Helping to solve social problems by delivering true value. TDK will continue to advance towards this goal.

Becoming an enterprise that helps solve social issues

Looking back on the year 2012, the worldwide economic slowdown under the influence of stagnation originating in Europe affected the electronics sector, making this a difficult year for TDK. However, as society continues to evolve rapidly, the demand for electronic components that sustain the continued creation of new products is expected to grow further.

Against this background, the electronic components sector is in a position to contribute to the solving of various issues facing society. TDK has an important role to play in this area, and we fully intend to meet this challenge and respond to the ever more sophisticated and diverse needs of society. The rapid progress in information terminals, as exemplified by the advent of wearable devices and the continuing trend towards multi-functionality defines the next-generation information and communications market. Additionally, the energy-related market is currently focused on developments such as the smart grid utilization of renewable energy - including solar and wind power. In both of these markets, we intend to further enhance our competitiveness and thereby contribute towards finding viable solutions to various social issues.

Progress in key areas during fiscal 2013

During fiscal 2013, significant progress was made in various respects that we have defined as key action items.

TDK aims to "contribution to the world by technology." An example of its efforts in this regard is the production of magnets that significantly reduce the usage of rare earth materials. In the past year, we brought such magnets to the stage of mass production and practical application. Research in this area is continuing, with the ultimate aim of developing magnets that no longer require any rare earth materials at all.

We are also working towards the "development of human resources," and have made progress in breaking down the barriers between various business groups, regions, and countries. The aim here is to ensure that a firm sense of values - rooted in the TDK spirit of exceptional craftsmanship - is shared across the entire group. Building upon this foundation, each part of the organization can then contribute in ways that reflect their respective strengths.

With regard to our aims surrounding "society and environmental considerations in the supply chain," we have established and announced a clear policy concerning conflict minerals. These minerals have become an international issue, because they are a source of revenue for armed groups. Together with our suppliers, we will continue to pursue a firm course of responsible procurement.

Finally, in the context of advancing towards the goal of "symbiosis with the global environment," we have worked with industry associations to promote the implementation of numeric standards for quantifying the contribution of electronic components towards the reduction of CO² emissions. The aim is to first establish such standards in Japan, and then tackle standardization on an international level.

Achieve sustained growth by quickly responding to challenges

In order to further boost internal communication channels and ensure that top management policies are thoroughly propagated throughout the company, a number of new initiatives were started. These include an opinion survey, and a program of open-topic discussions with younger staff members.

When addressing new employees, I often tell them "You need to experience some kind of failure while you are still new to this company. That is what will help you grow." It goes without saying that the future growth of TDK is sustained by the personal growth of each and every member of our staff. Quickly responding to a challenge without being afraid of the possibility of failure, is a stance that should not be forgotten. I believe that ultimately this will drive TDK forward.

Another aspect necessary for sustained future growth is the enhancement of the brand value. In this age of IT advancement and globalization, successful companies around the world rely on competitive strategies and strong brand power unique to each business. A TDK strength - ever since the company’s founding - has been originality. It is the driving force that enables us to create things that are beyond the grasp of other companies. It allows us to offer products and values that earn the trust of customers and of society. By pursuing finely honed technology paired with creativity, we intend to further enhance the value of the TDK brand. I am convinced that this is the path towards sustained growth, now and in the future.

I hope that you will find this report useful in learning about TDK’s current and future initiatives, and I heartily welcome your comments and suggestions.
Editorial Policy

This report has been compiled with the purpose of giving stakeholders an understanding of the TDK Group’s CSR (Corporate Social Responsibility) activities. The 2013 edition was created to provide answers to questions such as “Why is TDK engaged in CSR?” and “What is TDK’s stance towards CSR, what are its aims, and how are they being put into practice?”

Special features are included to highlight concrete activities with regard to the Key Action Items that TDK has defined for CSR: "contribution to the world by technology," "development of human resources," "society and environmental considerations in the supply chain," and "symbiosis with the global environment." KPI (Key Performance Indicators) have been set for each of these, and progress made during fiscal 2013 is reported in an easy to understand format.

The TDK website has comprehensive information centered on activity reports for fiscal 2013, and also provides third party opinions about the TDK Group. Please feel free to make use of this website resource.

We hope that you will find it interesting reading, and we heartily welcome your frank comments and suggestions via the accompanying questionnaire.

Report Format

This CSR report is also available as a booklet and as a collection of website pages, in a slightly different format (in order to match the requirements of the respective media).

Booklet: A summary version introducing our Key CSR Action Items.  
Web site: Compiled with reference to the Global Reporting Initiative (GRI) guidelines, including comprehensive information centered on fiscal 2013 activity reports as well as other detailed data.(Scheduled to be available in September 2013)

Period Covered

FY 2013 (April 1, 2012 - March 31, 2013)  
Some information covers activities outside this period.

Organizations Covered

TDK Group*

* TDK Group: TDK Corporation and 119 consolidated subsidiaries in Japan and overseas

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Contact

CSR Promotion Office : +81-3-6852-7115

Cover Page Design

This represents TDK innovations growing out of the rich soil of technology. The image also expresses a fresh breeze blown by TDK into the growing sectors, a motif also taken up on pages inside the booklet.
The TDK Group’s CSR

With the aim of building a company that continues to be trusted by society, all employees in their daily activities are implementing the corporate motto and ensuring corporate ethics.

Corporate Philosophy

**Corporate Motto**

Contribute to culture and industry through creativity

Corporate Principles

**Vision**

Always take a new step forward with a vision in mind. Creation and construction are not born without vision.

**Courage**

Always perform with courage. Performing power is born by confronting contradiction and overcoming it.

**Trust**

Always try to build trust. Trust is born from a spirit of honesty and service.

The TDK Code of Conduct: The TDK Group’s Standards and Guidelines

TDK Code of Conduct specifically provides the standards and guidelines for compliance with all laws, regulations, and social norms.

By pursuing creativity and consistently providing products and services that create new value, we offer satisfaction and dependability to our customers and all of our stakeholders. With their support, we also contribute to the development of a sustainable society by helping to resolve social issues. For this purpose, the members of the TDK Group will autonomously practice the following action guidelines in the course of their daily work:

1. TDK members shall respect the character and individuality of each employee and pay heed to values and opinions that differ from those of the TDK Group.
2. TDK members shall always be aware of wider issues and pursue the true facts of any situation.
3. TDK members shall be active, courageous, and tenacious in efforts to resolve social issues.
4. TDK members shall pursue work creatively as members of a manufacturing company.

Key CSR Action Items

The four action items shown to the right have been identified by the TDK Group as especially important due to their impact on society at large and the company.

**Key CSR Action Items**

1. Contribution to the world by technology
2. Development of human resources
3. Society and environmental considerations in the supply chain
4. Symbiosis with the global environment

**Key CSR Action Items**

- Contributing to culture and industry through sustainability
- Enhance corporate value
- Creation of a sustainable society
- Increase of business

CSR Promotion Structure

The TDK Group is engaged in a wide scope of CSR oriented activities, operating as a coherent whole. The Business Ethics & CSR Committee reports directly to the Board of Directors. The committee is comprised of the Administration HQ General Manager, and Function Managers from the Corporate Planning Group, Corporate Communications Group, Human Resources Group, General Affairs Group, Legal Group, CSR Promotion Office, Finance and Accounting Department, Management Review and Support Department, as well as the Chief Compliance Officer (CCO) of TDK-EPC. The mission of the committee is to identify and solve any issues related to the TDK Code of Conduct, for employees of TDK Group companies all over the world. The CSR Task Force operates under the umbrella of the Business Ethics & CSR Committee and consists of 11 HQ functions.

**CSR Promotion Office**

The CSR Promotion Office has in-depth knowledge of relevant issues and society’s expectations of business entities, and is tasked with shaping and promoting CSR activities. Various demands and expectations, both of customers and of society at large, are examined carefully in regard to strategic aspects such as the degree of urgency and importance, influence on TDK, capabilities of TDK, the benefit to society, for example. Working closely together with the respective departments of the company, policies are formed and responsive actions are implemented. The office which currently operates as part of the Administration HQ also promotes CSR awareness within the company and organizes training programs.

**Organization**

- Board of Directors
- Business Ethics & CSR Committee
- Executive Committee
- Functions
- CSR Task Force
- Compliance Office
- Shareholder/Investor Consultation
- Virginia
- Europe
- Asia
- TDK CSR REPORT 2013

**Corporate Motto**

Contribute to culture and industry through sustainability

**Key CSR Action Items**

- Contributing to culture and industry through sustainability
- Enhance corporate value
- Creation of a sustainable society
- Increase of business

**Key CSR Action Items**

- Contributing to culture and industry through sustainability
- Enhance corporate value
- Creation of a sustainable society
- Increase of business

The TDK Group’s CSR and the Corporate Code of Conduct

The TDK Group’s approach to CSR is based on the TDK Corporate Motto to ensure corporate ethics. This means that CSR activities are promoted through business activities based on the TDK Code of Conduct® and are always maintained through the proper channels of communication with our stakeholders while recognizing the fact that the company’s continued success is supported by our customers, suppliers, employees, shareholders and investors, local communities, and other stakeholders. By putting our Corporate Motto into practice, our corporate value increases, and this contributes both to the “Continued evolvement of business” and the “Creation of a sustainable society.”

* For the complete text of the TDK Code of Conduct, please refer to the following URL:
  http://www.global.tdk.com/about_tdk/code_of_conduct/
Social Problems of Our World— How TDK Meets the Challenge

The problems facing modern society are manifold, ranging from climate change and other environmental problems to social concerns such as the poverty gap. The nature of the issues and their regional extent also differ widely. In this challenging world, TDK is looking for ways to help in finding solutions by utilizing our strengths as an enterprise. By focusing on key issues under the aspect of CSR, we aim to contribute towards solving problems while continuing to develop as a business and work towards the realization of a sustainable society.

1. Contribution to the world by technology

2. Development of human resources

3. Society and environmental considerations in the supply chain

4. Symbiosis with the global environment

<table>
<thead>
<tr>
<th>Overview of FY 2013 Activities and FY 2014 Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>The TDK Group has identified action items that are particularly important from the perspective of CSR, and we are working to implement these through business activities.</td>
</tr>
<tr>
<td>The PDCA cycle is applied to each item based on the action plan, and we continuously strive to improve activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 2013 Action Plan</th>
<th>FY 2013 Results</th>
<th>FY 2014 Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Contribute to resolving social problems through business activities</td>
<td>- Developed the production of magnets with a greatly reduced size of 3 mm in the TDK Group, with special emphasis on &quot;Second-generation Information and Communications&quot; and &quot;Energy-related&quot;</td>
<td>- Increased the reduction of CO₂ emissions (environmental contributions): 1,059,000 t- CO₂</td>
</tr>
<tr>
<td>2</td>
<td>Innovative citizenship training</td>
<td>- Conducted TDK Monozukuri Tradition Seminars</td>
<td>- Conducted TDK Monozukuri Tradition Seminars (10 employees participated in FY 2013)</td>
</tr>
<tr>
<td>3</td>
<td>Development of global human resources</td>
<td>- Continued cross-cultural communication training and IMD seminars</td>
<td>- Continued cross-cultural communication training and IMD seminars</td>
</tr>
<tr>
<td>4</td>
<td>Promote CSR awareness within the company</td>
<td>- To implement cross-cultural communication training and expand the overseas implementation areas</td>
<td>- To continue to implement cross-cultural communication training and expand the overseas implementation areas (increased the number of sites in China, and extended to Europe and the Americas)</td>
</tr>
<tr>
<td>5</td>
<td>CSR based customer relations</td>
<td>- To establish an internal company framework</td>
<td>- To chart the development of products which contribute to solving social and environmental problems in the Mid Term Plan, with special emphasis on &quot;Second-generation Information and Communications&quot; and &quot;Energy-related&quot;</td>
</tr>
<tr>
<td>6</td>
<td>Promote CSR procurement</td>
<td>- To provide a proper response for customers and suppliers</td>
<td>- To establish an internal company framework</td>
</tr>
<tr>
<td>7</td>
<td>Handle conflict minerals regulations</td>
<td>- To implement regular TDK CSR &quot;Self-Checks&quot; at manufacturing sites and promote management-level improvement, focusing on labor and human rights</td>
<td>- To implement regular TDK CSR &quot;Self-Checks&quot; at manufacturing sites and promote management-level improvement, focusing on labor and human rights</td>
</tr>
<tr>
<td>8</td>
<td>Continue to promote cross-cultural communication training and IMD seminars</td>
<td>- To continue to provide guidance for suppliers and continue to provide training</td>
<td>- To continue to implement cross-cultural communication training and expand the overseas implementation areas (increased the number of sites in China, and extended to Europe and the Americas)</td>
</tr>
</tbody>
</table>

Resources and energy problems

- Resources required by humanity in 2030: 2 globes' worth
- Percentage of OECD member countries where prices increased: 75%
- Number of people subsisting on less than 1.25 USD per day (as of 2008): 1.29 billion

Food shortages

- Number of people suffering from malnutrition: 925 million
- Number of people subsisting on less than 1.25 USD per day (as of 2008): 1.29 billion

Economic gap

- Percentage of OECD member countries where prices increased: 75%
- Number of people subsisting on less than 1.25 USD per day (as of 2008): 1.29 billion

Poverty

- Number of people suffering from malnutrition: 925 million
- Number of people subsisting on less than 1.25 USD per day (as of 2008): 1.29 billion

Sea-level rise by 2100

- Max. 59 m
- Max. 59 m

Climate change

- Global temperature rise: -28 °C
- Global temperature rise: -28 °C

Loss of biodiversity

- Number of people suffering from malnutrition: 925 million
- Number of people suffering from malnutrition: 925 million

Water shortage

- Global temperature rise: -28 °C
- Global temperature rise: -28 °C

Number of people suffering from malnutrition: 925 million

Oversea: Worldwide Today’s Japan’s Bioregion’s

A Special Feature

TDK CSR REPORT 2013
Contribution to the world by technology

TDK Core Technologies
Sustaining Innovation in Society

More than 80 years have passed since the magnetic material ferrite was first invented and put to use. The spirit of creating entirely new things of value by starting at the fundamental level of the material itself has defined TDK from the very beginning. Even today, it is still the trait that enables us to contribute to various facets of society through innovative and original products.

TDK’s main fields and core technologies

“Materials technology” and “Process technology” form the basis of TDK’s five core technologies, and are used to realize the full potential of the materials. Changing materials in shape to become electronic components, and finally devices and end products, the output of TDK energizes the smart society in the Next-generation Information and Communications and Energy-related markets.
TDK’s Core Technologies and Monozukuri
Power Sustain a Society Inspired by Dreams

Cloud computing is the backbone of the smart society. The smart grid enables the realization of a cleaner future. TDK products play a vital role in many things surrounding us in our daily lives. By persistently pursuing a path of innovation for technologies and products geared to the needs of society, we help to build a world where dreams can come true.

**Energy-related Market**

TDK products play a role in the search for solutions to environmental issues such as global warming and dwindling energy resources. With the production of eco-friendly cars and renewable energy systems gaining momentum all over the world, TDK components contribute to better fuel economy and higher performance.

**Opening up new possibilities for solving environmental problems**

Large neodymium magnets for HEV/EV and industrial equipment

By harnessing proprietary low-oxygen process technology, microstructure technology, and other advanced processes, we produce magnets with world-leading properties.

**Main applications**

- HEV/EV drive motors
- Inverters
- Solar inverter

**MKK Power Capacitors**

These film capacitors are used around the globe in low-loss, high-voltage DC power transmission systems. Advanced technologies such as film metallization and stacked winding have been harnessed to create capacitors that are compact, extremely reliable and can handle high-energy levels.

**Main applications**

- Converters for power generation and power transmission systems
- Inverters for industrial equipment and railway traction systems, etc.

**Automotive-grade multilayer ceramic chip capacitors**

Advances such as the realization of a finer structure for the dielectric ceramic material have resulted in tiny (0.6 x 0.3 mm) capacitors that offer high reliability and can withstand the extreme temperatures in the engine room of a car.

**Main applications**

- TPMs
- Keyless entry systems, various other sensors

**DC-DC converter for HEV/EVs**

These power supplies efficiently convert the high voltage of the main battery into the lower voltage required by the electric equipment of the car, and are also used for charging the auxiliary battery. High power conversion efficiency helps to conserve energy.

**Main applications**

- HEV/EV/PHEV (plug-in hybrids) etc.

**HDD heads**

Magnetic heads for hard disk drives are manufactured using highly sophisticated thin film process technology. The heads from TDK are industry-leading products in the drive towards higher recording density. Our lineup also comprises products for HEV/EV and industrial equipment.

**Main applications**

- Hard disk drives for PCs, HDD recorders, home servers, data centers, etc.

**Power Management Module**

Based on TDK’s SESUB technology (semiconductor embedded in substrate), this product is a world’s first and features a multi-channel power supply management IC-chip that is embedded directly into the multilayer substrate. It also includes surface-mounted power inductors. The result is a highly integrated and extremely flat module.

**Main applications**

- Smartphones, mobile phones, tablet PCs, and other mobile devices

**TDK CSR REPORT 2013**

Power Management Module

**Towards a flourishing networked society**

**Next-generation Information and Communications market**

The modern networked society is working and changing on a daily basis. The power of craftsmanship which is a core strength of TDK also provides advantages when it comes to realizing goals such as making mobile devices more compact and versatile, or enabling data centers to store more data while consuming less energy.

**Thin film common mode filters**

Proprietary thin film patterning technology enables the formation of smaller and more precise coil patterns. With cutoff frequencies as high as 10 GHz, these EMC countermeasure control products offer even more efficient suppression of radiated noise.

**Main applications**

- Notebook PCs
- Servers, data centers, high-speed interfaces, etc.

**Wireless power transmission coil**

These coils are key elements of systems designed to allow wireless battery charging of smartphones and other mobile devices. The use of a proprietary flexible magnetic metal sheet from TDK enables a thinner profile and lighter weight.

**Main applications**

- Wireless power transmission systems for smartphones, digital cameras, Bluetooth headsets, etc.

**Lithium-ion battery**

These rechargeable, high energy density batteries are extensively used in various kinds of mobile devices. Advanced TDK technology for key components, such as electrodes and separators, provides a decisive advantage.

**Main applications**

- Smartphones, mobile phones, tablets, computers, and other mobile devices
TDK is a business centered on the core of magnetism-related materials technology. Since the development of these materials takes a long time, our company cannot hope for significant innovations by means of a setup calling for short-term results. However, it is of utmost importance to promote efficient development. The key point here is the selection of development themes.

At TDK we have introduced an original stage-process as a development management system. Under this system, the theme-specific development period is divided into four stages. At the end of each stage, the state of progress and commercial feasibility are objectively evaluated, and a decision is made on whether or not to go ahead with development. Thus, it is possible to judge the pros and cons of the theme by the same criteria each time, even if the leader of the development team changes. This increases the understanding of the engineers and enhances their enthusiasm for the project. Their motivation is further boosted by linking this system to the personnel appraisals, so that engineers are personally rewarded for their efforts through careful evaluation at each of the seven stages.

Furthermore, as personnel evaluation in order to cultivate the “human stock” that is essential for business development, at TDK we endeavor to foster an environment that promotes exchange beyond the limits of each department and specially across the globe, and to develop human resources with a broad vision. Below, we feature reports from two employees who have taken part in training experiences unique to TDK. Firstly, we hear from an employee who took part in our Technology Exchange Meeting (TEM), which began in 2011 with the aim of creating a group-wide synergy through technical exchanges between engineers from around the world. Secondly, we hear from a new recruit who took part in a unique training experience for new TDK employees. We hope that both experiences introduced below demonstrate our efforts to build a working environment in which engineers can fully display their capabilities without fear of making mistakes.

**Comment by TEM Participant**

Dr. Christian Holfmann, Senior Chief Researcher, Technology Exchange Meeting (TEM), TDK Corporation

"With keynote speeches by top management and group sessions in key areas the Technology Exchange Meeting (TEM) provides a top-down view and a bottom-up view of our capabilities at the same time. Bringing together technology experts from all parts of our company helps us to think out-of-the-box and develop advanced technologies. Thanks to the TEM, I have been able to establish and maintain a network with engineers outside my usual field of expertise, and this has proved useful in many situations. In addition to a excellent and extensive technology base, one of the major strengths of the TDK Group is its extremely broad knowledge base, which is reflected in the large variety in its product portfolio. I want to bring new technologies and materials that will enable new products for a sustainable society. By observing my surroundings I try to identify circumstances which can be improved by my knowledge and experience and then act accordingly."

**Unique Training for New Employees Stimulates the Imagination**

Alok Amre, Production Planning and Coordination Department, TDK-EPC Power Systems Business Group, TDK Corporation

"Our training for new employees included a unique program in which we were divided into teams of three and given the task of producing an original bamboo dragonfly. Our assignment was not merely to produce a bamboo dragonfly but to create a product that would sell - by taking quality, cost, delivery, and market value into consideration. We worked through the whole process of manufacturing from original idea through to sale. The team members came from various departments, such as development, planning, and marketing. Faced with this mammoth assignment, at first we were baffled. But as we put our ideas into words, concepts and designs began to take shape. I felt a great sense of fulfillment when our dragonfly was finally completed."

I realized that it was precisely because of our different backgrounds and different strengths that we were able to broaden our vision and find better solutions. I also understood that good communication is essential for making good products. I want to put what I learned in this training to use in my daily work and connect it to greater job satisfaction, better productivity, and innovation."
The TDK Group is responding swiftly to the advanced sophistication and diversification of the electronics sector. We do this by always operating at the cutting edge, introducing new products that utilize proprietary materials technology and design technology, and by developing new technologies. Key areas are products related to next-generation recording technology, microelectronics modules for mobile communications, and environmentally-oriented and energy-saving devices for the automotive sector and for next-generation infrastructure applications.

Technological resources are being allocated to vital markets including the Energy-related and Next-generation Information and Communications markets, to realize efficient, solution-oriented research and development.

**Passive components segment**

In the passive components segment, we have harnessed core technologies for the development of next-generation multilayer ceramic chip capacitors and inductors, EMC filters, and compound sheet type flexible magnetic shields and RF absorbers for anechoic chambers. As a result, we introduced various EMC countermeasure products to the market and advanced the performance of anechoic chamber facilities. Activities related to the implementation of RF modules and other module products were also strengthened.

**Magnetic application products segment**

In the magnetic application products segment, the development of market-ready rare-earth-free magnets and next-generation ferrite magnets is progressing, along with the development of next-generation high-density recording heads. The development of devices for hybrid vehicles and electric vehicles is also being strengthened. As energy saving measures have become a major concern for society, the development of highly efficient power supplies is one way in which we are responding to such needs. In view of fluctuations in the price and supply situation of rare earth materials - due to the difficult international situation in the production areas - we are aiming to significantly reduce the use of rare earth elements (or even eliminate them altogether) in new types of magnets.

**Film application products segment**

In the film application products segment, the development of next-generation, lightweight, environment-friendly, lithium battery materials as well as of films with new properties and functions is progressing.

**TEM (Technology Exchange Meeting)**

The TEM is a forum for technology exchange aimed at dismantling global barriers and promoting faster group-wide integrated development. TDK Group engineers from different countries, with specialization backgrounds across various fields, come together for two days to discuss and explore a number of topics in depth.

After a preparatory meeting in Munich in 2011, the fourth fully-fledged TEM was held in November 2012. A total of 155 engineers from the TDK Group have so far participated in the meetings. Through such initiatives, we aim to promote not only a cross-fertilization of ideas but also the exchange of human resources, in order to build a more organic R&D framework.

<table>
<thead>
<tr>
<th>TEMs so far</th>
<th>Cumulative total of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>155</td>
</tr>
</tbody>
</table>

**R&D expenses**

53,943 million yen

**Percentage of R&D vs. net sales**

6.3%

**TDK Named as one of the "Top 100 Most Innovative Organizations" by Thomson Reuters in 2012**

In January 2013, TDK Corporation was selected as one of the "Top 100 Global Innovators for 2012" by Thomson Reuters (headquartered in New York). This award honors corporations and research organizations with notable inventions, judged not only on the basis of patent applications but also in terms of global impact. Criteria for selection includes the number of patents, the success rate, the global reach of patent portfolio, and the influence of patents in citations. TDK received an especially high rating for its number of patents, along with high ratings in the other three categories.

*The key performance indicators (KPI) shown above are representative data only, provided as a measure of the progress of related items.*
How Up-and-Coming TDK Leaders from around the World See the Future of TDK — Finding out what society expects from TDK

IMD seminars aim for true globalization

The IMD seminar program aims at fostering future leaders of the company. Each year, at TDK Group sites in Japan or at other associated locations, training programs lasting approximately one week are held, with all participants lodging together at the venue. Nihon City in Akita Prefecture, a place closely related to TDK’s history from the very beginning, was one of the IMD locations this year. Under clear autumn skies, participants from a variety of countries - including China, the U.S., Malaysia, Germany, and France - assembled here. All 17 participants are candidates for executive positions at local subsidiaries.

Leaders from various countries think about CSR

The main topic on day three of the IMD seminar was “CSR.” Social responsibility is of course an area of importance for the business of the future which cannot be overstated. The staff members who may be leading the TDK branches of the future must acquire a deep understanding of what a company’s obligations towards society are. In their respective locales, they need to be able to grasp trends in social developments and identify the needs of the various stakeholders in order to promote meaningful CSR activities and conduct proper business management. This is the overriding aim of the program.

The program started off with an explanation of TDK’s philosophy with regard to CSR. Members of the CSR Promotion Office pointed out that putting the corporate motto of "contribute to culture and industry through creativity" into practice and strictly adhering to corporate ethics principles are key requirements. They then shared the information that key CSR action items had been grouped under four topics.

The next item on the agenda provided an opportunity to learn about the state of CSR around the world. The founder of First Penguin, Ms.Wong Lai Yong, a renowned speaker and consultant on social responsibility and human resources training, gave a lecture on this topic. Social issues differ considerably by country and region. Because CSR is born out of the attempt to deal with such issues, the focus of CSR differs significantly in Europe, Asia, and the Americas. The presentation, keenly followed by the participants, also touched on the current state of global environmental issues such as dwindling water and energy resources. Another observation that caught the listeners’ interest is the fact that in recent years, as the earnings of businesses rise, their influence also increases, which in turn heightens their responsibility and expands the expectations placed by society on them.

Ms. Wong stressed that the objective of CSR is to ensure sustainable growth, and that engaging with CSR issues means to both avert risks and grasp opportunities. By responding to stakeholders’ various viewpoints and concerns, opportunities for growth will emerge. The attendees realized that CSR should not be thought of as something that is separate from day-to-day business management, but rather is vital to integrate CSR into the overall picture. It is highly important to maintain CSR awareness as each individual person performs their daily tasks.

What do stakeholders expect from TDK?

What then are the expectations that stakeholders from various sides have towards TDK? One of the aims of the seminar was to think about this issue and try to view the company from different external standpoints.

The 17 participants from nine countries were divided into five groups, namely "customers," "suppliers," "shareholders and investors," "local communities," and "employees". By assuming these respective roles, the expectations and demands on TDK were worked out. Because issues differ by country and by region, the expectations towards TDK also tend to differ. During the discussion, the participants shared information about the respective situations in each of their countries. After expectations and demands had emerged and been clarified, the discussion moved on to the question of how TDK should respond, and what the ideal relationship and stance towards the respective stakeholders should be.
Development of human resources

Ideal Relationships with Stakeholders

After approximately one hour of group discussions, the final summary contained several unique key words and revealed some ambitious goals. The fact that potential future leaders of various TDK sites took the viewpoint of stakeholders and envisioned what an ideal relationship with TDK would look like doubtlessly has great significance for the further growth of TDK around the world. The content of the group discussions is summarized below.

Shareholders / Investors

The foremost concern of shareholders and investors is likely to be the avoidance of problems potentially leading to large losses. Promoting CSR has the effect of reducing risk. By listening to the opinions of society and responding early, within a moral framework, the corporate image can be maintained.

Additionally, trying to tackle social issues can lead to opportunities for growth and future business evolution. TDK's vision is to provide solutions that fit the future needs of society in order to enable sustainable growth. Gaining the trust and support of shareholders and investors through this vision is considered to be ideal.

Local communities

Local communities will emphasize strict adherence to laws, and will also look for a stance that is beneficial to the region. Effective use of resources is important to prevent environmental pollution. Maintaining good relationships with local governing bodies and providing fulfilling job opportunities for local people are both important. Making intensive use of local suppliers contributes to the revitalization of the region. Social activities that promote the company as a member of local society are another important aspect.

The ideal scenario for relations with communities can be realized when the TDK brand has good local penetration and is able to grow with the local people. Reducing the environmental impact through revolutionary green technologies also forms part of this scenario.

Employees

A company in effect must have a consistent CSR policy and must make it fully known to all members of staff. When transforming the policy into concrete action, responsibilities must be clearly defined, and priorities must be set.

Staff also need to feel that they are able to grow together with the company. If they sense that the company truly values them, their motivation will increase. There must also be opportunities for exchange and interaction among staff and the degree of work satisfaction must always be monitored and assessed.

Creating a fair and happy workplace through the promotion of CSR principles and mutual concern for each other is seen as defining the ideal relationship between a company and its staff.

Global Leaders Supporting TDK

Utilizing the Results of IMD Seminar to Bring Out Organizational Strength and Become a Global Leader

Shimmer Shao, IC Project Leader (Manager), Sales, TDK Shanghai

As the head of sales in Shanghai, I am responsible for IC (integrated circuit) collaboration. I introduce TDK Group products to the main IC makers with operations in China. In order to expand sales, I also cooperate with members of IC divisions overseas and endeavor to improve design efficiency and to strengthen sales support activities.

I am now in my seventh year at the company. It was during my first five years, when I was working in planning and marketing, that I realized how much I had grown. With the support of my colleagues, I was able to achieve substantial results, such as the holding of product seminars for customers more than 90 times. It was also very encouraging for me when I received a special award from the general manager for sales at the HQ in Japan.

And then two years ago, I was put in charge of IC collaboration at TDK China. As well as fulfilling my own duties, in this role I have to instruct group members and guide them toward achieving their goals. So my work requires not simply management skills but wide-ranging considerations as well. At first I was a bit overawed, but with the help of my colleagues and seniors, I have been able to overcome the difficulties. Now I see how executing my work as a leader and sharing my know-how exerts a good impact on those around me. I get a lot of satisfaction out of that.

Furthermore, a major turning point came in 2012, when I got the opportunity to participate in IMD seminar. Participation in this training had been one of my goals ever since joining the company.

I really was able to learn a lot from the training workshops and discussions. It was a good chance for me to review my work so far, and I think I was able to make new discoveries regarding my own management skills as well. And the network that I have built with colleagues around the world who I got to know through the training is a big help.

From now on I want to further broaden this kind of exchange beyond national borders and strengthen ties with colleagues at worldwide sites. In order to further display a synergistic effect as “ONE TDK,” I think it is necessary to build a setup to pursue compromises among people with differing cultures and ways of thinking.

Wages raises and promotion are important in increasing motivation, of course. But in order to gain a sense of fulfillment at work, it is also important to feel that you are trusted by your seniors and colleagues. For example, when I was assigned to my present department, the IC collaboration business had only just begun in China, so it was a big challenge for us to launch a new sales team and find customers. I think I was able to overcome this challenge and greatly expand the range of our work largely because my seniors trusted me and let me get on with it.

China is an extremely important market for TDK. I want to do my best so that we can expand sales in this market and achieve success here. There are not many examples of locally hired staff or women being appointed to senior managerial positions, but that’s a challenge for me as well.
Creating an Environment Where People Can Develop Their Full Potential

“People” are what makes TDK. Each member highly receptive to information, and even the smallest indicators of social development are not overlooked. Learning is an ongoing, life-long process. Kiyoshi Yazu from the Human Resources Group in the Administration HQ explains the aims towards which the company develops its human resources.

Fostering people who continue to learn and tackle problems

The way for a company to evolve is by helping its people to grow and develop. This is the fundamental idea behind TDK’s human resources development. I believe that the mission of the Human Resources Department is to build an environment that is conducive to bringing out the full potential and worth of each individual, by identifying their capabilities and allowing them to shine.

To achieve this aim and to ensure that the work that people do is best matched to their talents and their situation, we are implementing a combination of programs including level-specific training, selective training, and support for self-improvement opportunities. However, the focal points and priorities of human resources development also are subject to change. We therefore review the programs each year from the ground up, and are updating and introducing new content as necessary.

Our foremost aim is to engender an attitude of never ceasing to attempt new things and to tackle challenges. New employees often express the wish to make use of their specialty according to the field that they studied at university, but TDK’s business activities cover an extremely broad range, and just one single product reflects many diverse technologies and areas of knowledge. Simply thinking “this is my specialty” may hinder one’s ability to arrive at new ideas, and may block one’s opportunities for growth.

Starting from the current term, we have therefore completely overhauled our training program for assistant managers with the aim of promoting a habit of learning, mainly among the younger generation of our staff. Regardless of job description, acquiring literacy in accounting, marketing, languages, and logical reasoning reflects many diverse technologies and areas of knowledge. Simply thinking “this is my specialty” may hinder one’s ability to arrive at new ideas, and may block one’s opportunities for growth.

Innovative craftsmanship training

Since 2010, the TDK Monozukuri Tradition Seminars have been held with the aim of cultivating excellent manufacturing leaders. By rediscovering the origins of TDK’s strong tradition of creative production, we can once again grasp the big picture and re-energize manufacturing processes through diligent attention to the task at hand. Participants in the seminars are expected to guide and foster successors who will carry on the solid craftsmanship traditions of TDK. Many participants commented that their outlook had changed, or that they had become more keenly aware of the need for overall optimization, demonstrating that the intended transformative consciousness had been achieved.

Cumulative total of participants in TDK Monozukuri Tradition Seminars

<table>
<thead>
<tr>
<th>FY</th>
<th>Total</th>
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<tbody>
<tr>
<td>2013</td>
<td>61</td>
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Development of global human resources

TDK is conducting the following training programs aimed at the development of global human resources.

Cross-cultural communication training

As the scale of our business has become truly global, there is an increased need for all members of staff to improve their cross-cultural communication skills. With this in mind, TDK has strengthened the support for language training, mostly by e-learning, and we are conducting more cross-cultural communication training sessions at various locations. The goal is enhanced competence at functioning as a global business.

IMD Seminar (International Management Development)

We hold International Management Development Seminars with the aim of globalizing the TDK Group and forging transnational ties. The program is aimed mainly at managers working for TDK Group corporations outside Japan as well as those working for TDK Japan.

Cumulative total of participants in cross-cultural communication training

<table>
<thead>
<tr>
<th>FY</th>
<th>Total</th>
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<tbody>
<tr>
<td>2013</td>
<td>261</td>
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Cumulative total of participants in IMD seminars

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<th>FY</th>
<th>Total</th>
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<tr>
<td>2013</td>
<td>247</td>
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Promote human rights and diversity

The TDK Code of Conduct comprises clauses that stipulate respect for human rights and prohibit discrimination.

We have undertaken a number of specific efforts to protect human rights and ensure equal opportunity, including efforts to educate and enlighten employees, the establishment of a special telephone “helpline” for consultations, and various systems relating to childcare and caregiver concerns including childcare and other leave systems, and a system permitting reduced working hours.

We introduced the Diversity Promotion Action Plan in October 2007 as an initiative to further advance these efforts and to recruit and utilize diversified human resources. Diversity promotion subcommittee have been established in each division, leading company-wide campaigns to provide more opportunities for female employees, retired workers and others.

Cumulative total of employees taking child care leave

<table>
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<tr>
<th>FY</th>
<th>Total</th>
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<tr>
<td>2013</td>
<td>13</td>
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</table>

Cumulative total of employees returning to former position after taking child care leave

<table>
<thead>
<tr>
<th>FY</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>100%</td>
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* KPI figures shown above are representative data only, provided as a measure of the progress of related items. For other KPI figures, please visit our website.
The Social Problems behind Conflict Minerals: The Human Rights Situation in the Democratic Republic of the Congo

As a midstream company, TDK recognizes the importance of promoting CSR throughout the supply chain. Following the enactment of the Dodd-Frank Act in the United States in 2010, TDK has been promoting its response to conflict minerals. Here we report on an explanatory meeting held in April for all responsible personnel in TDK which covered conflict mineral countermeasures and the social problems behind these efforts.

The human rights situation in the Democratic Republic of the Congo

Thirty-four people attended the explanatory meeting, including those responsible for the conflict mineral response in each business group and other related personnel. Before the sharing of information on the specific countermeasures, the organizers thought it was extremely important for participants to learn about the background to the legislation, in other words, to understand what is currently happening in the Democratic Republic of the Congo, and to learn about the background to the affluence we enjoy. Therefore, TDK invited Ms. Reiko Taniguchi of Amnesty International Japan to the meeting to speak about the human rights situation in the Democratic Republic of the Congo. The participants listened attentively to her talk, which described the unimaginably wretched conditions in that country, and afterwards made such comments as, “I was really shocked to hear about what is happening in the Democratic Republic of the Congo.” Once again, they acknowledged TDK’s heavy responsibility to address the issue of conflict minerals.

The following is a summary of Ms. Taniguchi’s speech.

Background to the conflict mineral regulation: the wretched situation in the Democratic Republic of the Congo

The background to the conflict mineral regulation is the serious violation of human rights that is rampant in the Democratic Republic of the Congo. The Democratic Republic of the Congo has been called “the country that has everything except peace.” It is a treasure house of nature with abundant natural resources and wildlife. But because of the conflict involving these abundant resources, it is one of the poorest countries in the world and conditions there are terrible. Among them, the violation of human rights, and especially sexual violence against women, is a serious problem. Even today, nearly a decade after the end of the Second Congo War, there are said to be more than 1,100 incidents of sexual violence every day. Even compared with the chaos in other conflict regions, sexual violence here is prominent and extreme. There were an estimated 200,000 victims during the war, and the number of victims since the war is said to be more than 400,000.

One of the reasons why terrible conditions are continuing even after the war has ended is the delay in postwar stabilization. In the Democratic Republic of the Congo, the UN stabilization mission is not functioning, and the perpetrators of crimes are rarely brought to justice. Indeed, even investigations of incidents do not make much headway.

A major reason for the deterioration in public security is that armed conflicts have broken out over mining rights in the mining regions. The armed groups force nearby villagers and children, at gunpoint, to work and mine the minerals. These minerals are then smuggled out and sold in the international market, thereby further escalating the conflict. It is a vicious circle.

Companies are certainly not unconnected to this terrible situation. The Congo war, which took the lives of 5.4 million people, was a conflict over resources. After the war was over, the United Nations named and blamed more than 20 European and US companies operating in Africa in such fields as finance and transportation for serving the fees of conflict. Unfortunately, this fact was not reported widely in Japan at the time. The attitude of Japan is completely different to that of Europe and the United States, who place extreme importance on crimes against humanity. The United States was moved into action out of the belief that the violation of the human rights of women and children, who are innocent and have no means to resist, is a threat to humanity as a whole. The Dodd-Frank Act, enacted to regulate financial service practices, also contains important measures to end the violation of human rights in connection with financial systems. We do not know how effective the observance of this law will be in changing the human rights situation in the Democratic Republic of the Congo, but without doubt it is an important first step towards improving the situation. It is very meaningful for Japanese companies, after learning about and understanding the conditions behind the legislation, to contribute.

TDK’s response to conflict minerals

TDK commenced conflict mineral countermeasures in 2010 and, taking note of the final rule and industry trends, has been laying the groundwork for a specific response. In light of the final rule, adopted in August 2012, and industry trends, TDK has been revising its setup, roles, and survey methods. Furthermore, in April 2013 the TDK Group established a policy on conflict minerals* stipulating the basic stance of:

1. not purchasing, either directly or indirectly, any minerals that could become financial sources for armed groups in the Democratic Republic of the Congo and neighboring countries and, if such purchases come to light, taking steps to eliminate them;
2. implementing a comprehensive survey across the whole supply chain; and
3. endeavoring to solve common issues in cooperation with industrial organizations.

In the explanatory meeting, participants shared information about specific methods and unanimously affirmed their intention to make a sincere response from now on.

*Details of the policy are carried on the TDK website: http://www.global.tdk.com/en/social_responsibility/or2710.html

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<tr>
<th>Congo War</th>
<th>Independence</th>
<th>Administration of Joseph Mobutu takes power</th>
<th>Rwandan Genocide</th>
<th>First Congo War</th>
<th>Second Congo War (the “Great War of Africa”)</th>
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Society and environmental considerations in the supply chain
TDK Steadily Evolves CSR Activities with the Aim of Solving Social Problems

In order to tackle social and environmental problems using the full weight of the whole supply chain, collaboration within industry circles and with others is essential. CSR Promotion Office General Manager Sachiko Nagahara talks about TDK’s efforts so far and plans for the future.

Fulfilling our responsibility as a midstream company

Generally speaking, companies in the electronics industry have supply chains extending around the world. Responding to labor, human rights, and environmental problems, which could occur anywhere in the supply chain, is an important theme that TDK should tackle. In the belief that our mission is to firmly understand conditions within the company and our sphere of influence, to make improvements, and to establish a setup for preventing risks, TDK conducts activities based on the three pillars of self-checks, on-site audits, and training.

Since TDK is a midstream company in the supply chain, it has the position of both supplier and buyer. As a supplier providing products to customers, we carry out self-checks on the activities of our company and group companies and report on this to customers. As a buyer, we request responses to a CSR checklist in order to understand the labor, occupational safety, environmental and ethics conditions of our business partners. We also conduct on-site audits in order to get an objective understanding of these conditions. So far we have conducted such on-site audits at TDK’s main production sites, but from fiscal 2013 we plan to widen the scope and carry on-site audits at more locations.

Regarding training we are continuing to offer e-learning programs on ethics and CSR in general, and in February 2013 we held a workshop in Japan to promote understanding of the EICC (Electronic Industry Citizenship Coalition) code of conduct. The aim of the workshop was to give participants an understanding of the code of conduct’s contents so that they can appreciate the background to the questions in the CSR checklist and come up with even better corrective measures. In the future, we would like to hold this workshop not only in Japan but also in China and other countries. We would also like to convey our thinking about CSR, including the EICC, to suppliers.

Conflict minerals have become a major problem in the industry. TDK established a policy and declared that it would make the utmost efforts to use only minerals unrelated to conflict in the supply chain. Furthermore, in order to inform related personnel about how mineral resources are a source of funding for armed groups in the Democratic Republic of the Congo and are fueling conflicts and human rights violations there, we invited Ms. Reiko Taniguchi of Amnesty International Japan to speak about why conflict mineral countermeasures are necessary. Thanks to her lecture, which delved beyond the usual working-level talk, participants were able to understand the background to the issue.

Based on the recognition that the violation of the human rights of women and children in the Democratic Republic of the Congo poses a threat to humanity as a whole, legislation was enacted in the United States. I believe it is extremely significant for TDK, acting on the basis of this legislation, to sincerely tackle the issue of conflict minerals and to disclose such information to customers.

TDK cannot solve major social issues alone. But through its activities in industrial organizations, and in collaboration with the electronic components industry as a whole and with others, it can contribute to the formation of a society-wide movement. Although there is no end in sight, we will steadily evolve our activities in order to close the gap between the present realities of society and the ideal social situation.

Mr. Reiko Taniguchi of Amnesty International Japan to speak about why conflict mineral countermeasures are necessary. Thanks to her lecture, which delved beyond the usual working-level talk, participants were able to understand the background to the issue.
Making the Environmental Contribution of Electronic Components More Transparent

What is the environmental contribution of electronic components?

TDK electronic components are designed to harness our superior materials technology for outstanding energy efficiency. They contribute to energy-saving performance in many different types of end products, and thereby help to curb greenhouse gas emissions. As a case in point, products such as power supplies and transformers operating in the power distribution path can convert voltage or current with high efficiency, ultimately reducing the power consumption of equipment incorporating such products. Other passive components and sensors are indispensable elements in the control circuits of end products, ensuring their efficient operation and making them more environmentally-friendly.

Because electronic components are not used in isolation, but rather become an integral part of the target equipment, it is difficult to visualize just how substantial their contribution is, and this aspect has not been extensively evaluated so far. TDK therefore has established methods of calculating the contribution of components to the reduction of greenhouse gas emissions when used in other equipment. The methods reflect the technological initiatives that were taken during development and production in order to ensure environmental benefits. Environmental contribution figures calculated according to these methods are being released progressively.

Working towards standardization of environmental contributions: calculation as a leading company

To enable calculating the environmental contribution of electronic components, TDK has established a number of rigorous standards for various products. Besides using these in-house, TDK is in the process of proposing these calculation criteria to other electronic component manufacturing companies in Japan via industry organizations. Proposals have also been submitted to the electric and electronic goods industry within Japan, as well as to bodies governing international standards.

This is intended to avoid a scenario whereby individual manufacturers each use their own standards to calculate environmental contribution, leading to a lack of credibility with regard to this relatively new concept.

As a leading company in the field of electronic component manufacturing, TDK believes in competition where appropriate and cooperation where necessary and prudent. The company is therefore working towards establishing a solid basis that will enable each manufacturer in the industry to smoothly calculate environmental contributions.

How do TDK products rate with regard to environmental contributions?

How do TDK products measure up in terms of environmental contributions? For products where calculation standards have been established, the environmental contribution of TDK products in the respective categories is as shown on the right.

By further refining and adjusting calculation standards, broadening the scope to other suitable products, and widely offering environmentally beneficial products to world markets, TDK aims to achieve an environmental contribution level of 1,000,000 t-CO₂ by fiscal 2021.

Environmental contributions of TDK products (by category)

- Industrial equipment: 334,000 t-CO₂
- Automobiles (incl. HEV and EV): 67,000 t-CO₂
- IOT: 89,000 t-CO₂
- General electrical equipment: 8,000 t-CO₂

Eco innovation driven by eco components

Various efforts towards the visualization of environmental information are drawing attention in recent years. The concept of LCA (Life Cycle Assessment) that covers the entire environmental impact of a product, from raw materials mining to production of materials and parts, assembly, use, and recycling, all the way to depreciation, has become internationally recognized in the 1990s. International standards for its implementation were adopted, and extensive research carried out in worldwide resulting in making its application more feasible. These standards are now in the process of becoming an indispensable tool for environmental evaluation of advanced eco-products.

As LCA case studies have shown, many electric home appliances generate sizable CO₂ emissions over their long period of use, while high-performance products incorporating a large number of electronic components - such as mobile phones and notebook computers - tend to have a high environmental load related to the manufacturing process of their parts. Parts that contribute to energy savings during the use of electric products, or during the manufacture of electronic components therefore contribute significantly to reducing the environmental load over the life cycle of electrical goods. TDK has set itself a highly ambitious goal, aiming to cancel out the CO₂ emissions generated by its industrial activities with the CO₂ reduction gained by the use of eco components more transparent and quantifiable. As an attempt to raise awareness of eco components, the initiative can be expected to become a driving force that will further accelerate environmental innovation in the electronic components sector.

The concept of evaluating the environmental contribution of eco components, and the efforts by industry organizations towards international standardization demonstrate TDK’s dedication to act as a leader in the electronic components sector. As the information society evolves towards ever higher levels of sophistication, further improvements in the performance of electronic components have become a social need. However, attention must be paid not only to performance improvements. Disregarding the environmental side would result in further aggravation of environmental problems, thereby blocking the way towards sustainable development for humanity. According to a recent news report, more than half of the electronic components found in the latest generation of advanced mobile devices are made in Japan. The pursuit of eco innovation in Japanese electronic components is therefore absolutely vital for the reduction of environmental load worldwide.

The fact that TDK as a major player in the Japanese electronic components industry is steadfastly pursuing a goal that at first glance may seem contradictory, namely further improvements in performance combined with a consistent reduction of environmental load, carries enormous significance.

In 2011, TDK formulated the TDK Environmental Action 2020 Plan. Focusing on expanding environmental contribution and reducing the environmental load connected with the manufacturing process, the ultimate aim is the achievement of carbon neutrality, a first in the electronic components industry. As electronic components get smaller, while at the same time offering higher performance, they contribute significantly to reducing the energy used by the end products in which these components are integrated. However, since electronic components are used in a myriad of different configurations in many types of products, making their contribution more transparent and visible has been a difficult undertaking. TDK is now engaged in making the environmental contribution of electronic components more transparent, as described below.
Promoting Environmental Vision: TDK Environmental Action 2020

The TDK Environmental Action 2020 Plan established in fiscal 2012 encompasses TDK’s ambition to realize carbon neutrality and thereby contribute to the creation of a sustainable society. Shinya Yoshihara, General Manager of TDK’s Manufacturing HQ, explains the company’s stance.

Working together towards achieving carbon neutrality for the entire organization

The TDK Environmental Action 2020 Plan put forth in April 2011 represents a new challenge for TDK. Until then, activities aimed at reducing the environmental load of manufacturing at the production sites had been the central focus of the efforts to protect the environment, pursued vigorously by all companies. However, once the manufactured products leave our factories and are being used in society, there is the question of how much they are able to reduce the environmental impact, what their contribution is in that regard. This question, while of course being a concern for the companies making the end products, had not really been systematically explored by the manufacturers of the individual electronic components. With the aim of achieving carbon neutrality by fiscal 2021, TDK formulated a long-term vision encompassing both the environmental load (CO₂ emissions from manufacturing operations) and the environmental contribution (reduction of CO₂ emissions due to our products). In shared awareness of this dual-pronged approach, each and every member of our organization is now working towards meeting the formidable challenges ahead.

【Achieving carbon neutrality—the TDK way】

CO₂ emissions (environmental load) due to manufacturing operations — minus production of CO₂ emissions through products (environmental contributions) = zero

* There are many different aspects both to environmental load and environmental contributions, but the TDK Environmental Action 2020 plan designates energy source CO₂ reduction as the major element and defines carbon neutrality as a state of balance in this aspect.

Dual-pronged activities towards achieving carbon neutrality

Reaching the ultimate goal of carbon neutrality hinges on efforts in two areas, namely the reduction of environmental load and the expansion in environmental contributions. The reduction of environmental load volumes was the basic tenet of environment oriented activities so far. At TDK, we pursue this through concerted efforts and strengthened collaboration between various manufacturing sites around the world. The entire process, from trials to practical implementation, is realized on a global basis. In fiscal 2013, we used trial production lines at manufacturing sites in China to test ways of reducing energy consumption for the respective processes. Successful approaches were then implemented throughout the production in the Philippines, thereby expanding the scope and taking energy saving measures to the next level. Over the short time period of six months, this project resulted in a reduction of energy use by more than 30 percent. TDK will continue to pursue such worldwide activities in the future, with the aim of further lowering the environmental load.

With regard to environmental contributions, calculations used to be made only in the category of power supply units where it is possible to directly quantify the environmental contribution. When it comes to the electronic components incorporated within end products, the calculation of environmental contribution is much more difficult, and there have been few efforts in the electronic components industry to assess quantifiable contributions in terms of environmental benefits. To address this situation, we have worked with industrial organizations and in consultation with other manufacturers to establish impartial standards for calculating environmental contributions. TDK promotes activities aimed at realizing our goal of carbon neutrality.

Reducing the use of energy in manufacturing operations worldwide and making processes more efficient, as well as making direct environmental contributions through products, is the new dual-pronged approach that is certain to also strengthen our international competitiveness.

Activities to be expanded

Expansion of CO₂ contributions to products (environmental contributions)

FY 2013 target

Increase the reduction of CO₂ emissions through products (environmental contributions): Preparation of own standards for calculating environmental contribution volume

Activities to be downsized

Reduction of CO₂ emissions (environmental load) from manufacturing operations

FY 2013 target

Reduction of CO₂ emissions (environmental load) from manufacturing operations: Less than 1,090 thousand t-CO₂

TDK has manufacturing bases in Japan, China, other Asian countries, the Americas, and Europe, producing a wide range of products in various production types. As business operations expand, the company has identified the reduction of total CO₂ emissions as a major goal in the interest of reducing environmental impact. At manufacturing bases, energy-saving measures are actively implemented with a target setting of at least 2% reduction in CO₂ emissions as compared to the previous year’s total.

CO₂ emissions (environmental load) from manufacturing operations

1,031 thousand t-CO₂

498 thousand t-CO₂

TDK products contribute to a reduction of environmental load not only in energy-related fields but also in various other sectors including industrial equipment, ICT, automobiles, home electric appliances, and more.

The TDK Environmental Action 2020 Plan aims to make the environmental contributions more transparent by establishing standards for the calculation of CO₂ emission reduction quantities.

Proposals for Proposals for

Increased furnace efficiency/Use of waste heat
Optimization of local cleaning
Development contributing to product contribution
Proposal of common calculating rules for environmental contributions
Quantification/visualization of product contribution
Making of rules for calculating product contribution
Proposal of common calculating rules for environmental contributions
Note: Promotion through industrial organization activities

Activities to be downsized

Promotions of energy saving
Emissions caused by production activities

Activities to be expanded

Expansion of contributes products
Contribution on reducing CO₂ emissions in the society through products and know-how

Expansion of contributes products

Contribution on reducing CO₂ emissions in the society through products and know-how

Promotion of energy saving

Emissions caused by production activities

Not illustrated

Note: Promotion through industrial organization activities

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