

Overview and Growth Strategies of Each Business Segment

Automotive Textiles: Suminoe Textile Co., Ltd., Suminoe Teijin Techno Co., Ltd., Teijin Teclath Ltd., Owari Seisen Co., Ltd., Suminoe Techno Co., Ltd., Suminoe Textile of America Corporation, Bondtex, Inc., Suminoe Textile de Mexico, S.A. de C.V., SPM Automotive Textile Co., Ltd. (Guangzhou), Suzhou Suminoe Koide Automotive Accessories Co., Ltd., Suminoe Textile Shanghai Co., Ltd., T.C.H. Suminoe Co., Ltd., Suminoe Koide (Thailand) Co., Ltd., PT. Sinar Suminoe Indonesia, PT. Suminoe Surya Techno, Suminoe Teijin Techno Krishna India Pvt. Ltd.

Creating a globally optimized supply system for automotive textiles

Business Overview

The greatest feature of our Company is that we can supply a total line of automotive textiles, from floors to ceilings, including headliners, seat covering materials, car mats, and floor carpets. Outside Japan, the Suminoe Textile Group has now expanded its overseas presence by setting up 12 manufacturing and sales sites in six countries (the United States, Mexico, China, Thailand, Indonesia, and India), thereby creating a globally optimized supply system.

Advantages

- 1 Expertise in proposing optimal solutions as a total supplier of automotive textiles
- 2 Global manufacturing system that enables production at optimal sites
- 3 Development capabilities to expand the fields of new materials and conventional textile products
- 4 Sophisticated textile processing technologies and planning and design capabilities
- 5 Comprehensive strength based on integrated expertise of the interior fittings and automotive textile businesses

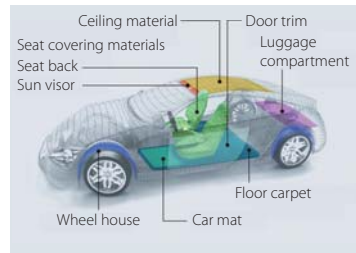
External Environment

- 1 Decrease in the number of domestically produced automobiles
- 2 CASE and rise of new EV manufacturers
- 3 Enhancement of environmental and noise control measures
- 4 Intensified price competition

Growth Strategy

- 1 Development, sales promotion and effective use of environmentally friendly products
- 2 Development of interior materials for next-generation vehicles
- 3 Cost reduction through the optimization of material procurement
- 4 Development of products, focusing on "new parts" and "production with less man-hours" as key words
- 5 Horizontal development to overseas markets
- 6 Development of fabric materials using new production methods
- 7 Development and deployment in accordance with the situations and issues of each global operation site

Major Product Lineup



Seat covering materials



Floor carpet



Car mat

Topics

Succeeding in the development of "e.colore® (eco-loré)" denim-like fabric processing technology, which strikes a balance between excellent design and environmental friendliness



Fabric processed with "e.colore®"



Equipment for "e.colore®" processing



The Suminoe Textile Group's "e.colore®" has been well-received by customers. "e.colore®" is a fabric processing technology, which improves design while reducing the dyeing process by effectively interweaving a black solution-dyed yarn* with a yarn of the base fabric. This processing technology, which significantly reduces the volume of dyeing solution, is friendly to the environment.

Recently, a customer requested us to develop an eco-friendly seat covering material in the image of natural fabric materials, such as denim, on the occasion of redesigning a vehicle model. Real denim is a fabric composed of undyed white weft and indigo dyed warp yarns. It is truly suitable to the "e.colore®" technology, which aims to produce an eco-friendly fabric by interweaving a black solution-dyed yarn with a yarn of the base fabric. For this reason, we started to develop "e.colore®" for denim-like fabric. In the development stage, the customer

visited Okayama, which is called the "Denim Capital" of Japan, in person. The Group worked very hard in pursuit of a seat covering material with a quite realistic denim texture by paying attention to the minutest details to express the denim's unique features while referencing many denim fabrics. It was difficult to reproduce the characteristics of denim by only adjusting print and base patterns. After going through hardships, we finally overcame this issue and succeeded in the commercialization of a very realistic product. We will henceforth continue to make active proposals for "e.colore®," which is capable of expressing in the image of natural fabrics while being conscious of the environment.

* Solution-dyed yarn: Yarn that is pre-colored by adding pigments in the stage in which its raw materials are melted by heat.

Delivery Track Records (Progress in Value Creation)



Surface of セルクロス® (CELL-CLOTH)

セルクロス® (CELL-CLOTH) wet-type synthetic leather adopted as a seat covering material for New Nissan Rogue destined for the North American market

Among the synthetic leather products developed by the Group, the seat surface material セルクロス® (CELL-CLOTH) is the first to be employed by an automotive manufacturer. For more than 15 years, セルクロス® (CELL-CLOTH) has satisfied requests from customers. Although initially it had many technical problems, by resolving them one by one and making design changes, we have had the product answer the needs of the times. Recently, Nissan decided to adopt our wet-type synthetic leather セルクロス® (CELL-CLOTH) for the New Nissan Rogue, in addition to the previous and current models of the Nissan X-TRAIL, both of which were designed for the Japanese market. The leather is produced by using a wet construction method unique to the Suminoe Textile Group. Even if sitting in the seat in wet condition, you can easily wipe off the water drops on the seat surface. Furthermore, its moisture permeable micro-porous structure allows you to drive comfortably without feeling sweaty for many hours. To enhance the marketability, we have added a more delicate pattern to the conventional pattern designed with simple dot embossing. Now the Group can offer a range of new expressions of セルクロス® (CELL-CLOTH) by modifying and combining the functionality and excellent design in accordance with customer requests on an as-needed basis.



Yuji Wakino

Sales Department
No.2
Business Division
Suminoe Teijin Techno
Co., Ltd.

As its name suggest, セルクロス® (CELL-CLOTH) is functional synthetic leather that has a cell structure with micro pores on its surface. Featuring a waterproof function and high moisture permeability, this leather is capable of preventing the seat from getting sweaty. In terms of design, a Nishijin-brocade pattern is expressed with embossing to make users feel the "Japanese Identity." As for this embossing expression, we had great difficulty in meeting our customer's stringent requirements. After repeating processing and adjustment many times, we were able to gain the approval of Nissan Design. As a result, セルクロス® (CELL-CLOTH) has received high evaluation not only for its functionality but also for its design. We are pleased that the customer decided to adopt セルクロス® (CELL-CLOTH) not only in the models for the Japanese market but also in those destined for the North American market.



Yuko Takayama

Synthetic Leather
Department
R&D Center
Suminoe Teijin Techno
Co., Ltd.

For the セルクロス® (CELL-CLOTH) design adopted this time, we used a more detailed pattern with fine slits on the entire surface, greatly changing the impression of the previous dotted design employed by the current models of the X-TRAIL. In creating the new design, our major challenges were to secure moisture permeability that characterizes セルクロス® (CELL-CLOTH), perform embossing to express the detailed design, and establish physical properties of the seat surface. Moreover, we were requested to give a soil resistant finish to the gray specifications to protect the light color. Although we faced great difficulties due to many technical challenges, by resolving them one by one we were eventually able to reach mass production. We will continue to make efforts to meet various needs in the future.

Overview and Growth Strategies of Each Business Segment

Interior Fittings: Suminoe Textile Co., Ltd., SUMINOE Co., Ltd., RUNON Co., Ltd., Suminoe Logistics Co., Ltd., Suminoe Works Co., Ltd., Sewing Hyogo Co., Ltd., TANGO TEXTILE Co., Ltd., Suminoe Techno Co., Ltd., CPO Co., Ltd.

Exhibiting our unique technological development capabilities to create environmentally friendly products at the industry's top level

Business Overview

The Suminoe Textile Group provides a wide variety of interior products that feature both excellent design and functionality to public facilities, hotels, schools, hospitals, and office buildings, as well as for general households.

We are also committed to developing eco-friendly products under the theme of KKR+A, or *Kenko* (Health), *Kankyo* (Environment), Recycle and Amenity.

Advantages

- 1 Preserving traditional techniques and handing them down to future generations (arts and crafts, hand-woven carpets and hooked rugs, and plush hand-woven curtains)
- 2 Credibility based on track record of delivering products to renowned facilities
- 3 Exceptional skills to meet customer needs through trinity of merchandizing, design and sales staff
- 4 Sales promotion targeting customers and design offices by sharing information between Group companies
- 5 Strong lineup of high value-added products based on the philosophy of environmental protection

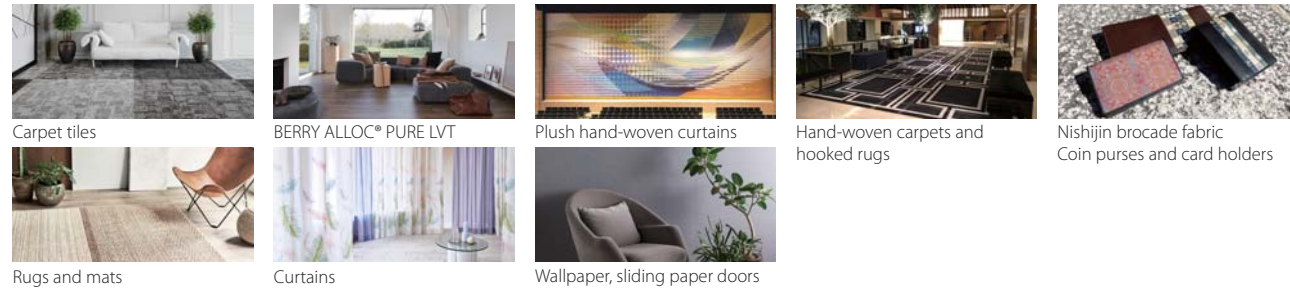
External Environment

- 1 Increased demand for environmentally friendly products
- 2 Decreased number of new housing starts
- 3 Profit deterioration risk due to higher materials costs

Growth Strategy

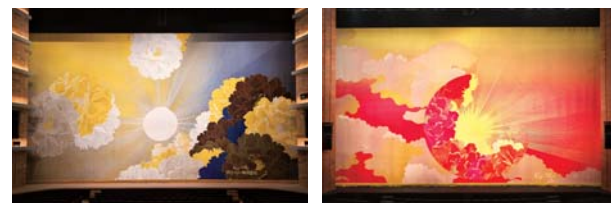
- 1 Expand lineups of environmentally friendly products and increase sales of these products.
- 2 Launch a new line of business to sell custom-made rugs.
- 3 Develop new products for housing.
- 4 Increase new customers.
- 5 Enhance transmission and penetration of our brand image.
- 6 Strengthen directly operated EC business.

Major Product Lineup



Topics

Tsuzureori Doncho (plush hand-woven curtains) delivered to Arcrea HIMEJI (Himeji Culture and Convention Center) by TANGO TEXTILE Co., Ltd.



Doncho for the Grand Hall

Doncho for the Medium Hall

The new facility Arcrea HIMEJI was constructed as a center of culture and art. The late Mr. Kenzo Takada, a world-renowned designer who was born in Himeji, donated his designs for the *doncho* (plush hand-woven curtains) of the stage halls in Arcrea HIMEJI. TANGO TEXTILE Co., Ltd. received the order for manufacture of these curtains for both the Grand and Medium Halls and delivered them to the facility. The design of the Grand Hall curtain expresses a scene in which the eastern sky is quietly beginning to lighten as the morning sun is coming up, shining light on the White Heron Castle (Himeji Castle) and the earth, using peony flowers as a motif. The design of the Medium Hall curtain expresses the splendor of sunset, along with the peony flower motif, depicting the White Heron Castle bathed in the fantastic light of the sun, slowly sinking below the western horizon, as if it were rewarding us for our labor. TANGO TEXTILE faithfully reproduced these sophisticated designs on the plush hand-woven curtains, which were highly acclaimed by various parties concerned at the time of delivery.

Topics

"空気を洗う壁紙® (Air Cleaning Wallcoverings) CRAFT LINE" from RUNON Co., Ltd., updated in tune with the latest interior trends



Yokohama Konandai Regional-based Integrated Care Hospital

Wallcoverings used in medical facilities, nursing care homes and welfare facilities should be highly functional as interior fittings. At the same time, as interior elements, they are required to have psychological effects to comfort medical/nursing care receivers and enhance healthcare professionals' motivation for work. Since the initial launch of "空気を洗う壁紙® (Air Cleaning Wallcoverings) CRAFT LINE," we have updated this series of products several times in tune with the latest interior trends. By balancing the deodorant function of the トリプルフレッシュ® (TRIPLE FRESH) and excellent design, we strive to develop products that help create highly satisfying living spaces and working environments. Since this age is known as the 100-year time period, there will be an increasing number of people receiving medical or nursing care at home. For this reason, our efforts are also directed at advancing proposals for general housing.

Delivery Track Records (Progress in Value Creation)



Many custom-made hand-tufted carpets adopted at the W Osaka, Japan's first W Hotel

In March 2021, the W Osaka opened as a luxury lifestyle hotel along Midotsuji, the primary main street running north-south through the heart of Osaka City. The W is one of the brands owned by Marriott International, a worldwide hotel chain. The concept of the newly opened W Osaka is an "adult playground" that unleashes creativity, not just a hotel to stay at." It has innovative and inspirational guest rooms, which clearly differentiate the W Osaka from conventional luxury hotels. Our hand-tufted carpets with original patterns have been adopted for these guest rooms. These brilliant carpets are designed with a gradation of either pink or blue, respectively, in the image of cherry blossoms or the ocean in Japan. We were able to complete the orders for these hand-tufted carpets, while meeting the customer's detailed requirements regarding both design and specifications, in a speedy and appropriate manner. This track record of delivering such high-end products represents the strengths unique to the Suminoe Textile Group, which is capable of providing proposals through an integrated production and sales approach.



Kazuhiro Mase
First Section, Third Contract Department
Kinki Block
West Japan Branch
SUMINOE Co., Ltd.

Our custom-made hand-tufted carpets were adopted for the guest rooms of the W Osaka. Before the designs of these carpets were determined, we held many discussions with overseas designers. Finished with dynamic gradations, these carpets are well-received by the hotel guests. The guest rooms with a playful atmosphere are enlivened by not only our carpets but also other interior items that are distinctively and sophisticatedly designed. I still remember that I was greatly surprised when I first saw the mockup room. These carpets were installed in August in under extremely hot conditions, which caused us great trouble. Nevertheless, I am delighted that I was able to be involved in this project, which contributed to the W hotel brand's first foray into Japan.



Erika Chikamori
Designer
East Japan Branch
SUMINOE Co., Ltd.

For this project, we worked to make designs while exchanging views with foreign designers in the Netherlands. It was considerably difficult to express beautiful gradations on hand-tufted carpets. Before the designs were adopted, we had to make many prototypes. When I visited the completed hotel for the first time, I was greatly stimulated by innovative and playful designs found here and there, which could radically overturn the conventional concept. In addition, this project provided me with an opportunity to be engaged in "Dutch Design" in the Netherlands, where I had studied in the past. I therefore felt a deep attachment to this project.

Overview and Growth Strategies of Each Business Segment

Traffic Facilities: Suminoe Textile Co., Ltd., Marunaka Souei Co., Ltd., Suminoe Techno Co., Ltd.

Contributing to creating safe and comfortable train cars

Business Overview

We have supplied our products to JR, private railways and publicly operated transportation services, maintaining the top market share for more than a century.

Currently, the Suminoe Textile Group offers total proposals for seat coverings, curtains, wall materials, flooring materials and other interior materials for public transportation systems, such as Shinkansen bullet trains and other trains, buses, and ships. We also deliver environmentally friendly products, including SUMICUBE® seat cushion material, which excels in terms of both safety and environmental performance.

Advantages

- 1 The industry's top market share held for more than a century
- 2 120 year-long credibility and track record as a pioneer of the industry
- 3 Capability to offer total proposals for seat coverings, curtains, wall materials, flooring materials and other interior materials
- 4 Environmentally friendly products with excellent safety performance (SUMICUBE® seat cushion material)
- 5 Wide sales network established across Japan

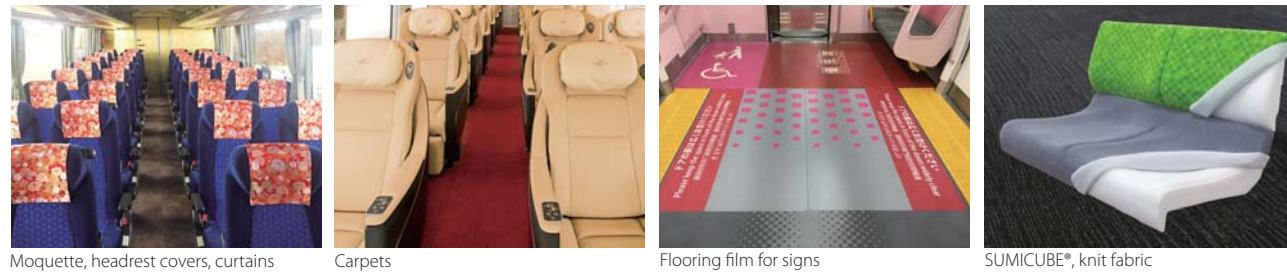
External Environment

- 1 Decrease in commuting and business trips due to penetration of teleworking
- 2 Decrease in the number of trains/buses owned
- 3 Increase in travelers in the post-pandemic era
- 4 Practical application of MaaS
- 5 Declining birthrate and aging population

Growth Strategy

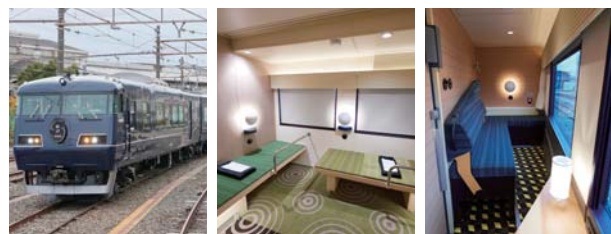
- 1 Increase order receipts for renovation and replacement works, both of which show signs of recovery.
- 2 Develop and increase sales of new products.
- 3 Develop environmentally friendly fabrics.
- 4 Increase market shares.
- 5 Propose and receive orders for SUMICUBE® with a new tactile impression.

Major Product Lineup



Topics

Our energy-saving and eco-friendly products, moquette seat coverings with inkjet print patterns, employed by the WEST EXPRESS Ginga, a long-distance train of JR West



On September 11, 2020, West Japan Railway Company (JR West) started operation of its new long-distance train, WEST EXPRESS Ginga, whose concept is "a train for casually enjoying rail travel." For the interior materials of its vehicles, JR West adopted the Group's moquette seat covering materials with inkjet print patterns, in addition to carpet tiles and curtains. Inkjet is an energy- and resource-saving system to print an image using the digital printing method. The inkjet printing system allows small lot size and multiple color printing. Taking advantage of these features, the Suminoe Textile Group widely deploys inkjet-printed textiles for train cars and buses everywhere in the country.

Topics

Our eco-friendly product SUMICUBE® adopted for the JR East Yokosuka-Sobu Rapid Line E235 Series train



The new E235 Series train cars, which East Japan Railway Company (JR East) introduced on the Yokosuka-Sobu Rapid Line, went into operation on December 21, 2020. Its ordinary cars employ Suminoe Textile's knit seat covering materials using recycled polyester yarn and SUMICUBE® seat cushion material for train cars. SUMICUBE® is an environmentally friendly product that can be recycled even after long-time use. Since this product is made from safe materials that do not generate cyanide or other poisonous gases at the time of combustion, SUMICUBE® does not cause air pollution when disposed of. With these features, SUMICUBE® has become widely used in many train cars, along with growing customer interest in purchasing eco-friendly products in recent years.

Delivery Track Records (Progress in Value Creation)



Our interior material adopted for the 17000 Series train on the Yurakucho and Fukutoshin Lines operated by Tokyo Metro

Tokyo Metro Co., Ltd. introduced the new 17000 Series train on the Yurakucho Line and the Fukutoshin Line to replace the 7000 Series train. The new series has been in commercial operation since February 2021. The 17000 Series train, which won the Good Design Award 2020, adopts a round headlight reminiscent of the conventional 7000 Series and 10000 Series so that customers can feel more familiar with the new train. Its vehicle interior space is stylishly designed to match the colors of the Yurakucho Line and the Fukutoshin Line. In-car comfort and safety have also been enhanced by such means as providing free spaces in all vehicles and lowering the vehicle floor height to reduce the level difference between the vehicle and the platform.

The 17000 Series train has adopted our moquette seat covering material processed with トリプルフレッシュ®デオ (TRIPLE FRESH DEO). This treatment technology has been highly regarded for its deodorant, antibacterial, antivirus functions that are unique to Suminoe Textile. Additionally, the train's seat cushion material uses SUMICUBE®, which excels in safety performance.



Yoshito Okuda
Tokyo Traffic Sales Group
Traffic Sales Department
Suminoe Textile Co., Ltd.

The 17000 Series is the new train type replacing the 7000 Series train, which has been in service on the Yurakucho and Fukutoshin Lines for about 45 years. The Fukutoshin Line will mark the 15th anniversary of its opening in 2023, and the Yurakucho Line will celebrate its 50th anniversary in 2024. Toward these anniversaries, Tokyo Metro plans to introduce a total of 21 trains comprising 180 vehicles of the 17000 Series by fiscal 2022. We held discussions on how to express the colors of the Yurakucho and Fukutoshin Lines and made many prototypes to develop the interior materials.

The 17000 Series train runs in a very wide area covering Tokyo, Kanagawa, and Saitama. We are honored to have been able to contribute to production of a train vehicle that is loved by many customers.

Mr. Tetsuya Kawamura
Design Section Chief
Rolling Stock Department, Railway Headquarters
Tokyo Metro Co., Ltd.

To provide an even safer, more stable and higher-quality transportation service, Tokyo Metro introduced the 17000 Series train to the Yurakucho Line and the Fukutoshin Line. There has been an emerging need to take measures to improve the in-car environment, including infection prevention measures. In order for the new train cars to meet this new need, we wanted a seat covering material having deodorant, antibacterial and antiviral properties, in addition to durability and burn-resistance. In this respect, Suminoe Textile Co., Ltd. created a seat covering material that satisfies our functional requirements. We are also pleased with its design in line with the concept of the open and bright car interior accented with the railway line colors. We would like to extend our deep appreciation to the Company for their support and cooperation.

Overview and Growth Strategies of Each Business Segment

Functional Materials: Suminoe Textile Co., Ltd., Owari Seisen Co., Ltd., Suminoe Techno Co., Ltd., Suzhou Suminoe Textiles Co., Ltd., Suminoe Textile Vietnam Co., Ltd.

Delivering products that incorporate our unique technologies and offering value in new fields

Business Overview

The Suminoe Textile Group has delivered products that incorporate its unique technologies it has accumulated, such as トリプルフレッシュ® (TRIPLE FRESH) deodorizing filters and olefin bathroom flooring. In addition, the Group is pursuing endless business possibilities, offering new value in the fields of smart textiles and functional food based on biotechnology, in keeping with the theme of KKR+A, or *Kenko* (Health), *Kankyo* (Environment), Recycle and Amenity.

Advantages

- 1 Effective use of functional processing, such as deodorization and antivirus
- 2 Expansion of business domains regardless of conventional fields and industries
- 3 Systems to promote development of diversified usages
- 4 Promotion of delicate product development to meet customer needs

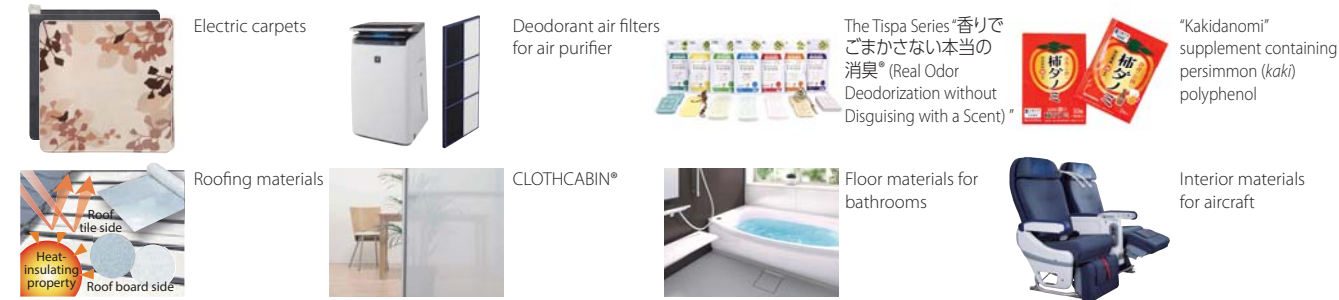
External Environment

- 1 Rise of hygiene awareness and health-consciousness
- 2 Increase in at-home time length and greater focus on private affairs
- 3 Increase in awareness of environmental load reduction
- 4 Aging society

Growth Strategy

- 1 Optimize the production and supply systems of textile-based electric heating appliances.
- 2 Promote development of new applications of functional materials by using processing technologies.
- 3 Increase sales of products made by functionally processing technologies, such as deodorant treatment and antivirus treatment.
- 4 Promote thorough quality management and supply of products by obtaining JISQ9100 certification, a quality management system standard for the aerospace industry.
- 5 Promote development of new health supplements following "Kakidanomi."
- 6 Promote commercialization of smart textiles.
- 7 Cooperate with the development section to strengthen the capability of development and sales.

Major Product Lineup



Introduction of Technologies (Progress in Value Creation)



Topics

Development of a water-wetting detection system that contributes to resolving social issues in a broad range of fields



Water wetting detection fabric (in a ribbon shape)

Water wetting detection fabric (in a sheet shape)

Water wetting detection system device (conceptual image)

Currently, the Suminoe Textile Group is putting its energies into the development of a water wetting detection system.

The water wetting detection system is intended to let users know at a glance that an object is wet without touching it. This system uses a water wetting detection fabric (woven with conductive yarns covered with water absorption and quick-drying yarns) to detect water wetting. If it is detected, the information will be visualized through the device.

This system features the ability to detect the moisture level to determine which level the object is in—dry, damp, or wet—by adjusting the system sensitivity. In addition, since the sensor is fabric-based, the system can cover a large detection area for water wetting and detect objects in various forms.

If the above features can be applied to toileting assistance, it will be possible to use the system to decrease caregiver burden at nursing care sites, which is a current matter of social concern. For this reason, the water wetting detection system is attracting much attention from various customers. The system is also expected to find applications in a broad range of fields, such as construction, engineering works, and entertainment. The Group will work toward the commercialization of this system by listening to front-line workers about their needs and conducting many demonstrations. In so doing, we will continue our efforts to help resolve social issues.

Expansion of products processed with トリプルフレッシュ®デオ (TRIPLE FRESH DEO)

In recent years, "antivirus" has become a keyword in product development. In recognition of this market need, the Suminoe Textile Group is endeavoring to apply the トリプルフレッシュ®デオ (TRIPLE FRESH DEO) to various products. The トリプルフレッシュ®デオ (TRIPLE FRESH DEO) is a technology featuring hybrid functionality. Based on the Group's proprietary deodorant treatment technology, it was developed by adding antibacterial, antivirus and antiallergen functions. At present, the Functional Materials Business Division and the Development Department are working in cooperation to advance the development of a sheet and a prefilter (that can be retrofitted to air-conditioning equipment), aiming to add the functionality to non-woven fabrics mainly for material use.

Based on our past track records of developing, studying and commercializing highly functional non-woven fabrics, we will further expand the specifications and functionality of the トリプルフレッシュ®デオ (TRIPLE FRESH DEO), while finding a new market and broadening the scope of its applications, in order to help make people's lives more comfortable and safer.



Shohei Ikeda

Osaka Sales Department No.2 Functional Materials Business Division Suminoe Textile Co., Ltd.

In conducting sales activities, nowadays, I always hear the words "antibacterial" and "antivirus."

Given the emerging needs for these properties, I think that promoting the applications of the トリプルフレッシュ®デオ (TRIPLE FRESH DEO) treatment technology is an important theme that we should promptly address and that offers us a business opportunity. Currently, a sheet, prefilter and other products to which the technology is applied are under development. I am ready to work together with other relevant departments to speedily commercialize these products and then increase sales of them. At the same time, I will stay attentive to the deployment of new products in implementing sales activities.



Takahiro Hamasaki

Functional Processing and Development Group Technical Center Development Department Suminoe Textile Co., Ltd.

Amid the increasing demand for antibacterial and antivirus functions, we found that the functions of the トリプルフレッシュ®デオ (TRIPLE FRESH DEO) technology matches the market needs. We therefore strive to develop a prefilter made of functional non-woven fabric for air-conditioning equipment. The challenge is to prevent the prefilter, as a retrofittable product, from applying load to the air-conditioning equipment and to impart the above functions to the prefilter. We are studying the optimal material and processing method toward the development of new products. I will continue my utmost efforts to develop products that will meet the needs of our customers.