

ACE Division

Broad Possibilities for THK's Seismic Isolation and Damping Technologies

ACE stands for Amenity Creation Engineering. Guided by the concept of "developing technology to realize creative living spaces for greater comfort," the ACE Division has sought to apply THK's original linear motion technology since its establishment in 2001. The division develops and markets seismic isolation and damping systems that protect human life and property from the threat of earthquakes. In addition, steps are being taken to promote increased use of the division's products and technologies in home automation-related devices.

THK's seismic isolation and damping systems leverage basic technologies, such as LM guides and ball screws, as well as a broad lineup of products, to protect a wide range of structures, from high-rise buildings and low-rise residences to historical structures such as temples and shrines. In this manner, the Company maintains a broad product lineup that is capable of providing considerable benefits to a variety of structures. Following the Great East Japan Earthquake that struck the nation on March 11, 2011, awareness toward the importance of business continuity plans (BCPs) has increased dramatically. This has in turn contributed to a sharp jump in demand for seismic isolation platforms to protect specific pieces of equipment and assets essential to business operations including servers and a variety of manufacturing equipment. The Company is working to further expand the use of its seismic isolation platforms.

In fiscal 2012, the Company was able to significantly increase the year-on-year number of cases where seismic isolation platforms to protect specific pieces of equipment had been adopted. In particular, an increase was secured in orders for the Seismic Isolation Module, Model TGS, which in addition to new damping capabilities offers improved freedom of connectivity, allowing a wider adoption range for such platforms compared with existing products. As a damping-related system for buildings, the Company launched the Inertial Rotary Damping Tube (iRDT), as a part of efforts to increase the number of buildings in which it is installed. In addition to controlling the degree of shaking of super high-rise buildings

caused by prolonged ground motion, the iRDT system reduces costs by enabling the use of fewer installation units. The system is also expected to be in great demand in the years to come for its ability to be not only fitted to new buildings but also used for seismic retrofitting work carried out on existing buildings.

Expanding Product Lineup and Bolstering Sales and Marketing Activities

Amid increasing general awareness of the need to implement disaster-related contingency measures, THK expects demand for seismic isolation and damping systems to continue growing over the medium to long term. The ACE Division will continue to promote the considerable benefits of THK's seismic isolation and damping technologies to architectural firms and homebuilders and actively promote the use of its products in the construction of public offices and other buildings that are charged with the responsibility of providing a disaster headquarters function during periods of emergency in order to further diversify its customer base. Meanwhile, THK will upgrade and expand its lineup of seismic isolation platform systems. In addition to addressing increasingly diverse earthquake countermeasure needs, the Company will expand sales while promoting the appeal of its broad product applications. This includes the outstanding efficacy of its seismic isolation platform systems with regard to precision measuring equipment including detection equipment. Moreover, the division will work to promote more widespread product uptake by continuing to organize seminars for the benefit of the general consumer. These seminars will help explain the importance of installing seismic isolation and damping systems, along with the advantages offered by THK's technologies and products, and at the same time implement sales and promotional activities through effective use of the Seismic Isolation Experience Car initiative.



An example of residential seismic isolation application



An example of seismic isolation table application (seismic isolation platforms for servers)



FAI Division

Targeting Higher Earnings from Transportation Equipment Fields

FAI stands for Future Automotive Industry. THK set up the FAI Division in 1999 to expand usage of the Company's products as automotive parts. THK's link balls, which are the division's mainstay product, employ an integral molding process for the production of aluminum die-casts, making each link ball much lighter than their conventional steel equivalent. At the same time, the Company's link balls are highly resistant to corrosion and abrasion. This product is attracting keen interest from major automobile manufacturers in Japan and overseas as the demand for fuel-efficient automobiles continues to rise. In 2007, RHYTHM CORPORATION, an automotive parts manufacturer that boasts superior forging technologies, was included in THK's scope of consolidation as a subsidiary company. In the ensuing period, and with the addition of RHYTHM, the division has worked diligently to promote business development under an integrated format. In order to further strengthen this collaboration, steps were taken to change the name of RHYTHM to THK RHYTHM CO., LTD. in June 2010. The THK Group is targeting a global presence as an automotive parts supplier through the pursuit of synergies with THK RHYTHM to enhance the Group's ability to respond rapidly and precisely to changes in the global automotive market.

Toward Realizing Further Synergies with THK RHYTHM

Projected major developments in the FAI Division over the medium to long term include significant growth in automobile demand within emerging markets and expansion in the number of major automobile production regions. Another key change is an ongoing trend to make automobiles lighter and more energy efficient, reflecting greater global interest in environmental protection. As a result, hybrid and electric vehicles are expected to gain in popularity in the future. Against this backdrop, THK continues to further develop those synergy effects to accrue from its relationship with THK RHYTHM. In this manner, the Company is working to expand the use of its products across a wider spectrum of automotive models.

Among a host of specific benefits to accrue to date, and from a management perspective, THK has witnessed increased efficiency in the handling of orders with a fewer number of people attending to a larger volume of orders. This has been achieved by consolidating the corporate function at THK RHYTHM's head office, and has further helped in building a structure that increases the speed of product use. From the standpoint of sales, proposals with respect to THK RHYTHM's products were implemented using THK's sales channels as well as its established trading relationships with domestic and overseas

manufacturers of finished automobiles. Moreover, steps have been taken to consolidate overseas branches and to bolster collaboration among staff. Turning to production, the manufacture of THK's link balls in Japan was taken over by THK RHYTHM. This initiative is designed to promote global business development, ensure agile and efficient business operations and enhance profitability in transportation equipment-related businesses. By leveraging THK's outstanding production technologies accumulated as a leading manufacturer of LM guides together with the production and quality management techniques of THK RHYTHM, a manufacturer of automotive parts, successful efforts have been made to secure highly cost-competitive production. On the technology front, subcommittees were established to better promote the interaction and exchange of the technological expertise of both companies. As one example, THK RHYTHM's forging technologies are being applied to the manufacture of LM guides, a core THK product. On this basis, the Group is implementing activities aimed at expanding use in consumer product areas and enhancing the cost competitiveness of LM guides. In this manner, the Group is working diligently to draw out synergies between THK RHYTHM and THK at each of the management, sales, production and technology levels.

In addition to these efforts, in fiscal 2012 deliveries to customers were commenced by THK RHYTHM CHANGZHOU CO., LTD., which had been set up in response to burgeoning demand in China. Established in Mexico to strengthen the product supply system to North and South America as well as in its local market, THK RHYTHM MEXICANA, S.A. DE C.V. will also start deliveries in fiscal 2013. In this way, the Company will work on a global scale to steadily increase the number of automobiles for which THK products have been adopted.

Looking further ahead, the FAI Division will accelerate efforts to realize synergies with the aim of promoting increased application of its products. At the same time, the division will also work to lift the take-up of the Company's core products including LM guides and actuators, as it strives toward improving profitability in transportation equipment fields.



An example of link ball application



IMT Division

Expanding Use of the Group's Electric Actuator and Unit Products Businesses

The Innovation Mechatronics Technology (IMT) Division was established in June 2009 with the aim of expanding the Group's electric actuator and unit products businesses, areas which are projected to experience future market growth.

In recent years, and amid the growing need for enhanced productivity prompting advances in performance and diverse functionality with respect to such industrial machinery as semiconductors as well as flat-panel production equipment, calls for improved economy in machinery architecture and design have become increasingly prominent. Under these circumstances, demand for mechanical, hydraulic or air-based equipment including actuators, which assist in the movement and control of goods, is expected to rise. Moreover, as interest in global environmental protection gathers momentum, the need for electric actuators, which deliver superior energy efficiency compared with existing hydraulic- and air-based actuators, is projected to advance. In addition, extending beyond industrial machinery, momentum is projected to gather toward electric-powered production lines across all areas.

Against the backdrop of this operating environment, the IMT Division is leveraging THK's original concepts and innovative technologies to further cultivate markets. As an initial step, the division will work to expand the application of electric actuators and unit products in industrial machinery. Recognizing the existence of wide-ranging latent demand in such community and general living environment areas as fitness and nursing care, the division will be sure to unlock this demand to spur earnings growth. In this regard, every effort will be channeled toward

actively developing electric actuators that combine varied and diverse applications while at the same time nurturing the market.

Strengthening Development, Production and Sales that Reinforce THK's Competitive Advantage

Electric actuators are made up of three elements: control equipment, a motor and a mechanical slider unit. The base technologies in the latter are LM guides and ball screws, which are THK's core products. A pioneer in LM guides and the manufacturer that leads the world in terms of the know-how accumulated in these products, THK has continued to supply products of the highest quality on the global market for many years. As the mechanical slider unit is made up of those same high-quality LM guides and ball screws, THK's electric actuators possess significant advantages in the market.

In fiscal 2012, we worked to expand and upgrade our lineup, which ranges from low- to high-end products, to broadly meet the needs of our extensive customer base. Having also assembled a range of peripheral control devices, we upgraded systems to enable linked sales, from controllers to actuators. In the years to come, we will work to enterprisingly expand their adoption, while making the features and advantages of THK's electric actuators even more attractive. We will also focus on electric actuator developments that will enable us to cater to the demands of the market, including the trend toward automation. In addition to naturally reinforcing our business systems in Japan, we will work on full-scale globalization in the Americas, Europe and Asia. Particularly in Asia, where market expansion is anticipated, we will vigorously work to build the foundations of a local production and sales system.



Economy series ES



Economy series EC



Compact series KR/SKR



Universal series US



Multi-Axis series MA2-S



Multi-Axis series MA2-U



Driver controller TLC/THC



Press series PCT



Clean series CSKR



Super FA series KT



Linear motor series GLM