

REVIEW OF OPERATIONS

TIRE GROUP

The Year at a Glance

In fiscal 1999, sales increased in North America, Europe and Oceania, but were down in Japan and other Asian countries, as well as in the Middle East. In this environment, exports of tires from Japan fell slightly from the previous year, and sales by the Tire Group dipped 2.1%, to ¥280,007 million.

Results in Japan

Figures Down in all Categories

Continuing sluggishness in the Japanese economy resulted in a decrease in sales of tires. To increase tire sales on an original equipment (OE) basis and improve our market share, we applied value analysis and value engineering proposals to promote our products to automakers. However, despite a slight rise in sales of automobiles following the

implementation of new standards for low-displacement cars, domestic automobile production declined 7.0%, to 9.97 million units in fiscal 1999. Our marketing efforts were negatively influenced by this slow demand, and domestic sales were down for the year.

In the replacement tires market, we worked to stimulate demand by introducing products featuring distinctive technologies and functions. These offerings included the PARADA radial tire—with a novel tread pattern to add the precocious touch of a first-rate look to automobiles—the GEOLANDAR I/T studless tire for four-wheel drive vehicles, the DNA—a next-generation



GEOLANDAR I/T
The GEOLANDAR I/T studless tire for four-wheel-drive vehicles has earned high popularity in Japan.

tire with reduced rolling resistance to improve fuel consumption—and a variety of other innovative tires. We also continued our Inch-Up promotional campaign, which encourages car owners to replace existing tires with Yokohama products featuring lower sidewall profiles. The lower sidewall-profile tires, providing unequivocal improvement to cornering, braking and handling performance, are integrated with low noise and high riding comfort:

The DNA, introduced to the Japanese market in October 1998, is a next-generation, environmentally friendly tire that improves rolling resistance by 10% from previous models and improves fuel consumption.





PARADA

The PARADA, the ideal tire for dressing up cars such as station wagons and minivans, has been particularly popular with young consumers in Japan.

the requirements of modern vehicles. Through this campaign, we have promoted a range of products, centered on those with high-value-added features. We also strengthened our marketing and brand management during the year under review by expanding the network of our capitalized sales outlets to take the prime move in the marketplace. Our subsidiaries and affiliates increased to 254 as of March 31, 1999, compared with 195 a year earlier. Activities in the Yokohama Group included the integration of wholesale-function subsidiaries—reduced to 26, from 32 at the close of fiscal 1998—the rationalization of distribution and the strengthening of management foundations. Harsh as this situation may be, these endeavors were insufficient to counteract the influence of depressed demand and severe market conditions. Although our unit sales increased slightly in fiscal 1999, a decrease was reported for sales in terms of value.

Startup of Integrated Logistics System

In the fall of 1999 at the Shinshiro Plant we will begin full-scale operations of a new logistics system based on a digital information network that will integrate our product development, production, distribution and sales activities. Using this system, we will be able to significantly shorten the lead time from receipt of orders to delivery. As a result, we

can, for example, achieve a cycle of completion of production plans in about a week.

In addition to enabling us to meet customer needs more effectively, we expect that these efforts will help us cut costs through productivity enhancement and inventory reductions. Furthermore, we intend to introduce these systems in other facilities in the near future.

Results in North America

YTC Sales Increase

Yokohama's sales in North America are handled by localized production facilities in tandem with exports from Japan. In fiscal 1999, reflecting the health of the U.S. economy, sales in this region increased favorably.



RY237



Yokohama's steel radials for trucks and buses have earned high acclaim in the United States. Pictured are the RY237 and TY517, two representative products in this area.

TIRE

In this environment, sales of U.S. subsidiary YTC advanced 8.0%, to US\$420 million. Passenger car radials and steel radials for trucks and buses were particularly strong sellers. In October 1998, YTC launched a new production line for radial tires for sport utility vehicles (SUVs), bolstering both capacity and efficiency, and bringing its output to 23,000 tires per day. Meanwhile, YTC expanded sales to independent dealers during the year. Moreover, the company reduced its loss to US\$9.0 million, an improvement of US\$20.0 million from the previous year's loss, thanks to successful efforts to improve its financial position. YTC's new goal has been set to become profitable in fiscal 2000.



YTC's Salem Plant in Virginia contributed to increased sales of the subsidiary during the year.

Results in Asia and Oceania

Full-Scale Production in the Philippines and Vietnam

Yokohama's sales in Asia, centered on passenger car radials, are sustained primarily through exports from Japan. In fiscal 1999, these exports decreased under

the effects of lingering economic slowdown in the region. However, there are still signs of high potential for future growth in Asia, which is why Yokohama reinforced its business in the Philippines and Vietnam during the year.

Yokohama Tire Philippines, an export hub for passenger car radials that began operations in January 1998, commenced exports to Europe, the Middle East, and other countries in Asia. In addition, the company began selling replacement tires in the Philippine market and OE tires to Japanese automakers with facilities in the country. As a result, output reached one million tires for the year.

In other activities in this region, Yokohama Tyre Vietnam commenced production of SPEEDLINE tires for motorcycles in July 1998. In Oceania, sales of our major passenger car radials and tires for SUVs were strong, while exports of these tires from Japan increased considerably.



Yokohama supplies tires for races such as the Daytona 24 Hours and Le Mans 24 Hours. This photo is from the 45th Macao Grand Prix in November 1998, for which we were the sole tire supplier.



GEOLANDAR A/T

The GEOLANDAR A/T, a high-performance tire for four-wheel-drive vehicles, performed well in Oceania.

Targeting Further Growth

In March 1999, Yokohama Tire Philippines was certified under the ISO 9002 series of international quality management standards. This company is now working to achieve output of 1.6 million tires in fiscal 2000. Yokohama Tyre Vietnam plans to introduce tires for scooters and expand its sales channels with the objective of annual tire production of 320,000. This subsidiary is also planning to enter the market for light truck tires.

Results in Europe and Other Regions

In Europe, where our operations center on the sale of passenger car radials, our high-performance tires have earned an excellent reputation for quality. Sales of these tires increased in fiscal 1999 against the backdrop of the generally strong regional economy. As full-scale exports from Yokohama Tire Philippines began during the year, we were able to enhance our product lineup in Europe. In fiscal 2000, we plan to begin sales of our AVS SPORT ultrahigh-performance tires, further expand our sales efforts and raise brand awareness in an effort to increase sales.

In the Middle East, we mainly export passenger car radials and steel radials for trucks and buses. In the year under review, falling crude oil prices restricted purchasing power, and our exports decreased on a fiscal basis. In the first half of fiscal 2000, steady increases in the price of oil are expected to help turn our results around, while we also plan further introductions of new tires to the market.



AVS SPORT

Yokohama plans to introduce the AVS SPORT as its global flagship product for ultrahigh-performance tires.



MB GROUP

The Year at a Glance

Sales of antiseismic rubber bearings, marine hoses and aircraft components increased in fiscal 1999, but slack consumer spending and capital investment and a drop in housing starts led to decreases in demand for our sealant products, conveyor belts, hoses and golf products. As a result, sales by the Multiple Business (MB) Group shrunk 6.4%, to ¥121,176 million.



Yokohama is the top brand of sealing materials for construction use in Japan. Pictured is SUPER II, our primary product in this area.

HAMATITE® Products

HAMATITE® is Japan's top brand of sealants for buildings. We also hold nearly half of the domestic market for industrial sealing materials for windshield sealants on an OE basis to

automakers. In the year under review, we launched a new HAMATITE® sealant designed to maintain the external appearance of buildings. Also, we commercialized AD GUARD PC-1, the world's first one-part, room temperature-curable epoxy resin adhesive. Removing the necessity of mixing different liquids to produce this sealant greatly simplifies work at construction sites. In fiscal 1999, mainly because of restrained capital investment, automobile production and housing starts in Japan, sales in this category fell from the previous year.

Hoses

Yokohama leads the Japanese market for hydraulic hoses. We fabricate the hoses, while Group company Yokohama Hydex assembles them with couplings before sale. In the year under review, reduced automobile production and decreased output by mining and construction equipment companies led to a drop in our hose sales.



Yokohama produces a variety of hydraulic hoses for applications from automobiles to mining and construction equipment.



Sales expanded for our marine hoses in fiscal 1999.

Fenders and Marine Hoses

Most of our fenders and marine hoses are exported outside Japan. In fiscal 1999, active promotion efforts allowed us to significantly increase sales of marine hoses.



We anticipate a bright future for our antiseismic rubber bearings for buildings.

Antiseismic Rubber Bearings

Yokohama entered the market for antiseismic rubber bearings with its introduction of bearings for bridges in fiscal 1995. We first launched bearings for

In fiscal 1999, these three drivers in our PRGR H/S series helped us improve our market share despite the sluggish domestic golf market.



buildings in fiscal 1997. Our renowned high-attenuation rubber, which is used in these bearings, quickly alleviates vibrations from earthquakes. Sales were strong in the year under review, doubling from figures recorded two years ago.

Golf Products

In the PRGR brand, which enjoys an excellent reputation in the high-end golf products market, Yokohama markets drivers, irons, caddy bags and highly permeable shirts. In fiscal 1999, we released three new drivers in the PRGR H/S series, and the overall market share of PRGR expanded. However, the drop in personal spending in Japan caused the golf products market to contract approximately 20%, and our sales edged down as a result.

MB GROUP

Aircraft Components

In this category, sales of lavatory modules and drinking water tanks to The Boeing Company of the United States were favorable, and orders for components made from composite materials increased from aircraft manufacturers in Japan. Thus, overall sales in this category were up from a year earlier.



Yokohama also manufactures components for rockets. Pictured is a coil tube for rocket heat exchanges.



Lavatory modules for The Boeing Company are produced with advanced composite materials.



YH America in Kentucky began manufacturing windshield sealant in the period under review.

Overseas Production

To meet the needs of automakers and construction companies with operations outside Japan, Yokohama is strengthening its overseas manufacturing of hoses and sealants. In the United States, SAS Rubber, which produces automobile hoses for the North American market, began supplying products to Ford Motor Company. YH America, our other base for automobile hoses in the North American market, handles hose and coupling assembly. In June 1998, YH America began full-scale production of windshield sealants for supply to U.S. affiliates of Japanese automakers.

Yokohama Rubber (Thailand) Co., Ltd., is responsible for producing windshield sealants and assembling hoses and couplings for our customers in Asia. Although the Thai economy continued to contract in fiscal 1999, we are working to maintain our operations in the country by promoting exports and reducing costs by, for example, purchasing more materials locally.



INNOVATIVE RESEARCH AND DEVELOPMENT

Yokohama's R&D organization is equipped to respond effectively to changes in the marketplace, owing to its active promotion of information exchange between product design, manufacturing and sales divisions throughout the Yokohama Group. In this area, we concentrate on technologies to ensure high product performance, minimal costs, low energy consumption and environmental preservation. We place particular emphasis on developing new and composite materials.

Technologies for Silica Composite Tires

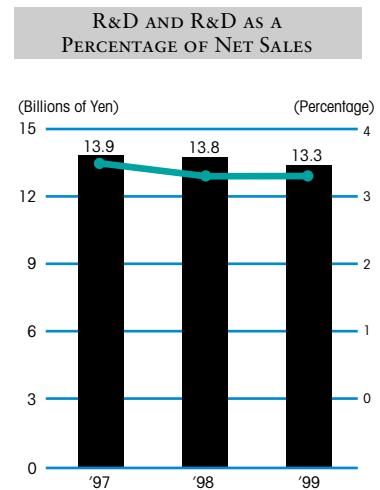
Silica composite tires are attracting attention throughout the industry as environmentally friendly next-generation tires. These tires offer superior grip and minimized fuel consumption by reducing rolling resistance, while ensuring excellent performance. However, the difficulty of effectively forming composites of silica and rubber has meant costly and complex processing. As research and product development are pursued around the world to resolve these issues, Yokohama is ahead of the competition with its development of two unique technologies.

ZERUMA • Developed by Yokohama in 1996, Zeruma is a new processing auxiliary that improves the performance of silica composite tires while reducing production costs. This additive, a liquid compound, possesses a molecular structure that acts as an intermediary between silica and rubber. Zeruma evenly distributes silica components through rubber, enabling the resulting composite to fully achieve its performance potential. Also, Zeruma reduces compounding and vulcanizing times, simplifying processing and enhancing productivity.

SILICA SURFACE-TREATED CARBON BLACK • In October 1998, Yokohama announced a new technology to chemically combine silica with carbon surfaces before compounding with rubber. We named the technology based on this material Silica Surface-Treated Carbon Black. Compared with conventional compounding technologies, Yokohama's new technique makes it possible to distribute small amounts of silica evenly, thereby reducing production costs. In addition, rubber processed in this manner not only lowers fuel consumption while increasing tire grip, it also raises tire abrasion resistance by strengthening the compounding capability of rubber.

New Materials

VELAREN • In 1997, we successfully developed a dynamic vulcanization and continuous kneading technology that unifies the curing and kneading processes, thus enabling the blending of plastics with different kinds of rubber. Velaren, the rubber-plastic compound resulting from this technology, is employed in a series of new materials that are light and easy to recycle, and which contribute to resource conservation and energy efficiency by enabling manufacturers to downsize products. Currently, we are using Velaren materials in water-shielding sheets for civil engineering use, but we also foresee applications in such fields as tires and sports products.



ENVIRONMENTAL PROTECTION

Yokohama pursues its business objectives under the theme of QCDE, or quality, cost, delivery and environmental protection. Maintaining high QCDE standards is essential if a company is to compete successfully in the global market. Of particular importance to all good corporate citizens in the next century will be ensuring that our environment is healthy. Yokohama's commitment to the environment is evident in the many ecological activities it has undertaken since the beginning of the 1990s.

Environmental Action Plan and Environmental Management Standards

Since Yokohama enacted its Environmental Action Plan in 1993, our corporate obligations have grown and evolved. Consequently, in June 1998 we revised the plan, outlining new goals in the process. In addition to working to reduce industrial waste and carbon dioxide emissions from our facilities, we set the objective of attaining the ISO 14001 international standard for environmental management at all six of our plants in Japan. The Mishima Plant fulfilled requirements in July and the Mie Plant in December 1998, while the Shinshiro and Ibaraki plants reached the standard in May and June 1999, respectively.

Life Cycle Assessment Method for Tires Helps Reduce Carbon Dioxide

In July 1998, Yokohama established a Life Cycle Assessment (LCA) method for tires. Analysis under this system, from production to disposal of a tire, has shown that between 80% and 90% of the carbon dioxide produced is generated during its usage. Consequently, we realized that the most effective way to cut carbon dioxide emissions from tires is to enhance performance by, for example, improving rolling and abrasion resistance. Using the data from this analysis, we continue to develop products that have minimal negative impact on the environment.

A Television Campaign for Maintaining Tire Air Pressure

Yokohama began airing a unique series of television promotions in July 1998 with the message of contributing to environmental protection by regularly checking the air pressure of tires. Insufficient air pressure increases rolling resistance, thereby adversely affecting fuel efficiency.

Yokohama Sole Tire Supplier for U.S. Electric Vehicle Race

The Americas Electric Challenge is a nationwide series of races sponsored by Electric Vehicle Technology Competitions, Ltd., of the United States. In support of the spirit of this event, which aims to promote both fun and environmental protection, Yokohama lends its support by being the sole supplier of tires for the ABB University Spec Series, one group of races within the Americas Electric Challenge. In 1998, 10 races were held in this series in locations such as Indianapolis Motor Speedway in Indiana.