

The Kyotanabe Plant is the center of the Company's chain production. Our goal is to make this plant a source of high-value-added chain technology that is used around the world and, in turn, for Tsubakimoto Chain to become the leading chain manufacturer in the global high-end market.



*The Kyotanabe Plant*

### **A Leading-Edge Plant That Is the Result of Our Commitment to Chains**

Some believe that the chain business is maturing globally and has little room for growth, and based on this viewpoint many overseas chain manufacturers are refraining from aggressive capital investment and increasing their external procurement. However, Tsubakimoto Chain thinks differently. We believe that, if we can improve our quality and functionality as much as possible and accurately meet the increasingly advanced needs of customers around the world, our business opportunities will continue to expand. Also, to bolster cost competitiveness, there is a trend toward shifting production abroad, such as to China. In chain manufacturing, however, the accumulation of technologies and skills is essential, and we believe that Japan is the best place for us to hone these types of advanced capabilities.

## **The Kyotanabe Plant**

# **THE WORLD'S NUMBER ONE**

### **The Tsubaki Approach to Manufacturing – The Kyotanabe Plant**

The Kyotanabe Plant is the world's largest chain plant, with 99,000 square meters of floor space on a 230,000-square-meter site and leading-edge facilities and systems. We have achieved the highest level of productivity in the world and established unsurpassed development and quality control systems. This complete production and supply system has been highly evaluated by customers around the world, and on several occasions plant tours have resulted in new business for the Company.

Tsubakimoto Chain is targeting a 20% share of worldwide markets for chains for industrial use, and the Kyotanabe Plant is the linchpin of that growth strategy.

### **Leading the World in Productivity and Quality**

In accordance with the belief that, as a chain manufacturer, we must maximize productivity to build solid positions in worldwide markets, we have increased labor productivity and automated our operations to an extent not achieved by any other chain manufacturer. For example, we have automated operations with the introduction of a range of distribution systems between the component-forming, heat-treatment, and assembly processes, such as auto guided forklifts and automated vertical storage facilities. Also, through the use of Autran Vanguard monorail-type conveyance systems from our Materials Handling Systems Division and automated vertical storage facilities, we have achieved 24-hour unmanned operation at our engineering plastic plant.



*Auto guided forklifts*

Also, the flows of materials and information through our leading-edge production facilities and distribution systems are managed by production control systems developed in-house. We have developed a production and supply system that can rapidly meet market needs.



*Autran Vanguard, a monorail type conveyance system*

We began to introduce the cell manufacturing method to our assembly lines in January 2004. Originally, many thought that cell manufacturing was not suitable for chain production processes, which were typical examples of lot manufacturing. Nonetheless, we took on the challenge of disproving that idea, and in the year under review we completed the introduction of cell manufacturing to all 76 assembly lines at the Kyotanabe Plant. In the future, as we synchronize the plant's assembly lines with component processing, the benefits of these efforts will become even clearer as we cut work-in-process inventory and reduce lead times.



*The cell manufacturing method has been introduced to all of the Kyotanabe Plant's assembly lines.*

Tsubakimoto Chain's points of differentiation extend to more than just productivity. We also believe that we are the world leader in quality. We have been steadily accumulating production and quality control know-how since our founding nearly 90 years ago, and the capabilities that we have cultivated cannot be quickly reproduced by our competitors.

## CHAIN PRODUCTION FACILITY

### **A Source of New Technologies**

We believe that because chains are made from simple components, it is important to cultivate technologies to meet market demand.



*The Kyotanabe Plant's Technical Center*

The Technical Center at the Kyotanabe Plant was set up based on that belief. Looking 10 to 20 years into the future, we have positioned this center as the source of the technologies and information that will lead our production bases in Japan and overseas. The center is not only a source of new technologies for the entire Group, such as fundamental, evaluation, and production technologies; it is also a base for the transmission of technologies and skills to chain production bases in Japan and abroad.

With our markets seen as mature, the types of efforts that we are making are extremely rare and are solidifying our technical superiority in global markets. The high-value-added products that we develop at the Technical Center are unrivaled in such areas as fatigue strength, abrasion strength, and environment resistance. In the past, we have introduced new versions of our mainstay RS Roller Chains incorporating new technologies about every 10 years, and in the future we will continue to launch new products to maximize customer value.

Our long-term commitment to manufacturing has been highly evaluated by customers in Japan and overseas. And, we see the Kyotanabe Plant as a source of high-value-added chains for markets around the world.