REVIEW OF OPERATIONS

e-material solution provider

Consolidated net sales for fiscal 2005, ended March 31, 2005, increased 0.3% from ¥655,792 million to ¥657,853 million.

In the electronics industry in the first half of fiscal 2005, demand for digital home appliances, such as LCD and plasma flat-screen TVs and DVD recorders, was boosted by the Summer Olympic Games in Athens, and other events. This resulted in strong demand for the TDK Group's electronic components in the first half. However, demand for these components began to cool in the second half in line with production cutbacks of finished products that use them. In this business environment, TDK continued to implement profit structure reforms. TDK also actively made investments to drive growth, such as by ramping up production capacity of capacitors and forging a strategic alliance regarding HDD heads.

Electronic Materials and Components Segment

Segment net sales increased 4.9%, from ¥519,792 million to ¥545,214 million. Segment operating income rose 15.0%, from ¥58,715 million to ¥67,520 million.

Looking at electronic materials and electronic devices, demand for components was strong in the fiscal year's first half on the back of higher demand for digital home appliances driven by the Athens Summer Olympic Games. However, the second half saw sales prices of components drop as demand cooled due to inventory cutbacks of digital home appliances. The overall result, however, was a year-on-year increase in sales of both electronic materials and electronic devices.

In recording devices, HDD demand was lackluster in the first half of fiscal 2005 due to inventory cutbacks by customers following strong HDD demand in the second half of the previous fiscal year. Demand for HDD heads also picked up in the second half of fiscal 2005 once this adjustment phase ended. The result was a year-on-year increase in sales of recording devices.

Multilayer ceramic chip capacitors (MLCC)

Electronic Materials

[Product Overview]

The electronic materials sector is broadly divided into two product sectors: capacitors, and ferrite cores & magnets.

Multilayer ceramic chip capacitors (MLCC), the mainstay product of the first category, are produced by alternately stacking many layers of electrodes, consisting mainly of palladium or nickel, and dielectric material, mainly barium titanate or titanium oxide. The standout feature of these capacitors, which are designed to store electrical energy, is that each of the layers is no thicker than several to tens of micrometers. The ability to form such thin layers is one of TDK's greatest strengths and is critical to capacitor performance because energy storage increases with the number of

Ferrite cores

Ferrite magnets

Rare-earth magnets

layers. Multilayer chip capacitors store and discharge electric charges in the circuits of electronic devices. They are used to smooth out and stabilize electrical current, eliminate electromagnetic interference, or "noise," and allow alternate current to pass while blocking direct current, a process known as coupling.

Ferrite is an electronic material that is mainly used as a magnetic material. Consisting primarily of ferric oxide, ferrite also includes cobalt, nickel, manganese or other metals to obtain precisely the desired properties. As ferrite is produced by sintering powder materials, it is called a magnetic ceramic. Ferrite is broadly divided into two types. One is soft ferrite, which is used in cores for transformers and coils. By improving the characteristics of soft ferrite, it is possible to make smaller, lighter and more efficient transformers and coils. The other type is hard ferrite. This material is used chiefly to make magnets that are essential to the operation of motors in office equipment, audio and visual products, automobiles and other widely used products.

TDK has also commercialized rare-earth magnets, consisting mainly of metals such as samarium and neodymium. Extremely powerful in relation to their small size, rare-earth magnets are used mainly in small, voice coil motors (VCMs) for HDDs and automobile applications.

[Results]

Sales in the electronic materials sector rose 4.8%, from ¥166,818 million to ¥174,800 million.

Capacitor sales rose year on year. Sales of multilayer chip capacitors, the main product in the capacitors sector, were strong in the first half. In the second half, amid lackluster demand, TDK was able to absorb sales price declines and the effect of forex movements by improving the sales mix. These factors led to higher year-on-year sales.

Sales of ferrite cores and magnets increased year on year. In ferrite cores, sales declined from the previous fiscal year despite higher demand for general-purpose power supply cores for digital home appliances and cores for communications equipment. This decrease was due to a reduction in output of deflection yoke cores and flyback transformer cores used in CRT TVs. However, sales of magnets increased year on year, the result of steadily rising demand for use in automotive and HDD applications. The net result was a year-on-year increase in sales of ferrite cores and magnets as a whole.

Electronic Devices

High-frequency components

Coils (inductors)

Chip varistors

[Product Overview]

The electronic devices sector is broken down into three broad categories: inductive devices, high-frequency components, and other products.

The main products in the inductive devices category are coils and EMC components. Coils are typically made by winding a wire around a ferrite core. Because they produce a magnetic field when a current passes through the wire and also produce electromotive force depending on changes in magnetic flux, coils are widely used in electronic circuits. TDK has commercialized SMD coils that use an epoxy resin adhesive and multi-layer chip coils, in which coil patterns are formed by a process similar to printing. Choke coils and common mode filters are other coil types. EMC components reduce electromagnetic noise given off by all types of electronic devices. In recent years, as IC clock frequencies have climbed, high-frequency noise has become an increasingly serious problem. TDK has addressed this with a broad lineup of EMC components, including beads and filters, made from ferrite, which is an excellent absorber of high-frequency noise.

High-frequency components are chiefly used in circuits for mobile phones and other devices that handle high frequency signals. In mobile phones, voice frequencies must be modulated and demodulated at extremely high frequencies. TDK produces isolators that use ferrite to control the movement of these signals, and VCOs (voltage-controlled oscillators) that produce frequencies required for transmission and reception in mobile phones. This category also consists of diplexers that split and combine signals of differing frequencies in mobile phones. These products are modules made by combining capacitors, coils, resistors, ICs, transistors and other components.

In other products, TDK offers switching power supplies that convert alternating current into direct current, DC-AC inverters that convert direct current into alternating current, and DC-DC converters that alter DC voltages, and transformers which have two or more coils, use electromagnetic coupling to step up and down AC voltage or convert impedance.

Also, TDK manufactures products such as sensors and actuators, as well as chip varistors. Sensors are measurement devices that produce an electrical signal that varies in accordance with a specific parameter such as humidity or printer toner level. Actuators are products that convert electrical energy into mechanical energy for such applications as buzzers. Chip varistors protect electronic circuits from abnormal voltages, such as static electricity and pulses, that can cause equipment to malfunction.

[Results]

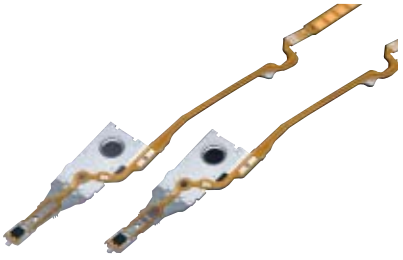
Sales in the electronic devices sector rose 7.8% from ¥107,999 million to ¥116,387 million.

Power system products

Sales in the inductive devices sector increased year on year. Inductive devices, the largest product category in the electronic devices sector, posted higher sales despite lower sales prices and the negative effect of forex movements. The increase was attributable to higher demand spurred by acceleration in the pace at which automobiles are incorporating electronics and the increasing sophistication of mobile phones, as well as new product launches.

Sales of high-frequency components declined marginally year on year because higher sales volume and an improved product mix failed to completely offset persistently strong discounting pressure from mobile phone handset manufacturers, the main customer for these components.

Sales of other products rose year on year. In power systems, sales of DC-DC converters and DC-AC inverters were healthy. Sensors and actuators recorded higher sales due to growth in demand for use in PCs and peripherals and communications equipment. As a result of this, overall sales of other products were higher than in the previous fiscal year.



GMR heads for HDDs

Recording Devices

[Product Overview]

The recording devices sector is divided into two categories: heads for Head Disk Drives (HDDs), the mainstay of the sector, and other types of heads. HDD heads employ a thin-film construction and magneto-resistive (MR) material to "read" signals recorded on hard disks. MR refers to the phenomenon in which a material's electrical resistance varies when exposed to a magnetic field. The commercialization of HDD heads using this MR effect has made it possible to "read" signals recorded on hard disks at much higher areal densities. At present, GMR (Giant-MR) heads, which have higher playback sensitivity than conventional MR heads, are the mainstream technology in the HDD head market.

Other heads includes optical pickups, magnetic heads used in floppy disk drives (FDDs) and thermal printer heads.

Optical pickup for DVDs

[Results]

Sector sales increased 1.9% from ¥230,105 million to ¥234,578 million.

Sales of HDD heads increased year on year. TDK had to overcome the loss of business from a major customer that started producing heads in-house in 2004, as well as the impact of falling sales prices and unfavorable forex movements. Cutbacks in HDD inventories at customers in the first half of the year also shaped the market. However, demand for HDD heads rose in the second half of the fiscal year following the end of these cutbacks, leading to higher year-on-year sales.

Sales of other heads declined year on year, due to sluggish sales of optical pickups.

Semi-conductors and Others

Anechoic chamber

[Product Overview]

Anechoic chambers are rooms in which walls are covered with ferrite tiles that absorb electromagnetic waves. These spaces, designed to block electromagnetic waves emanating from outside as well as to control reflections of electromagnetic radiation within the chamber, facilitate the evaluation and testing of noise in electronic devices, including those used in automobiles.

This sector also includes manufacturing equipment that is sold externally as well as other products and newly developed products, such as organic EL displays, not included in the aforementioned three sectors (electronic materials, electronic devices and recording devices).

[Results]

Sector sales climbed 30.8% from ¥14,870 million to ¥19,449 million.

TDK recorded slightly higher sales of anechoic chambers for electromagnetic noise control and growth in external sales of manufacturing equipment due to higher investments in semiconductor facilities and equipment by customers.

Recording Media & Systems Segment

Segment sales declined 17.2% from ¥136,000 million to ¥112,639 million. The segment recorded an operating loss of ¥7,690 million, an increase of 248.8% from last year's operating loss of ¥2,205 million.

Sales of audiotapes and videotapes declined year on year. While TDK maintained a high market share, demand is declining for these products as a whole.

Sales of optical media increased, with higher DVD sales volumes offsetting a sharp fall in prices of DVDs and lower CD-R sales.

Sales of other products decreased year on year. There was an increase in sales of LTO-standard* (Linear Tape-Open) tape-based data storage media for computers. However, a decline in sales caused by the sale in the previous fiscal year of a U.S. software development subsidiary and lower sales of recording equipment brought overall sales of other products down year on year.

DVD

Blu-ray disc

LTO

[Product Overview]

In the recording media & systems segment, the main products are audiotapes, videotapes, optical media, and tape-based data storage media for computers.

TDK supplies several types of optical discs, including write-once CD-Rs and 4.7 gigabyte DVDs that can hold approximately 7 times more data than their CD counterparts, although having the same 12cm diameter. TDK has also commercialized a Blu-ray disc that can store huge volumes of data. These discs are seen as the next generation of optical media.

In tape-based data storage media for computers, TDK has commercialized a product that has been verified under LTO Ultrium 3 standards, making it compatible with magnetic-tape backup equipment meeting the LTO* (Linear Tape-Open) standard.

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