Since its founding, Tsubakimoto Chain has believed that its technical skills and steady manufacturing have been the source of its growth. This philosophy, which has been continuously transmitted to all employees, is the foundation of the Company's ability to supply high-value-added products in markets around the world.

Customer-Oriented, Technology-Driven Manufacturing

The Tsubakimoto Chain Group handles a wide range of products, including power transmission products, such as roller chains and other chains for general industrial applications, timing chain drive systems for automobile engines, reducers, and motion control units as well as materials handling equipment and systems. All of these products are the result of the diversification and growth that have stemmed from the application of the fundamental chain technologies that the Company has steadily cultivated since it was founded in 1917.

In accordance with our Groupwide mission of "providing best value to customers around the world by capitalizing on our technical strengths in power transmission products and materials handling systems," we have an unwavering customer and technology orientation. We believe that the origin of our competitive, high-value-added products is the steady enhancement of fundamental technologies.

Tsubakimoto Chain

A WORLD LEADER IN PRODUCT DEVELOPMENT

A Complete Development System Focused on Customer Satisfaction

To maximize customer satisfaction, Tsubakimoto Chain has built a complete development system that extends from fundamental technologies to device technologies, products, and applied technologies.

The Company's R&D structure comprises the Development and Technology Center and the R&D departments of each operating division.

The Development and Technology Center takes thorough steps to enhance the fundamental technologies shared by all operating fields, such as materials, processing, evaluation, and tribology technologies, and provides related information to each operating division's R&D department. Moreover, it plays an important role in the development of technologies that are directly linked to new products, such as new anti-corrosion surface processing technologies, new anti-abrasion surface processing technologies, new power transmission technologies for automobiles, and alternate-adsorption, nano-thin-film production equipment. The center also handles



the development of products that transcend segmental boundaries and long-term product and technical development. The Auto Support Department, which was established in the year under review, conducts advance development in anticipation of the needs of automakers, thereby helping them to shorten development times and reduce costs. This department is a major point of differentiation with competitors.

The Development and Technical Center will deepen its coordination with operating divisions in all three functional areas of a manufacturing company – sales, technology, and production – thereby assisting in the enhancement of fundamental technologies and the provision of optimal solutions. The center is also in charge of unified management of intellectual property (IP) for the entire Group and will play an important role in the Group's IP strategy.

Each operating division's R&D department is conducting product development and improvement activities based on the data developed in conjunction with the Development and Technical Center. At the same time, marketing staff members with responsibility for development cultivate close relationships with customers and develop applied technologies for the purpose of optimizing customers' systems.

Tsubakimoto Chain's competitive products are a result of the close cooperation between the Development and Technical Center and the operating divisions' R&D departments.

We believe that the origin of our competitive, high-value-added products is the steady enhancement of fundamental technologies.

High-Value-Added Products Provide a Strong Competitive Edge

The Tsubakimoto Chain Group supplies advanced products that meet customer needs by thoroughly pursuing quality in all areas, from fundamental technologies to evaluation technologies, production technologies, and quality assurance.

Steel chains have only five parts – outer plates, inner plates, pins, bushes, and rollers – but even a small error can make a vital difference in performance. Accordingly, we are working to differentiate ourselves with high quality by thoroughly enhancing fundamental technologies, such as lifespan prediction technologies. However, our superiority in chain operations is not limited to the quality of our products. Another major point of differentiation is the breadth of our lineup of products that can accurately resolve the issues faced by customers in a variety of industries, including information technology, shipbuilding, steel, machine tools, and food products. A further point is our ability to supply advanced solutions.



Bobcat® S300 Skid-Steer Loader, from Bobcat Company, uses Tsubakimoto Chain's Super Roller Chains.



For example, our mainstay Lambda® RS Roller Chains, which not only offer lube-free, long-life operation but also can be used in temperatures ranging from -10°C to 150°C, are an excellent example of how our high-value-added products provide advanced solutions to customer needs. Furthermore, we are responding to growing concern about environmental conservation by expanding the recycling of used plastic chain.

In automotive parts operations, we are the world leader in the simulation and evaluation technologies used to lower timing chain noise, to reduce stretch, to cut friction loss, and to enhance tensioner performance and durability. The products that we develop on the base of these high technical capabilities boast the advanced quality and functionality that meet the rigorous needs of automakers. Also, to respond to demands for advanced engine performance, development activities that are closely linked to, and sometimes ahead of, automakers are indispensable. Tsubakimoto Chain is working to maximize customer satisfaction through close coordination, where engineers with advanced technical and problem-solving capabilities participate in automaker projects from the new engine development stage.



Timing chain drive system components for V6 engines



In power transmission units and components operations, where our products include reducers and variable speed drives, motion control units, couplings, and clutches, several products have garnered top shares of the domestic market, and we have built a solid position. Tsubaki Emerson, with a fundamental development policy of enhancing core products and core technologies, is working to create new markets by developing high-value-added products. Environmentally friendly Power Cylinders, which are used in IT-related equipment, are a good example of those efforts. In the future, by aggressively developing new products, we will work to raise the contribution made to our performance by new products.



Machine tool equipment that uses Tsubaki Emerson's Shock Monitors

To maximize customer satisfaction, Tsubakimoto Chain has built a complete development system that extends from fundamental technologies to device technologies, products, and applied technologies.

In materials handling systems operations, we are concentrating our development resources on our core target fields – the distribution, newspaper, automotive, biotechnology, IT, and food industries – and, with our advanced product functionality, we have established distinctive positions in these markets. A good example is our industry-leading linear motor high-speed sorting systems for the distribution industry, which provide a wide-ranging, accurate response to customers' specific needs, such as the sorting of sundries, food products, apparel, and parcels. We also have a high market share in automotive body paint shop conveyor systems, and in the year under review we bolstered our lineup of these systems with the release of the *Minomi* Conveyor System, which helps automakers to improve the workplace environment and increase productivity. Our work in the automotive industry also involves applying the technologies that we have cultivated in our core fields to development efforts in related fields, such as systems for automotive assembly processes.



Protein incubator

In these ways, Tsubakimoto Chain has established technical superiority in a range of product fields. This competitive edge has been carefully cultivated over many years in a corporate culture that emphasizes the steady enhancement and accumulation of technology.



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