

## President's Interview



### Takehiro Kamigama President and CEO

#### Profile

1981 Joined TDK

2001 General Manager, Recording Device  
Business Group

2002 Corporate Officer

2003 Senior Vice President

2004 Director, Executive Vice President

2006 Representative Director,  
President and COO

#### Q1 Please tell us about TDK's response to the Great East Japan Earthquake.

This was a disaster on an unprecedented scale, and it caused severe damage to the manufacturing facilities of many companies in the electronics sector, including TDK. As a result, the supply framework of crucial components for electronics products was disrupted, leading to worldwide uncertainty in the marketplace and reminding us once again of the importance of the electronic component industry.

Within the TDK Group, damage to buildings and manufacturing lines led to instances where production had to be temporarily suspended. Facilities in the Tohoku area were also affected by power outages, likewise necessitating production stops. Learning from this experience, we are currently strengthening our supply framework to ensure an uninterrupted flow of products even in the event of an earthquake hitting a country that is a major production base.

In more concrete terms, we are reviewing the procurement process for crucial parts and materials that are essential for ensuring stable production, and we are reconfiguring our supply chain on a

global scale. We are also bolstering our risk management structure to enable the swift assessment of damage following a disaster, and to improve our ability to analyze the effect this will have on production.

With a view to surviving the power shortages expected this summer, we have put into place further energy saving measures and have prepared our own power generating equipment.

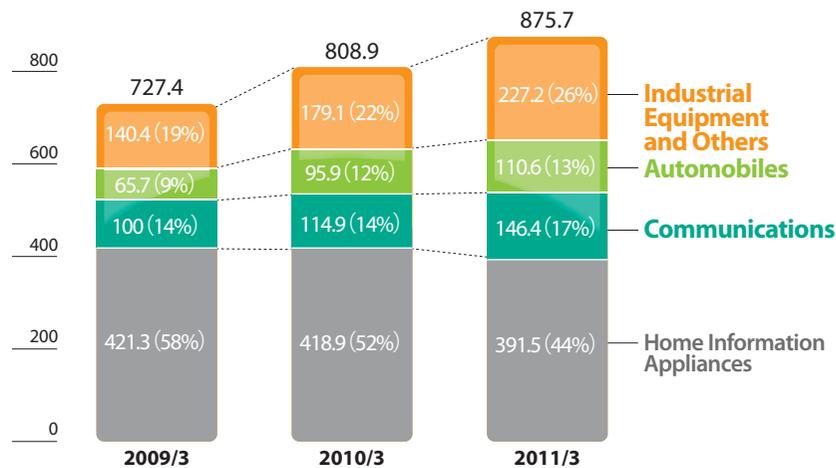
#### Q2 Please tell us about TDK's growth strategy for the future.

The TDK Group has identified the home information appliances sector which includes products such as TVs, computers, and tablets, the communications sector centered on smartphones, the automotive sector, and the industrial equipment and energy sector as markets where significant growth can be expected. Consequently we have focused on these areas while bringing our proprietary materials technology and process technology to bear. Placing particular emphasis on the communications, automobile, and industrial equipment and energy sectors, total sales in these three areas increased from 306.1 billion yen in fiscal 2009 to 484.2 billion yen

in fiscal 2011. As a result, the share of these three areas to total consolidated sales rose from 42% in fiscal 2009 to 56% in fiscal 2011.

In the communications field, the market for smartphones continues to grow at a rapid pace. With concern for the global environment intensifying, the industrial equipment and energy sector, as well as the eco car sector, comprising hybrid-electric and electric vehicles, are also medium- to

**Net sales** (Billions of yen)  
1,000



\* Figures in parentheses show the share of each field's sales in total consolidated sales.

long-term growth markets. The TDK Group will continue to focus on such key areas and develop and market products that offer true added value, to ensure sustained growth.

**Q3** Could you elaborate on concrete strategies for TDK's key growth areas?

In the communications sector centered on smartphones, major demands include

higher performance, better functionality, longer operating times, etc. To achieve extended operation times in particular, a sizable chunk of the limited space in a compact device has to be given over to a large-capacity battery. This in turn means electronic components need to be even thinner, smaller, and lighter. One approach that offers a viable solution here is called modularization, which is the grouping of components in modules that require less space while handling multiple functions.

TDK not only offers many types of advanced multilayer ceramic chip capacitors and inductors, we also provide a formidable array of other high-frequency components including SAW filters and duplexers. This allows us to develop products that meet the stringent demands of customers and deliver enormous added value.

In the automotive sector, crude oil prices continue to rise, which is expected to drive up demand for hybrid and electric vehicles on a global scale. Likewise for cars with conventional gasoline engines, the trend toward better fuel economy and improved safety makes electronic control systems ever more important.

The TDK Group already offers a wide



range of electronic components that are essential for the eco car of today and the future. This includes the high-performance magnets required for improving the performance of EV/HEV drive motors, current sensors contributing to reduced energy consumption, DC-DC converters to convert voltages, etc. An important role is also played by our high-reliability chip capacitors, inductors, sensors, and other parts designed specifically for use in the demanding environment of cars with conventional internal combustion engines.

In the industrial equipment and energy sector, we anticipate increased demand in the market for renewable energy sources such as wind and solar power over the medium to long term. This is inevitable as Japan reconsiders its energy policy in the aftermath of the disaster. The

development of the Smart Grid to efficiently link multiple small-scale power generating facilities is also garnering worldwide attention. The TDK Group is targeting such growth markets by actively developing and marketing magnets and sensors for wind power generators, high-frequency components for smartphones, electronic components for inverters used in both wind and solar power installations, as well as a wide range of other passive and power supply related products.

In the HDD sector, while the prices for disks used in home information appliances continue to drop, the demand for high-end products required for data centers has been boosted by the trend toward cloud computing. Key issues in the high-end HDD sector include not only cost but also increased access speed, larger capacity, and reduced power consumption.

Innovative TDK developments such as thermal-assist magnetic heads are an impressive demonstration of our leading role at the cutting edge of high-performance HDD technology. We expect to maintain and increase our share of the high-end market in the medium to long term. Our competitiveness in this area is further bolstered by our micro actuator

drive technology applications and other HDD suspension related parts.

#### Q4 What is the TDK strategy for research and development?

The business model of the TDK Group is to capitalize on our proprietary materials and process technologies in order to differentiate our products. We realize this through materials, parts, and modularization, delivering the advantages of our technological lead to the customer in various shapes and forms. This of course means we attach particular importance to R&D in our area of core competence, materials science, and we plan to further increase the number of researchers working in this and related fields.

We are also adding new laboratory



facilities with the latest experimental equipment and are establishing a framework for pursuing multiple research topics in parallel. This will serve to enhance efficiency and strengthen our R&D base in a global context.

A major example of the medium- to long-term fundamental research we are pursuing is a discipline called spintronics. Expected to lead to applications that will give birth to electronic components of the future, spintronics utilizes the electrical charge of electrons in solid-state bodies (property that transmits electricity) in combination with the spin of electrons (property that causes magnetic attraction).

While still a new field, spintronics research harks back to a TDK forte from the very beginning, namely magnetics technology. Possible applications include high-speed, high-capacity, nonvolatile magnetic memory. If practical application is successful, we envision this as a potential future key product area for our company.

Another major research topic is the development of high-performance magnets that do not require neodymium, a rare earth material. Such magnets could reduce the cost for electric drive motors and generators in hybrid and electric vehicles,

and applications in the HDD sector are also possible.

Meanwhile, TDK is looking to capitalize on the technological know-how in roll to roll manufacturing processes it has gained over many years of making magnetic tape. This is expected to lead to yet another new product category with definite growth potential: functional films for touch panels, separators for rechargeable batteries, solar panel films, etc.

Making use of our HDD head manufacturing facilities, acceleration sensors, pressure sensors, and other MEMS (micro electronics mechanical systems) devices are also in the product pipeline. In fact, HDD heads that combine mechanical parts with sensors, actuators, electronic circuitry, etc. can be considered a type of MEMS device. We will also be able to produce various kinds of other MEMS devices by modifying our production lines and applying TDK's own process technology.

#### Q5 Could you tell us about your global strategy and M&A stance?

As is evident from the fact that 87.3 percent of our net sales for fiscal 2011 stem from overseas, the major markets of the TDK

Group are located outside Japan. In keeping with this trend toward globalization, we operate four main bases, namely Japan, Americas, Europe, and Asia. We have research, production, and marketing facilities in all of these areas, and are covering all aspects of business.

However, each area does have its special strengths. For example, materials-related R&D is centered in Japan, while product and application development is given higher priority in Europe, America, and China, areas that are also the major markets for the resulting products. What is important here is the fact that close mutual cooperation and communication help to optimize synergy, benefiting the entire Group.

As for mergers and acquisitions, if we consider it necessary from a strategic point of view, we will continue to bring companies with distinct technology and product assets into the fold. As I mentioned earlier, TDK differentiates its products through original materials development and process technology that brings out the best in these materials.

The mergers and acquisitions of the past few years have significantly strengthened the Group's technological



resources, and we are always on the lookout for new materials and processes, with a view toward accelerating product development in key areas. Depending on evolving market demands and technological progress, we may decide to add more companies that bring specific and distinctive advantages to our business strategy.

The TDK Group will continue to develop global markets based on a realistic approach that includes M&A when necessary, while also attracting outstanding human resources from all over the world. We believe this is bound to enhance our global competitiveness.