complete data transmission between on-line monitoring equipment and provincial platforms.

2.Input of Resources

N order to reduce the use of materials and harmful substances, the factories have formulated relevant assessment plans for waste silk and isolation packs, and at the same time, recycled materials and recyclable materials are used to replace primary materials and non-recyclable materials. For example, in the production of Lyocell, carbon disulfide is no longer used as the raw material, and hydrochloric acid is used to replace conventional sulfuric acid and its usage is significantly reduced; ReVisco™ - a regenerated fiber developed by the factory, which uses recycled waste cotton textiles as the pulp raw material, has realized the recycling of waste textiles in the viscose fiber field and passed the standard certification of RCS recycling declaration. In addition, recycled pulp and recyclable pulp certified by FSC are also widely used in normal production and procurement.

3.Procurement

In order to ensure that the purchased products meet the specified requirements, the factories have formulated the Quality Standard for Raw and Auxiliary Materials, and have made strict incoming inspection regulations on the inspection and acceptance of purchased raw materials such as viscose pulp, caustic soda, sulfuric acid, carbon disulfide, zinc sulfate, sodium hypochlorite, hydrogen peroxide, oil agent, auxiliary agent, titanium dioxide, defoamer, flame retardant, flocculant, corrosion and scale inhibitor, germicide and algaecide, acetic acid, slurry, hydrochloric acid and liquid zinc sulfate; only after the inspection is qualified and the inspection sheet is issued can those materials be accepted and put into storage.

In order to meet the requirements of green supply chain evaluation, the factories have formulated the following regulations:

1. Clear planning documents are formulated for the implementation of green supply chain management, and the requirements of the supply chain management are put forward;

2. The company strictly implements green procurement and supplier management, and gives priority to the selection of sustainable raw materials; through the examination of FSC-COC forest production and sales supervision chain and PEFC production and sales supervision chain, it has been awarded the “Green Shirts” Rating in the Hot Button Ranking Report published by Canopy. The purchased pulp is FSC-certified pulp and recycled cotton pulp recovered after its recycling and consumption, and the purchased fiber raw materials have passed the sustainable certification;

3. The company strictly controls the production process to ensure the sustainability of the production process, and has successively obtained the certifications of sustainable textile production; it has developed traceability technology and successfully applied it to the environmentally-friendly viscose, EcoTang®, ensuring the green and transparent use of the product in the whole industry chain. Through pre-spinning injection technology, cellulose fiber and environmentally-friendly pigments are organically combined to reduce the later dyeing and finishing processes and shorten the textile processing chain. The company adopts environment-friendly pulp materials, which do not contain formaldehyde and decomposable aromatic amine dyes, which can not only meet the consumers’ demand for fabric colors, but also reduce the impact of the final products on the environment;

4. The ReVisco®, a regenerated fiber developed by the company, has realized the recycling of waste textiles in the viscose fiber field, and passed the standard certification of RCS recycling declaration and TÜV soil biodegradability certification;

5. The company has established a website, where the information such as pollutant detection reports, social responsibility reports, sustainable development reports, raw material procurement, sustainable supply chains, suppliers’ audits and certifications, and suppliers’ green environmentally-friendly certifications is published.

Carbon Emission Reduction

In 2021, the company made a carbon footprint report on the products of the factories, calculating that the carbon footprint of 1 ton of viscose staple fiber products of Tangshan Sanyou Group Xingda Chemical Fiber Co., Ltd. was 13.61tCO2e, in which the process of obtaining raw materials contributed greatly to the carbon footprint, accounting for 68.54% of the carbon footprint, followed by the production process, accounting for 30.14%. The company actively promotes the greening of raw materials and production by using the accounting results of the products.

Environmental emissions

1.Air Pollutants

Item	Organized exhaust emission rate kg/h				Unorganized exhaust gas emission concentration mg/m³			
	Hydrogen sulfide	Carbon disulfide	Stink	Ammonia	Hydrogen sulfide	Carbon disulfide	Stink	Ammonia
1# purge stack	3.029	8.343	724	-	0.008	0.83	18	0.15
2# purge stack	4.537	15.63	724	0.605				

2.Solid waste

The company entrusts qualified institutions for the disposal of hazardous waste, among which the Tangshan Xinlian Environmental Protection Technology Co., Ltd. is entrusted to handle sludge, Tangshan Aoshengtong City Mineral Resource Development Co., Ltd. is entrusted to handle waste batteries, Cangzhou Ruihai Grease Chemical Co., Ltd. is entrusted to handle waste mineral oil, and Haichang Environmental Technology Co., Ltd. in Leting County is entrusted to handle other hazardous waste such as waste paint buckets and waste reagent bottles. The domestic garbage is sent by the sanitation department to the municipal domestic garbage disposal and sanitary landfill sites. Scraps and other solid waste in production are recycled, and the generated scrap iron and non-parts are sold. All treatments meet the requirements of GB18599 and related standards.

3.Noise

The main noise sources of the factories are air compressors, water pumps, air fans and other production equipment. The factories adopt measures such as adding silencers and damping pads, and after sound absorption in workshops, wall shielding, plant absorption and distance attenuation, the noise at the factory boundary meets the standard requirements.

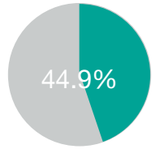
4.Greenhouse Gas

The plant's greenhouse gas emission in 2021-2022 are 528075.22tCO_2e and 329525tCO_2e respectively.

Performance

1.Intensive Land Use

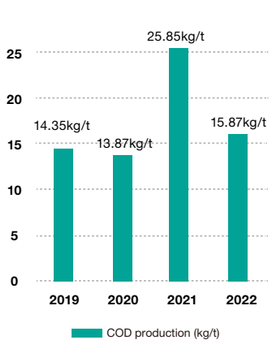
The company's volume fraction is 0.93



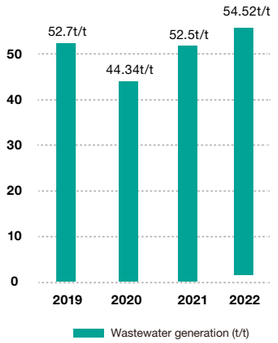
The company's building density is 44.9%

In 2019-2021, the output value of unit land-using area of the factories was RMB7,406,900mu, RMB5,832,500mu, RMB7,358,600mu, and RMB4,962,500mu respectively.

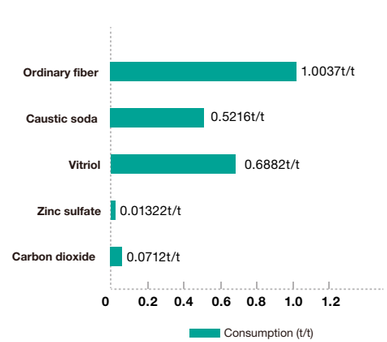
2.Clean Production



In 2019-2022, the output of COD perunit product of the factories



In 2019-2021, the waste water output per unit product



Plant material consumption perunit-product in 2021

In 2021 in the factories, the pulp consumption per unit product of ordinary fiber was 1.0037t/t; the consumption of caustic soda was 0.5216t/t; the consumption of sulfuric acid was 0.6882t/t; the consumption of zinc sulfate was 0.0132t/t; the consumption of carbon disulfide was 0.0712t/t.

In 2022 in the factories, the pulp consumption per unit product of ordinary fiber was 1.0032t/t; the consumption of sulfuric acid was 0.6977t/t; the consumption of carbon disulfide was 0.0652t/t.

In the factories, the general solid waste mainly includes waste viscose, dry coagulated viscose blocks, waste silk, sludge, etc. Among them, all the waste viscose and dry coagulated viscose blocks are recycled after collection, and the waste silk is collected as a by-product and washed and dried to be sold as short fiber, and the sludge is collected and sold to third-party companies for recycling, and the comprehensive utilization rate of industrial solid waste reaches 100%.

The factories have established physicochemical sewage stations and biochemical sewage stations in the form of “aeration and stripping - neutralization - coagulation and sedimentation”, in which the waste water treated by the physicochemical sewage stations is reused in the production link through the reclaimed water system, and combined with the recycling water in the production link, the recycling rate of the factory wastewater treatment is 96.8%.

39473.76kg/t	58402.31kg/t	100%	96.8%
In 2021, the waste gas output per unit product of the factories	In 2022, the waste gas output per unit product of the factories	comprehensive utilization rate of industrial solid waste	recycling rate of the factory wastewater treatment

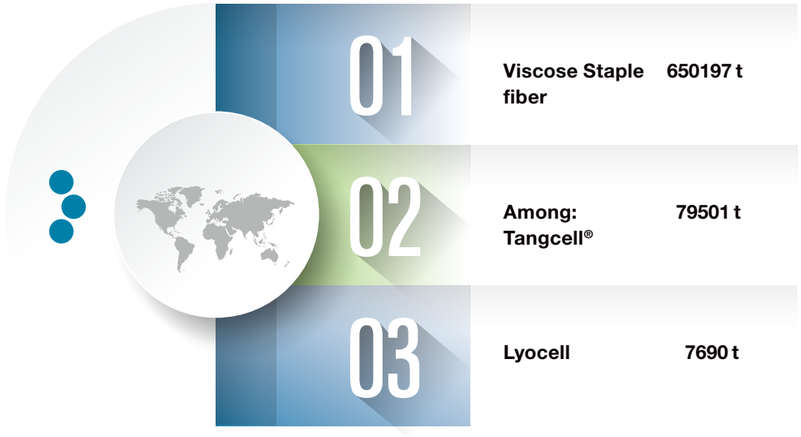
3.Low-carbon Energy

In 2021 and 2022, the comprehensive energy consumption of Xingda plant will be 138015tce and 90882tce respectively.

05

Green Products

In order to lead the development of a new generation of green and sustainable regenerated cellulose fiber, Sanyou Chemical Fiber has launched the high-end environmentally-friendly brand of Tangcell® on the basis of the “Sanyou®” brand with the connotation of “technology, green and fashion”, which ensures that the industry chain is green, transparent and sustainable while ensuring that the production process is more low-carbon and the whole life cycle can be traced, providing a green and sustainable solution for the textile industry chain from the source.



01/ Product Matrix

Sanyou Chemical Fiber, as one of the leading enterprises in the industry, has been widely recognized by downstream customers for its product quality and service. In 2020, it was rated as a “Quality Supplier” in the industry. Relying on its strong R&D strength, the company has developed differentiated products with different raw material sources, multiple functions and colors, which are suitable for different application fields.

- Sustainable bamboo material
- Customized raw material
- Innovative process
- Functional customization
- Color customization
- Closed-loop process
- Low-carbon emissions
- Recycling
- Applicable to unique application scenario
- Pollution in the printing and dyeing process can be avoided
- Traceability
- Bamboo material
- Sustainable raw material
- Waste textile
- Special oil agent
- Low environmental impact
- Functional customization
- Special for wiping and sanitary materials
- Naturally dispersed

- Special fiber for vortex spinning
- Special fiber for ring spinning
- Special fiber nonwovens forsanitary
- Negative ion fiber
- Bamboo charcoal fiber
- Ultra-short fiber
- Corn-bamboo fiber
- Fire resistant fiber
- Antibacterial fiber

TangCell From nature

- Colored fiber
- EcoTang®
- Modal
- Lyocell
- Customized fiber
- ReVisco®
- Bamboo Modal

02/
Recycled Fiber

Sanyou Chemical Fiber and industry chain partners actively promote the R&D of pulp preparation technology and spinning viscose preparation technology by recycling waste textiles, and have successively solved the problems such as poor spinning quality and difficult molding after using recycled pulp, and opened up the technical bottleneck of recycling regenerated cellulose fiber.
In 2022, the proportion of recycled pulp in the recycled fiber mass-produced by Sanyou Chemical Fiber reached 30%, and the fiber strength reached more than 2.2cN/dtex. Sanyou Chemical Fiber will continue technology R&D and production process optimization, and plans to increase the proportion of recycled pulp to 50% in 2023. This further reduces the carbon emissions in the viscose fiber textile chain, actively responds to the national green development concept, and promotes the green transformation and development of the current economy and society.

The proportion of recycled pulp in the recycled fiber mass-produced by Sanyou Chemical Fiber:

1) Renewcell, the recycled fiber partner

Renewcell is a Swedish textile recycling company, and its waste textile recycling technology can transform waste textiles such as jeans and T-shirts into new dissolved wood pulp. Since 2019, Sanyou Chemical Fiber and Renewcell have cooperated to optimize the key process parameters of waste textile pulp preparation - recycled pulp spinning, solving the technical bottleneck of pulp preparation - spinning process of waste clothes. Sanyou Chemical Fiber uses regenerated pulp from Renewcell as the raw material, and the proportion of recycled pulp in the production of regenerated viscose exceeds 30%. In 2020, Tangcell® and Renewcell reached a five-year cooperation agreement and continued to build a new circular economy chain.

2) Södra, the partner of ReVisco®

Södra is a Swedish Forest Owner Association and an international forest industry group. Its business is based on processing the forest products of its members, and it is committed to a sustainable logging rate, responsible logging and more management measures.

In February, 2020, Sanyou Chemical Fiber successfully produced viscose staple fiber with OnceMore® dissolved pulp as the raw material. At present, Södra provides Sanyou Chemical Fiber with OnceMore® dissolved pulp based on the waste textile recycling technology.

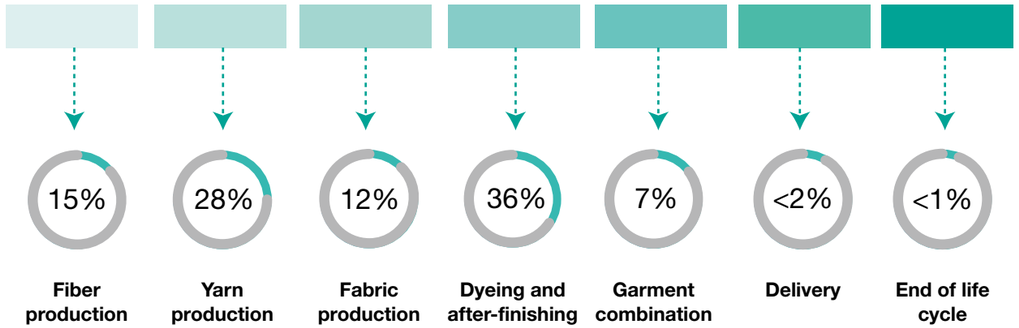
3) Recycling raw materials - the Next Generation Solutions

Sanyou Chemical Fiber attaches great importance to the sustainability of forests, the main pulp raw material. For this purpose, Sanyou Chemical Fiber continuously inspects the sustainability of suppliers' raw material sources and actively explores innovative raw material solutions. Canopy's proposal of "Next Generation Solutions" meets Sanyou's concept of sustainable development. The two parties reached an agreement on reducing the demand for natural cellulose and not wasting global forest resources by using "Next Generation" pulp raw material substitutes, in a bid to reduce carbon emissions and promote a circular economy. For this purpose, Sanyou Chemical Fiber became a supporter of "CanopyStyle Next Generation" and signed the world's first "Early Adopter of Next Gen MMCF Pulp". The company supports Canopy and its partners to develop and expand a new generation of alternative fiber products, take the lead in bringing new materials to the market, and promote the commercialization of new technologies.

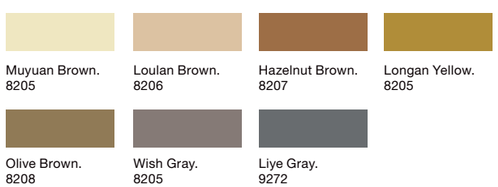
03/
Tangcell® Colored Fiber

According to the research on the environmental impact of the global textile and apparel industry conducted by Quantis, the carbon emissions from the printing and dyeing/after-finishing stage in the full life cycle of clothing account for about 36% of the total carbon emissions from textiles. Therefore, in fiber production, the fiber is directly colored through the pre-spinning injection process, which avoids the carbon emissions of textiles during printing and dyeing, and puts forward a new solution to reduce the environmental impact of textiles and clothing in the whole life cycle.

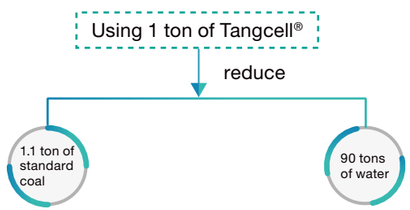
Greenhouse Gas Emissions Generated by Clothing in Different Life Cycle Stages.



In 2022, Sanyou Chemical Fiber adopted the environment-friendly coloring process of stock coloring, and successfully developed 7 new color fiber products - Wish Gray, Muyuan Brown, Loulan Brown, Olive Brown, Hazelnut Brown, Longan Yellow, and Liye Gray. This has reduced the energy consumption and pollution in the subsequent dyeing process, achieved the synergy and efficiency improvement of pollution reduction and consumption drop, and made a little contribution to the construction of a community between men and nature. Sanyou Chemical Fiber will continue to make continuous efforts to improve the quality of the ecological environment and promote the construction of ecological civilization.

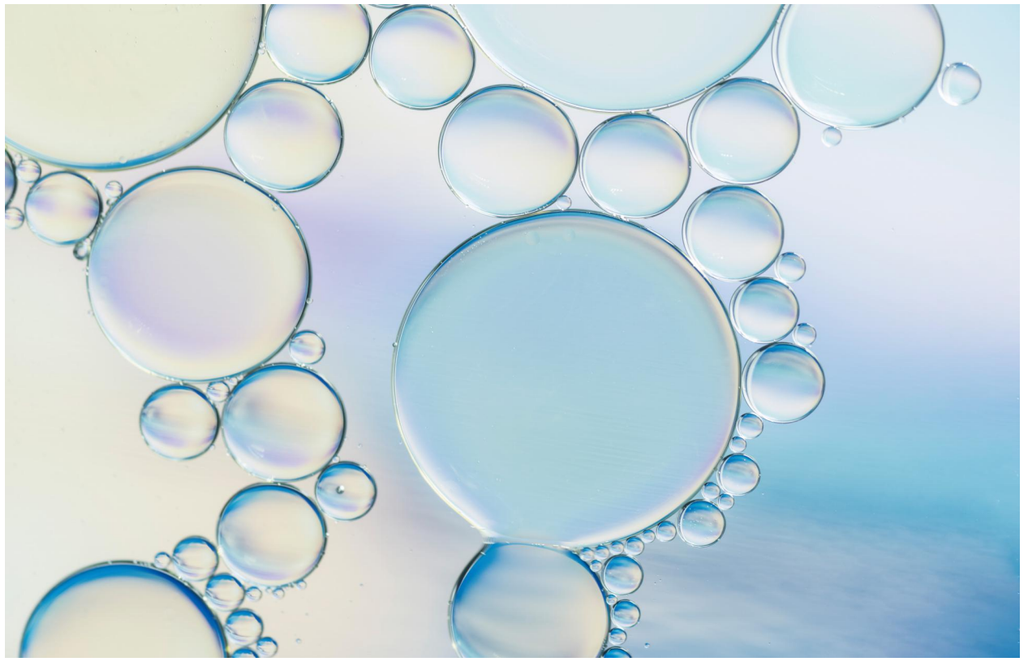


It is estimated that using 1 ton of Tangcell® Colored Fiber can reduce (estimated based on the comprehensive energy consumption of yarn and knitted fabric printing and dyeing processing and the limit offresh water intake in accordance with the Standard Conditions for the Printing and Dyeing Industry (2017 Version) issued by the Ministry of Industry and Information Technology): 1.1 ton of standard coal and 90 tons of water.



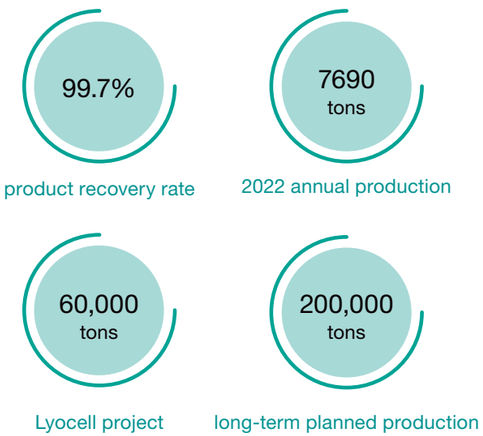
https://canopyplanet.org/campaigns/canopystyle/canopystyle-next-generation-vision-for-viscose/
https://quantis-intl.com/measuring-fashion-report-press-release/

04/
Tangcell® Lyocell



In order to promote the green transformation of the regenerated cellulose fiber industry, Sanyou Chemical Fiber actively promotes the R&D of Lyocell production technology, which uses NMMO as the solvent to replace carbon disulfide in the viscose fiber process, thus avoiding the pollution of sulfur-containing waste gas in fiber production. NMMO solvent can be recycled in the whole production process system, forming an independent closed-loop production system, with a product recovery rate of beyond 99.7%.

The Sanyou Chemical Fiber 5000-ton Lyocell Project was completed and put into operation successfully in 2019, with an annual output of 7,690 tons in 2022. In 2021, Sanyou Chemical Industries announced that it planned to invest an additional RMB1.635 billion to build a 60,000-ton Lyocell project, and the long-term planned production capacity would reach 200,000 tons.



05/
Tangcell® Bamboo Dyer

In 2022, Sanyou Chemical Fiber's "Bamboo Series" included bamboo fiber, Bamboo Modal and primary color bamboo fiber. Sanyou Chemical Fiber is committed to the variety R&D of non-wood fiber to reduce the consumption of forest resources and protect the ecological environment.

1) Raw material

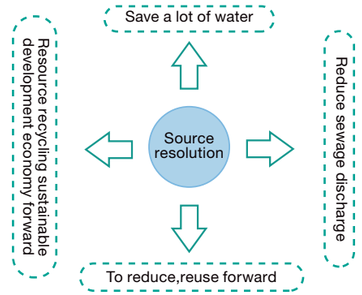
Tangcell® Bamboo Modal originates from sustainable bamboo with a development concept of "replacing cotton with bamboo and replacing wood with bamboo", which can reduce the dependence of regenerated cellulose fiber on forest resources as much as possible and find an effective way for the rational and efficient utilization of bamboo resources

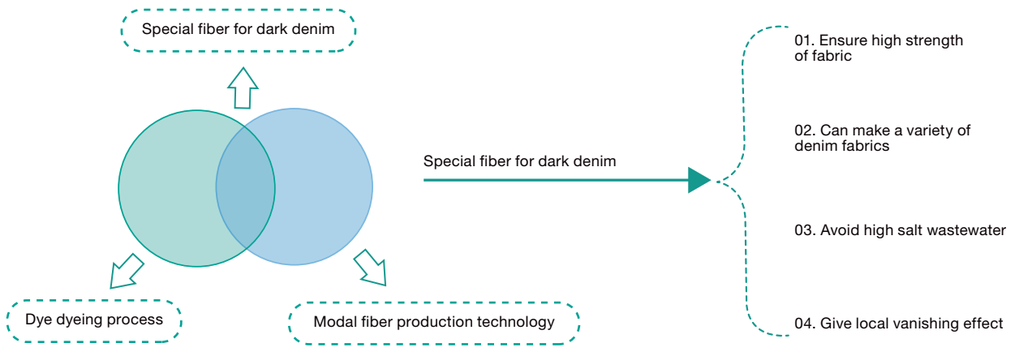
2) Process

Tangcell® Bamboo Modal is produced with the Modal process, which completely inherits the advantages of Modal in fiber strength and wet modulus and has good air permeability and water retention effect, and its fabric is more suitable for closed-fit wear.

06/
Special Fiber for Denim

In 2022, Sanyou Chemical Fiber newly developed a special fiber for denim. This product combines the dye coloring technology with the Modal fiber production technology to produce a special fiber for dark denim, which not only ensures the high strength of the fabric, but also gives the fabric an effect of local fading; the fiber can be used to make denim fabrics with various styles. In addition, it also avoids the production of high-chroma and high-salt waste water in the fabric dyeing process. Special fiber for denim can save a lot of water resources in the subsequent textile printing and dyeing process, reduce sewage discharge, and drive enterprises to move forward to the circular sustainable economy in a reduction, reuse and resource utilization manner.





07/ Industry Chain Docking

80 .
with more than 80 participating enterprises

30 .
More than 30 representatives from spinning

In 2022, Sanyou Chemical Fiber visited more than 20 brands and downstream enterprises separately. At the same time, with the theme of “About Tangcell®”, it organized three concentrated lectures on the Tangcell Brand in Peixian County of Jiangsu Province, Xiaoshan of Hangzhou, and Jiangyin of Jiangsu Province, with more than 80 participating enterprises, covering yarn, non-woven fabric and fabric production and trade enterprises. The key is to take the brand as the medium, accelerate the integration of the industry chain, realize the consensus of brand building, and build a new ecology for the industry development.

At present, the company has established cooperative relations with many clothing and home textile brands at home and abroad, realizing two-way communication from the downstream to the upstream of the industry chain, which has been highly concerned by upstream and downstream enterprises and terminal brands.

The future is coming - Tangcell® has entered the textile industry cluster of Peixian County.

On February 17, Sanyou Chemical Fiber Team came to Peixian County, Jiangsu Province, the first stop of Tangcell® industry chain exchange, and held an upstream and downstream exchange meeting of Tangcell® industry chain at Qiaocheng Hotel. Nearly 70 representatives from 26 yarn enterprises including Peixian Haiyun, Wuyuxing Group, Xuzhou Huasheng, Peixian Longsheng and Xuzhou Wennuan attended the meeting.

The future is coming - Tangcell® has entered the textile industry cluster of Xiaoshan, Hangzhou.

On February 19, Sanyou Chemical Fiber Team came to Xiaoshan, Hangzhou, the second stop of Tangcell® industry chain exchange, and held an exchange meeting at Jinma Hotel. Representatives from China Yarn Network, Huarui Information, 13 yarn enterprises from Hangzhou Xiaoyuan and Zhejiang Hongyang, and 12 fabric printing and dyeing enterprises from Zhejiang Sanyuan, Zhejiang Hengsheng and Hangzhou Fu’en attended the meeting.

Tangcell® has entered the textile industry cluster of Jiangyin

In 2022, Sanyou Chemical Fiber held a seminar on Tangcell® industry chain exchange in Jiangyin, Jiangsu Province, with the theme of “building consensus, industrial innovation and green win-win”. More than 30 representatives from spinning, weaving and clothing enterprises attended the meeting. At the meeting, representatives had in-depth exchanges on how to jointly promote the textile industry to develop in a green, low-carbon and sustainable direction.

Collaborative development and green win-win - A visit to Tangcell® industry chain

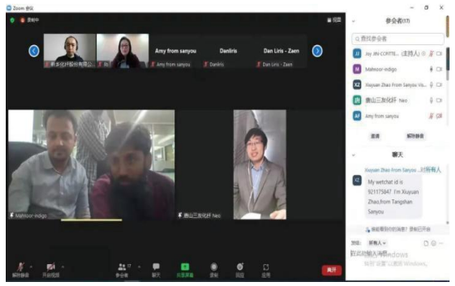
In June, 2022, Tangcell Brand Publicity Team of Sanyou Chemical Fiber visited Dalian New Materials (Suzhou) Co., Ltd., Suzhou Zhenlun Spinning Co., Ltd., and Suzhou Sishon Biofiber Co., Ltd. successively, and discussed how to jointly practice sustainable development actions and promote healthy and green development of the industry.

Leading the future - A visit to Tangcell® industry chain

In August, Tangcell Team went to Jiangsu Province to visit Suzhou Xingjingze Fiber Technology Co., Ltd., Suzhou Shengshengyuan Yarn Co., Ltd., and Jiangsu Guotai Huasheng Industrial Co., Ltd. It communicated with them on how to build a sustainable industry chain, and the application and promotion of environmentally-friendly viscose with high market popularity at present is the key topic of the exchange.

Tangcell & Nbond | Let fiber from nature return to a cleaner world

In mid-June, Tangcell® Brand Publicity Team of Sanyou Chemical Fiber visited Hangzhou Nbond Nonwovens Co., Ltd., and the two exchanged views on the environmental protection properties, market application and follow-up cooperation of EcoTang® clean high-whiteness environmentally-friendly fiber of Tangcell® used in the nonwoven field.



Tangcell® participated in the on-line meeting of overseas buyers

On March 31, Tangcell® participated in the on-line meeting of overseas buyers. It conducted exchanges and discussions with customers from Bangladesh, Indonesia and Pakistan on the cloud platform set up by the China Council for the Promotion of International Trade.

Cloud dialog | Tangcell® participated in the on-line meeting of overseas buyers

On September 22, Tangcell® participated in the on-line meeting of overseas buyers held by the Textile Industry Branch of China Council for the Promotion of International Trade. It conducted cloud dialogs with customers from Indonesia and Bangladesh.

Leading green and creating smart future | Focusing on the sustainable development of the cellulose fiber industry chain

From September 20 to 22, the 16th Cellulose Fiber (Viscose) Industry Chain Forum in Hangzhou, China, sponsored by Huarui Information and supported by Tangshan Sanyou Group Xingda Chemical Fibre Co., Ltd. was held as scheduled. Various experts in the fields of pulp, cellulose fiber, yarn, fabric, clothing and nonwovens gathered together to discuss how the cellulose fiber industry entering a new life cycle can embrace the changes of the times and go higher and further in the new cycle.

Green fiber leads to a clean future - Tangcell® attended the China Cotton Textile Raw Material Industry Chain Conference

On November 30, China Cotton Textile Raw Material Industry Chain Conference and Top 100 Cotton Textile Enterprise Summit, sponsored by the China Cotton Textile Association and strongly supported by Sanyou Chemical Fiber Co., Ltd., was held on-line.

06

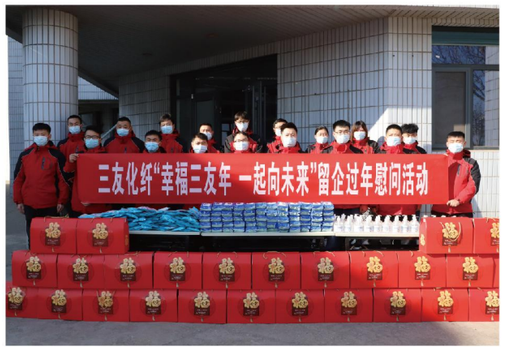
Social Responsibility

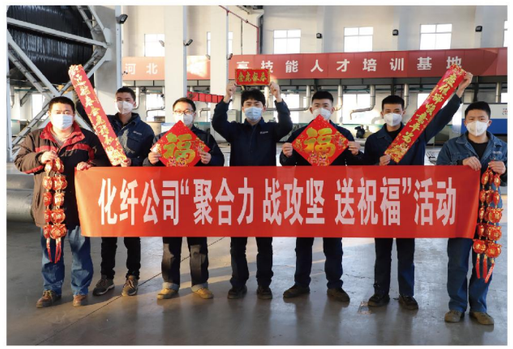
01/
Social Welfare

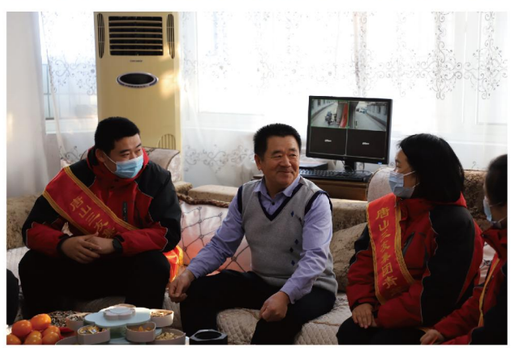
Sanyou Chemical Fiber has always been guided by the General Secretary Xi Jinping's Thoughts on Socialism with Chinese Characteristics for a New Era, fully implemented the spirit of the 19th National Congress of the Communist Party of China and the previous plenary sessions of the 19th National Congress and the Central Economic Working Conference, closely focused on the central tasks of production, operation, reform and development, constantly improved the scientific level of the Party development, strengthened the foundation, gave full play to advantages, focused on key points, and paid close attention to implementation, constantly transformed the political advantages of the Party into the core competitiveness of enterprises, and provided a strong organizational guarantee for the company's high-quality development.

02/
I do Practical Things for the Masses

The company focuses on the urgent problems of employees, vigorously carries out post care, cultural and sports activities and employee care actions, and constantly enhances employees' sense of happiness. The company has implemented caring actions, and carried out 10 events including "summer heatstroke prevention and winter warmth" through centralized care, post care and employee discussions, and invested more than RMB800,000 to provide more than 8,000 of various benefit articles for employees. The company has enriched staff's cultural life, and held 15 events, such as reading parties, table tennis matches and staff fun sports meetings, so that staff can gather confidence and power in those events. The company also launched the "Tangcell Night - Staff Summer Evening Party", highlighting the main line of Tangcell Brand, and creating a unique Tangcell trend night in the form of the "theme show + model catwalk".

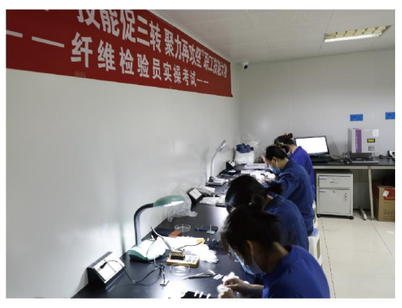






03/
Internal Training

With the goal of improving staff skills, the company regularly conducts post training, technical contests, labor competitions, etc., and strives to build a platform for demonstrating skills and learning from each other. The company also vigorously selects advanced models, and puts the emphasis that the advanced models recommend on grassroots front-line, outstanding youth, ordinary party members, key positions and critical moments. Over the past year, we have selected 48 “Pioneer Party Members”, 352 post stars and excellent team leaders, and 48 young stars. Before May 1, a commendation meeting was held to pay tribute to the most honorable workers, and 12 outstanding teams and 26 outstanding individuals who have made outstanding contributions to the pandemic prevention and benefit breakthrough were commended.



04/ Social Welfare

Donate

“Clothing Donation and Environment Protection” voluntary service events.

These events have donated more than 2,000 pieces of clothes and home textiles, which not only send warmth to impoverished mountainous areas, but also advocate the sustainable development concept of recycling waste textiles and reducing deforestation, making youth efforts for a green Sanyou.

The company always pays attention to social needs, gathers the staff's love and resource advantages of the company, supports public welfare undertakings, organizes charitable donations, volunteer services and other activities, and gives back to the society with practical actions.

Charitable

“Youth Power for the Pandemic” voluntary service events.

We abide by the orders to bear our responsibilities in the anti-pandemic events. During the pandemic control, the company carried out the “Youth Power for the Pandemic” voluntary service events, and many young volunteers joined the battle and set up a “Four-Aid” volunteer service team - they provided aid in 1) on-site nucleic acid testing, 2) disinfection in production sites, 3) community services, and 4) separate dining in canteens and food delivery, actively participating in the front line of the pandemic prevention and control, and serving the overall situation of the pandemic prevention and control led by the company.

Active service for nucleic acid testing. The company organized 13 young volunteers to assist medical staff in order maintenance, certificate registration, public opinion guidance and other voluntary service activities in the factory areas, and served more than 5,000 person-times successively.

Dutiful community service. The company organized more than 30 young volunteers from the downtown and Nanbao to join the community service to purchase necessities for the families of employees in need. They helped community workers carry out community nucleic acid testing site services, overhaul the information input system, and maintain the order of the testing site, so as to practice the spirit of Lei Feng with practical actions.

Responsible contributions to production. The company organized more than 20 young volunteers to take the initiative to undertake the mission to implement the pandemic prevention tasks such as personnel flow investigation, environmental disinfection, and logistics support, make every effort to ensure the smooth and orderly production, and practice the youth oath of “making my own contribution as a Party member” with practical actions.

Safe dining with a full guarantee The company organized 11 young volunteers to provide aid in the canteens to help the canteens load and unload food, complete the packing of dishes, and deliver meals to each post, so as to guarantee that employees who stuck to their posts could have healthy and delicious meals.

Donate blood

“Celebrating the Convening of the 20th National Congress with Passionate Duty Fulfillment” voluntary blood donation by the staff

75 people donated more than 25,000 milliliters of blood. Sanyou conveys warmth with dedication, unites strength with love, practices the responsibilities as a state-owned enterprise with practical actions, highlights the beauty of youth, and celebrates the successful convening of the 20th National Congress.

Volunteer service

Law popularizing voluntary service events

In order to vigorously promote the concept of the rule of law of the Socialism with Chinese Characteristics and further enhance the staff's concept of the rule of law, on the occasion of the National Constitution Day, the company launched voluntary service events to publicize the laws, and publicized the national constitution, anti-telecom fraud and other laws and regulations closely related to life to protect their legitimate rights and interests via leaflet distribution and case interpretation.