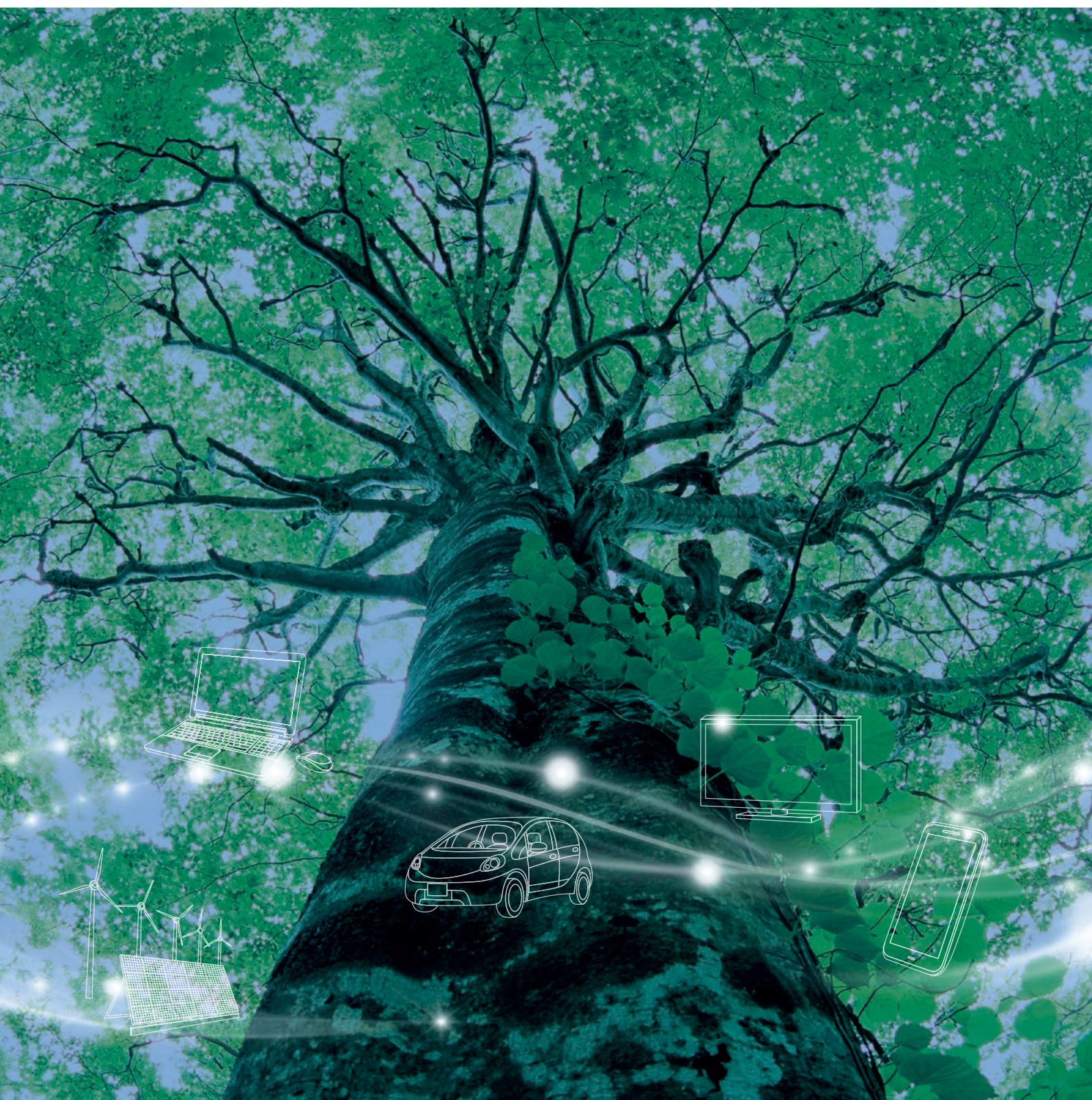


# TDK CSR REPORT 2013

English version





## 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 our 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 CO<sub>2</sub> 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.

Takehiro Kamigama  
President & CEO, TDK Corporation

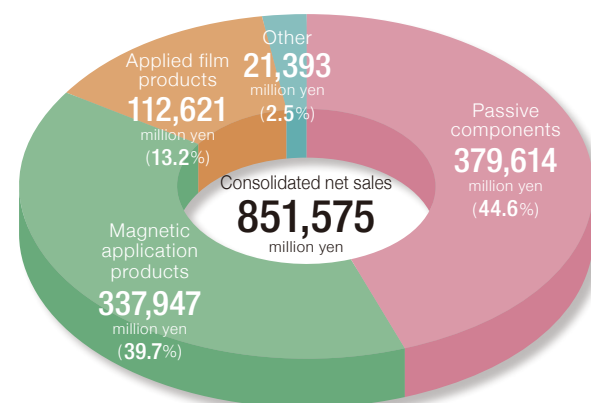


## Business Outline

### Company Profile

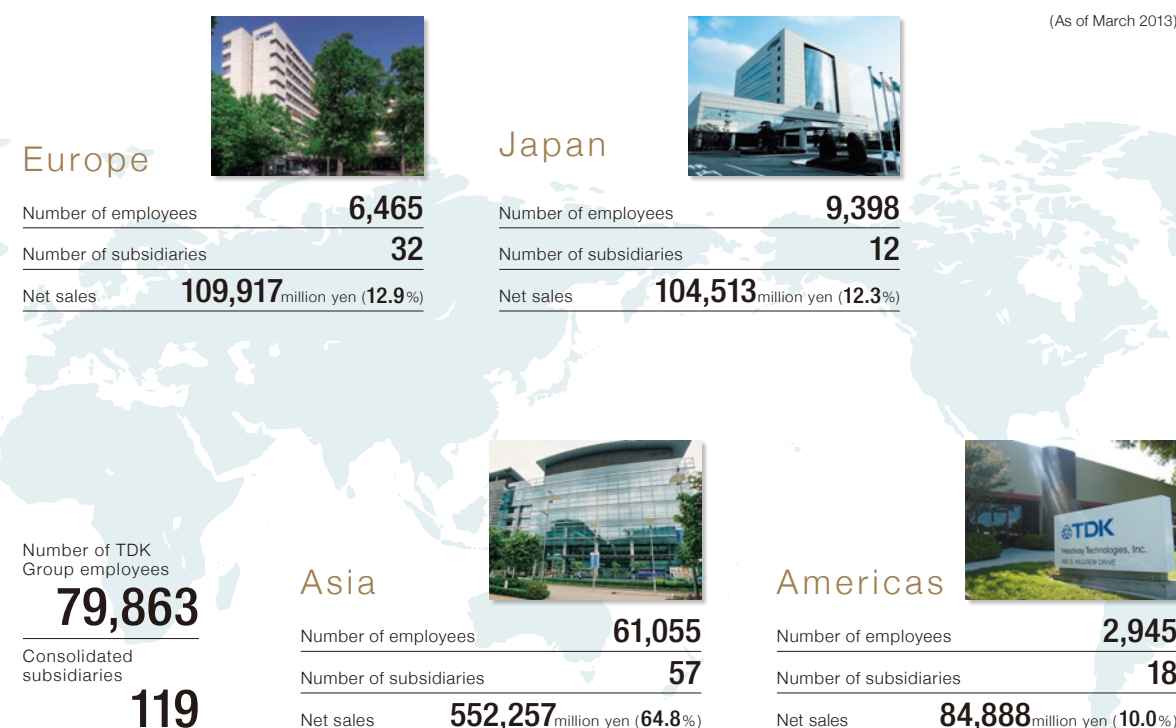
Name : TDK Corporation  
Headquarters : 3-9-1 Shibaura, Minato-ku, Tokyo, Japan  
Established : December 7, 1935  
Capital : ¥32,641,976,312 (as of March 2013)

### FY2013 Net Sales by Product Segment (Composition ratio)



### The TDK Global Network

From TDK's founding in 1935, TDK business has expanded into various countries and regions around the world. The TDK product lineup has also greatly diversified. Remaining an important player on the world stage, TDK aims to keep delivering services and products that fulfill the needs of society.



## 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,"

### 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

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.

### Major Organizational Changes during the Covered Period

None

### Date of the Report's Issue

September, 2013

(Previous issue : September 2012 ; next issue: September 2014 [scheduled])

### 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.

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### — Highlight —

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# 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.

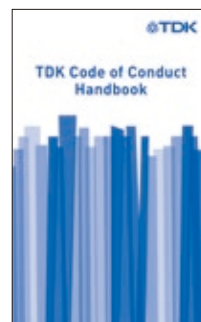
#### Courage

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

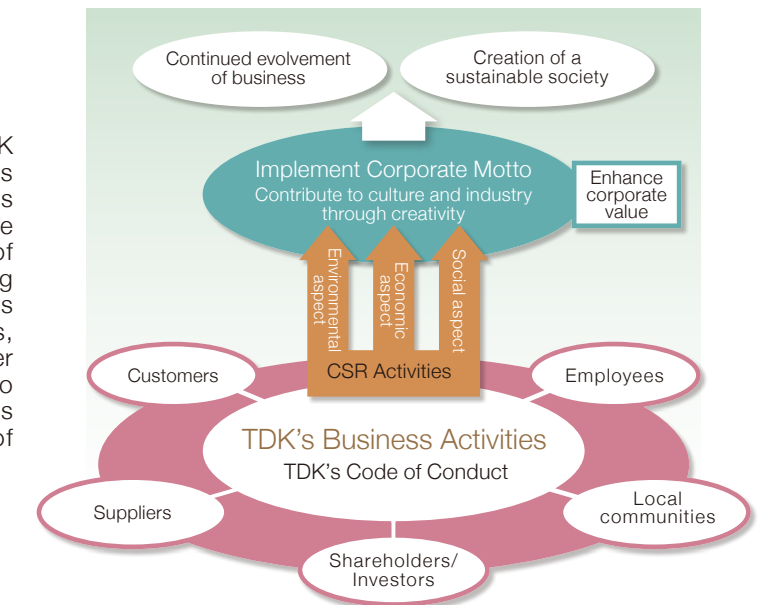
of the TDK Group will autonomously practice the following action guidelines in the course of their daily work:

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.

## 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/](http://www.global.tdk.com/about_tdk/code_of_conduct/)



## 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.

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

## 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 reporting directly to the Board of Directors formulates the basic action policy, and the CSR Promotion Office - as well as all HQ departments, business groups, and TDK sites around the world - work together to put the policy into practice.

### Business Ethics & CSR Committee

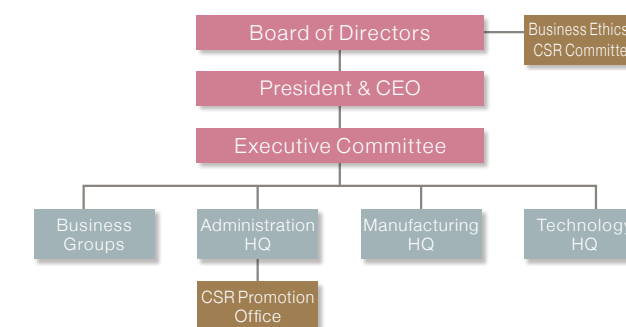
The Business Ethics & CSR Committee reports directly to the Board of Directors. The committee is comprised of the Administration HQ General Manager, and Function Managers from the Corporate Planning Group, Corporate Communications Group, Human Resources Group, General Affairs Group, Legal Group, CSR 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.

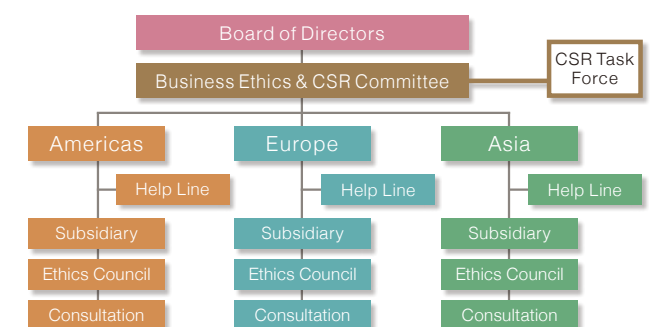
### CSR Promotion Office

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



### CSR Promotion Structure



# 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.

Continued evolvement  
of business

Creation 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

## Resources and energy problems

Resources required by humanity  
in 2030

**2** globes' worth <sup>\*1</sup>

## Economic gap

Percentage of OECD member  
countries where gap increased

**75** % <sup>\*2</sup>

## Poverty

Number of people subsisting on less  
than 1.25 USD per day (as of 2008)

**1.29** billion <sup>\*3</sup>

## Food shortages

Number of people suffering  
from malnutrition

**925** million <sup>\*4</sup>

## Climate change

Sea level rise by 2100

Max. **59** cm <sup>\*5</sup>

## Loss of biodiversity

Global nature loss  
in past 30 years

**-28** % <sup>\*1</sup>

## Water shortage

Number of people without  
enough water in 2025

**2 in 3** <sup>\*6</sup>

References: \*1 WWF "Living Planet Report 2012," \*2 According to OECD Tokyo Center, \*3 According to World Bank, Tokyo Office, \*4 FAO Report "State of Food Insecurity in the World 2010," \*5 IPCC "Fourth Assessment Report" (2007), \*6 UNEP "Global Environment Outlook 4" (2007)

## Overview of FY 2013 Activities and FY 2014 Action Plan

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.

The PDCA cycle is applied to each item based on the action plan, and we continuously strive to improve activities.

Item		FY 2013 Action Plan	FY 2013 Results	FY 2014 Action Plan	
1	Contribution to the world by technology	Contribute to resolving social problems through business activities	<ul style="list-style-type: none"><li>Promote the development of products which contribute toward solving problems in the Mid Term Plan, with special emphasis on "Next-generation Information and Communications" and "Energy-related"</li></ul>	<ul style="list-style-type: none"><li>Realized the mass production of magnets with a greatly reduced use of rare earth materials, and developed a micro DC-DC converter and a wireless power transfer charging system for mobile phones, etc.</li></ul>	<ul style="list-style-type: none"><li>Continue to promote the development of products which contribute toward solving problems in the Mid Term Plan, with special-emphasis on "Next-generation Information and Communications" and "Energy-related"</li></ul>
2	Development of human resources	Innovative craftsmanship training	<ul style="list-style-type: none"><li>Continue the TDK Monozukuri Tradition Seminars</li><li>Conduct the seminars at overseas sites according to team composition</li></ul>	<ul style="list-style-type: none"><li>Conducted TDK Monozukuri Tradition Seminars (12 employees participated in FY 2013)</li></ul>	<ul style="list-style-type: none"><li>Continue the TDK Monozukuri Tradition Seminars</li><li>Conduct the seminars at overseas sites according to team composition</li></ul>
		Development of global human resources	<ul style="list-style-type: none"><li>Continue cross-cultural communication training and IMD seminars</li><li>Continue to bolster the overseas trainee program</li><li>Continue to expand the support for language study programs within a self-development framework</li></ul>	<ul style="list-style-type: none"><li>Conducted cross-cultural communication training and IMD seminars</li><li>Bolstered the overseas trainee program</li><li>Continued and expanded support for language study programs within self-development framework</li></ul>	<ul style="list-style-type: none"><li>Continue cross-cultural communication training and IMD seminars</li><li>Continue to bolster the overseas trainee program</li><li>Continue to expand the support for language study programs within a self-development framework</li></ul>
		Promote diversity	<ul style="list-style-type: none"><li>Continue the implementation of action plans in various departments</li></ul>	<ul style="list-style-type: none"><li>Implemented action plans in various departments</li></ul>	<ul style="list-style-type: none"><li>Continue the implementation of action plans in various departments</li></ul>
		CSR awareness within the company	<ul style="list-style-type: none"><li>Continue to implement e-learning (Japan) and expand the overseas implementation areas</li><li>Continue to enlarge the scope of group training</li></ul>	<ul style="list-style-type: none"><li>Continued to implement e-learning (Japan, China), and prepared to expand the overseas implementation areas</li><li>Continued to broaden coverage of the stratified group training</li><li>Conducted workshops as part of IMD training</li></ul>	<ul style="list-style-type: none"><li>Continue to implement e-learning (Japan, China), and expand the overseas implementation areas (increased the number of sites in China, and extended to Europe and the Americas.)</li><li>Continue to broaden coverage of the stratified group training</li><li>Promote CSR awareness during IMD training</li></ul>
3	Society and environmental considerations in the supply chain	Promote CSR procurement	<ul style="list-style-type: none"><li>Periodically revise CSR check sheets for suppliers and continue to provide guidance</li><li>Expand supplier CSR audits</li></ul>	<ul style="list-style-type: none"><li>Improved and provided guidance for CSR check sheet for suppliers</li><li>Performed supplier CSR audits</li></ul>	<ul style="list-style-type: none"><li>Periodically revise CSR check sheets for suppliers and continue to provide guidance</li><li>Expand supplier CSR audits</li><li>Implement CSR training at employment agencies focusing on labor and human rights</li></ul>
		Handle conflict minerals regulations	<ul style="list-style-type: none"><li>Gather information and assess trends regarding legal regulations for conflict minerals</li><li>Provide a proper response for customer and suppliers</li><li>Establish an internal company framework</li></ul>	<ul style="list-style-type: none"><li>Gathered information and assessed trends regarding legal regulations for conflict minerals</li><li>Provided a proper response for customers and suppliers</li><li>Established an internal company framework</li><li>Established a conflict minerals policy for the TDK Group</li><li>Reviewed the internal framework in light of SEC's final conflict mineral rules</li></ul>	<ul style="list-style-type: none"><li>Continue gathering information and assessing trends regarding interpretation of SEC's final conflict mineral rules</li><li>Continue to provide a proper response for customers and suppliers</li><li>Continue to improve the internal company framework</li></ul>
		CSR based customer relations	<ul style="list-style-type: none"><li>Implement regular TDK CSR "Self Checks" at manufacturing sites and promote ongoing management-level improvement</li><li>Perform internal CSR audits</li><li>Respond to CSR survey and auditing requests from customers in a timely manner</li></ul>	<ul style="list-style-type: none"><li>Implemented regular TDK CSR "Self Checks" at manufacturing sites and promoted management-level improvement, focusing on labor and human rights</li><li>Implemented self-imposed audits by third party organizations (4 sites in China)</li><li>Responded to CSR survey and auditing requests from customers in a timely manner</li></ul>	<ul style="list-style-type: none"><li>Implement regular TDK CSR "Self Checks" at manufacturing sites and promote management level improvement</li><li>Implement self-imposed audits by third party organizations (8 sites in China and other Asian locations)</li><li>Respond to CSR survey and auditing requests from customers in a timely manner</li></ul>
4	Symbiosis with the global environment	Promote environmental activities	<ul style="list-style-type: none"><li>Promote environment-oriented activities based on the TDK Environmental Action 2020</li><li>Work towards achieving carbon neutrality<ul style="list-style-type: none"><li>Reduce CO<sub>2</sub> emissions (environmental load) from manufacturing operations to no more than 1,090,000 t- CO<sub>2</sub></li></ul></li><li>Increase the reduction of CO<sub>2</sub> emissions through products (environmental contributions): establish TDK calculation standards for environmental contributions</li></ul>	<ul style="list-style-type: none"><li>Promoted environment oriented activities based on the TDK Environmental Action 2020</li><li>Worked towards achieving carbon neutrality:<ul style="list-style-type: none"><li>Reduced CO<sub>2</sub> emissions (environmental load) from manufacturing operations: 1,031,000 t- CO<sub>2</sub></li></ul></li><li>Reduction of CO<sub>2</sub> emissions through products (environmental contributions): increased the number of products for which environmental contributions can be quantified (498,000 t- CO<sub>2</sub>)</li></ul>	<ul style="list-style-type: none"><li>Promote environment-oriented activities based on the TDK Environmental Action 2020</li><li>Continue to work towards achieving carbon neutrality:<ul style="list-style-type: none"><li>Reduce CO<sub>2</sub> emissions (environmental load) from manufacturing operations to no more than 1,090,000 t- CO<sub>2</sub></li></ul></li><li>Increase the reduction of CO<sub>2</sub> emissions through products (environmental contributions): implement TDK calculation standards for environmental contributions, and obtain contribution allocation</li></ul>



# 1

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.

Materials  
technology

Process  
technology

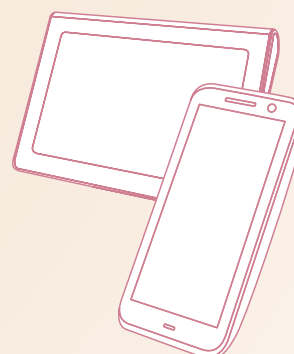
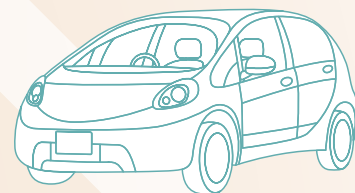
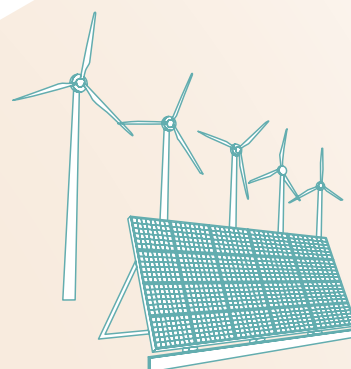
Device &  
module  
technology

Evaluation  
and simulation  
technology

Production  
technology

TDK  
products


Main fields



Core  
technologies

# 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.



**Wind power generation**

**Solar power generation**

**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.


**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, wind power generators, industrial motors, etc.

**HEV EV**


Opening up new possibilities for solving environmental problems

## 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.




**Current sensors**  
Current sensors from TDK are used not only in hybrid electric and electric vehicles, our lineup also comprises products designed for torque control in servo motors, input/output control in switching power supplies, battery management and various other industrial equipment applications.  
【Main applications】  
HEV/EVs, industrial motors, inverters, switching power supplies, etc.




**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.



**Automotive-grade multilayer ceramic chip capacitors**  
Advances such as the realization of a finer structure for the dielectric ceramics 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 (tire pressure monitoring systems), keyless entry systems, various other sensors




**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, enabling hard disk drives that are both smaller and also offer greater storage capacity.  
【Main applications】  
Hard disk drives for PCs, HDD recorders, home servers, data centers, etc.



Towards a flourishing networked society

## Next-generation Information and Communications market

The modern networked society is evolving 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.




**Tablets**

**Smartphones**


**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, computers, HDDs, SSDs, high-speed interfaces, etc.




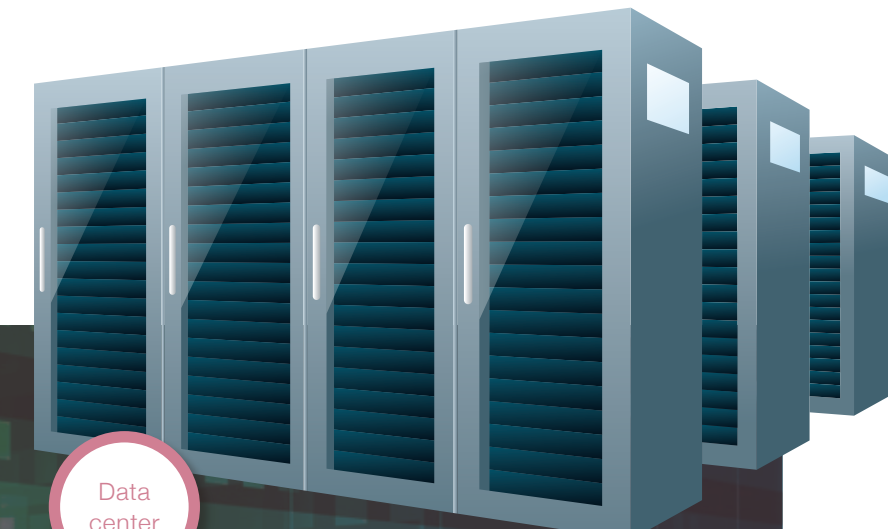
**Wireless power transmission coil**  
These coils are key elements of systems designed to allow wireless battery charging of smartphones and other mobile devices. The use of a proprietary flexible magnetic metal sheet from TDK enables a thinner profile and lighter weight.  
【Main applications】  
Wireless power transmission systems for smartphones, digital cameras, Bluetooth headsets, etc.



**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 capacitors and power inductors. The result is a highly integrated and extremely flat module.  
【Main applications】  
Smartphones, mobile phones, tablet PCs, and other mobile devices



**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

Smartphones

Tablets

Data center





## Setup for Inspiring Technological Innovation

TDK is a business centered on the core of magnetism-related materials technology. Since the development of these materials takes a long time, one cannot hope for significant innovations by means of a setup calling for short-term results. However, it is important to promote efficient development. The key point here is the selection of development themes.

At TDK we have introduced an original stage-gate 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 well as personnel evaluation, in order to cultivate the "human strength" that is essential for business development, at TDK we endeavor to foster an open environment that promotes exchange beyond the limits of each department and specialty 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 Creating Synergies by Pooling the TDK Group's Collective Strength



Dr. Christian Hoffmann  
Senior Chief Researcher,  
Technology & Intellectual  
Properties Strategy Group,  
Technology HQ,  
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 an 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 create 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.

### Comment from Participant in Training for New Employees

### Unique Training for New Employees Stimulates the Imagination

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 were therefore able to experience 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.



Akiko Arai  
Planning Section, Planning  
and Coordination Department,  
Production Engineering Group, TDK

Nobuhiko Karashima  
Process Development Section,  
Advanced Technology Development  
Center, Technology HQ, TDK

Hironori Yoshimura  
MLCC Production Technology Division  
1 Group 3, Ceramic Capacitors  
Business Group, TDK-EPC

# Aiming to Become the World's Most Powerful Technology Development Group

TDK has positioned "contribution to the world by technology" as a key action item under from CSR perspective. Kaoru Matsuoka, General Manager of the Technology HQ, explains the concept as follows, noting that it is closely linked to TDK's corporate motto of "contribute to culture and industry through creativity."

## Revolutionize and challenge through technology

Since our company's initial foundation on the basis of realizing the potential of ferrite, TDK has consistently advanced the progress of magnetics technology, and it still makes up part of the DNA of this company. Evolving further into microfabrication, powder and thin-film formation, sintering, coating, and other advanced processes, we have developed and expanded our core technological competence. As a result, we are able to supply the industry with materials, components, devices, and modules reflecting these core technologies, centered on the Next-generation Information and Communications and Energy-related sectors.

Our Mid Term Plan - adopted in fiscal 2013 - aims to "sharpen TDK's core technologies and contribute to the evolution of new social infrastructures." The motto for our technological development is therefore, "Change the paradigm of technology, challenge and revolutionize!" In other words, we want to change the world through technology.

To take an example, permanent magnets from TDK are used in motors and other similar products. Since it is said

that electric motors account for about 60% of the energy consumed by society as a whole, contributing to the higher efficiency of motors is an area where TDK can make a significant contribution. If higher efficiency can be realized, drastic savings in energy consumption will be the result. Another area where we can make an important difference is in the field of rare earth materials - currently used for the permanent magnets of electric motors. Since these materials are both costly and rare, the protection of scarce resources is an important consideration with regard to their use. TDK is therefore making intense efforts to develop permanent magnets that do not require rare earth materials. Once realized, this will bring about a revolutionary change in the world of permanent magnets. The widespread use of electric motors that combine both low cost and high efficiency will be extremely beneficial in the drive to reduce the load on the environment.

In this way, TDK refuses to think that something is "impossible." Rather, we want to challenge various aspects of established technology, with the aim of bringing about a revolution. As a business that is a public entity and has the responsibility to contribute to society, TDK pursues technology that helps society to evolve in a positive direction. The most important resource that allows us to pursue this aim is "people." This of course applies not only to us, but can be said of all industrial activities. Strengthening human resources is always a key factor. TDK wants to give its junior staff a broad range of opportunities to gather experience and to learn. We therefore implement a strong program of staff rotation. This involves pursuing the initial stages of technology development within the Technology HQ, but then transferring the engineers, alongside his/her project, on to the business groups that operate in the intended field of application. In this way, development can continue in closer proximity to the actual markets. The engineers take responsibility all the way through to mass production in the respective business groups. We believe that this market-oriented approach has the potential to trigger technological revolutions. By fostering staff with a high level of technological knowledge, TDK wants to become the world's most powerful technology development group.

In order to contribute to the evolvement of the social infrastructure, we will hone our core technology skills in the field of magnetics to the utmost, under the motto of "Change the paradigm of technology, challenge and revolutionize!"



Kaoru Matsuoka

Senior Vice President, General Manager of Technology HQ and General Manager of Advanced Technology Development Center of Technology HQ, TDK Corporation



## Contribute to resolving social problems through business activities

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.

### TDK's Research & Development framework

In Japan, the Advanced Technology Development Center within the Technology HQ is pursuing the development of advanced materials technology, process technology, and new devices as a corporate R&D activity. In addition, sector specific products and technologies are being developed through technology development sections within the respective business groups.

On the global stage, TDK promotes research and development in conjunction with major universities in the U.S. and Europe, and we are making increased use of local expertise and technological resources through R&D subsidiaries in various countries. In China, where we intend to strengthen our base and pursue an expansion of activities in future, we are carrying out research related to electronic component materials.

With regard to R&D at consolidated subsidiaries, we are continuing to intensively pursue the development of next-generation HDD heads at Headway Technologies, Inc. in the U.S.

R&D expenses

**53,943** million yen

Percentage of R&D vs. net sales

**6.3%**

### 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.

Number of  
TEMs so far

**4**

Cumulative total of  
participants

**155**

### 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.



Trophy engraved with the TDK name



# 2 Development of human resources

## How Up-and-Coming TDK Leaders from around the World See the Future of TDK

— Finding out what society expects from TDK

When thinking about how to maintain sustainable growth of the TDK Group, the social responsibility aspect is a high-priority consideration.

What does society at large expect from TDK, and how can TDK fulfill its obligations? Future leaders of TDK, coming together from various parts of the globe, engaged in passionate discussions about these topics.



### IMD training participants

- TDK (Thailand) Co., Ltd.  
Amnart BOOTLOR (Thailand)
- TDK Components U.S.A., Inc.  
Belinda LEE (U.S.A.)
- Magnecomp Precision Technology Public Co., Ltd.  
Chamni HAN CHIANG (Thailand)
- TDK-Lambda Malaysia Sdn. Bhd.  
CK TOH (Malaysia)
- TDK-EPC AG & Co. KG  
Dr. Bernhard OSTRICK (Germany)
- EPCOS (Zhuhai FTZ) Co., Ltd.  
Dr. Herbert POELZL (China)
- EPCOS (Anhui)  
Feida Electronics Co., Ltd.  
Frederico KNORR (China)
- TDK Corporation of America  
John GIBSON (U.S.A.)
- TDK Taiwan Corporation Joseph CHAO (Taiwan)
- TCN Shenzhen  
Judy XU (China)
- TEE - Paris branch  
Olivier MAGRO (France)
- TDK (Shanghai) International Trading Co., Ltd.  
Shimmer SHAO (China)
- TDK (Malaysia) Sdn. Bhd.  
Tuan ROHISHAM (Malaysia)
- TDK Singapore (Pte) Ltd.  
Vanessa KNG (Singapore)
- TDK Hong Kong Co., Ltd.  
Vina LAM (Kar Yee LAM) (Hong Kong)
- TDK (Suzhou) Co., Ltd.  
Yu Hong LU (China)
- TDK Taiwan Corporation  
Yung-Hsien YEH (Taiwan)

### 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.

Nikaho 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.

### IMD (International Management Development Seminar)

So far, International Management Development Seminars have been held 16 times since 1997, with the aim of fostering true globalization of TDK's human resources and strengthening transnational ties. Both in terms of production and sales, more than 80% of the TDK Group's activities are located outside of Japan. Overseas markets are the mainstay of the group, and global

cooperation and coordination are essential to our competitiveness. This seminar program comprises lectures and workshops to foster a deeper understanding of corporate ethics, widen the horizons of participants, enhance their awareness of management viewpoints, and bolster mid to long term strategic thinking. The creation of a global human network is

another objective. So far, 247 people from 16 countries have taken part in the program, which has seen participants who have completed the IMD seminar go on to become presidents of overseas affiliates and take other leading posts. This demonstrates its importance for cultivating people who can lead TDK's growth on a global level.

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 management, but rather it 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 anew about this issue and to try and 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.



## 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.

### Customers

Expectations of customers are wide and varied, ranging from labor and safety conditions, respect for human rights and other concerns related to company actions, to environmental issues. In order to respond to these, the company must create innovative products of high quality and supply them at low prices. Close observation of local laws and customs is required when constructing new plants. Creating employment opportunities is also a social responsibility.

By taking a leading role in innovation and in concern for the environment, a business should ideally be seen by customers and consumers to be an innovative company, a green company, and a high-quality company.



### Suppliers

For a supplier, knowing TDK's set of values and requirements is crucial. TDK must have a clearly defined CSR policy, and provide training for suppliers to that effect. Regularly measuring and evaluating the supplier's actions and providing relevant feedback is also expected.

Suppliers can be assumed to expect a win-win relationship where the supplier and TDK are able to grow together with a long-term perspective. A collaborative stance in terms of technology and know-how between TDK and its suppliers in many different business sectors is expected to bring about various new possibilities. These in turn will make it possible to build better partnerships.



### 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 vitalization 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 the company is providing quality employment opportunities to local citizens. 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 social 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 Shimmer SHAO



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 targets. 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 developments 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 know-how. 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 subjects that are the basics of any business, such as accounting, marketing, languages, and logical communication, has become a prerequisite for being recommended for promotion. From an early stage onwards, we want to inspire in our young staff an attitude of continuously absorbing new knowledge and technologies whatever the sector.

Another goal of the revision is related to the role of supervisors and superiors, those who are in charge of other employees. We want to create a corporate climate where superiors are always concerned about the training and growth of the people working under them, purposely providing opportunities for individuals to develop their personality and special skills. To this end, a staff member can, in consultation with superiors, set

down their own "key challenge goals" and work towards them while receiving on-the-job training from superiors. This framework is bound to foster growth in people working in junior positions.

A receptive mind is also vital if one wants to quickly grasp early signs of change in the modern business environment. Watching the world with interest, and in a spirit of positive learning that makes it possible to adapt to change, these are the qualities that we are after.

As the scope of business operations expands and work becomes more specialized, it is often difficult for an individual to grasp the real purpose of his or her role within the overall process. Here it is important that all members of the organization remain constantly aware of the ultimate goal, which is to provide customers with optimal value.

To ensure this, we also aim to improve the quality and volume of internal communications. In an open and refreshing atmosphere, where one can speak one's mind and talk freely and confidently without hesitation, a business can fulfill its mission. We are working towards creating such a workplace, which in turn will surely allow each individual to realize their full potential.



Kiyoshi Yazu  
Senior Manager, Human Resources Group  
Administration HQ, TDK Corporation

## 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 revamp 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 transformations of consciousness had been achieved.

Cumulative total of participants in TDK  
Monozukuri Tradition Seminars

# 81



## 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 care 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.

Employees taking  
child care leave

# 13

Ratio of employees  
returning to former position  
after taking child care leave

# 100%



## 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 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

# 261

Cumulative total of  
participants in IMD seminars

# 247

Cumulative total of participants in  
trainee programs (from and to Japan)

# 11



# 3 Society and environmental considerations in the supply chain

## 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 social situation surrounding conflict minerals

Conflict minerals are mineral resources produced illegally in the Democratic Republic of the Congo and neighboring countries. These mineral resources have become a global issue, because they are a source of funding for armed groups and fuel conflicts and violations of human rights. The US Financial Regulatory Reform Act (Dodd-Frank Act) - enacted in July 2010 to improve accountability and transparency in the financial system - aims to sever the financial sources of armed groups by making it obligatory for listed companies in the United States to declare information on their use of the four minerals\* produced in these regions.

A final rule stipulating the details of the legislation was approved in August 2012, and the Act went into effect in 2013. Thus, in order to fulfill their obligation to disclose information, it has become essential for listed companies in the United States to carry out surveys of their supply chains. For components manufacturers, including TDK,

sincere efforts to respond to the issue of conflict minerals and to disclose information to customers is now an essential condition for the continuation of business.

\*Tin, tantalum, tungsten, and gold

### 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 listening to Ms. Taniguchi's speech

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 the proceeds used to purchase weapons and ammunition. In order to maintain their control of the mining regions, they bring in more weapons and ammunition and enlist child soldiers, 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 fanning the fires 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



Ms. Reiko Taniguchi

Fundraising Coordinator,  
Amnesty International Japan

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/csr/social\\_responsibility/csr02210.htm](http://www.global.tdk.com/csr/social_responsibility/csr02210.htm)

### Congo War

- |           |  |
|-----------|--|
| 1960      | Independence                                 |
| 1965      | Administration of Joseph Mobutu takes power  |
| 1994      | Rwandan Genocide                             |
| 1996-1997 | First Congo War                              |
| 1998-2003 | Second Congo War (the "Great War of Africa") |

Republic of the Congo



# TDK Steadily Evolves CSR Activities with the Aim of Solving Social Problems

In order to tackle social and environment 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 world. 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.



Sachiko Nagahara  
General Manager, CSR Promotion Office,  
Administration HQ, TDK Corporation

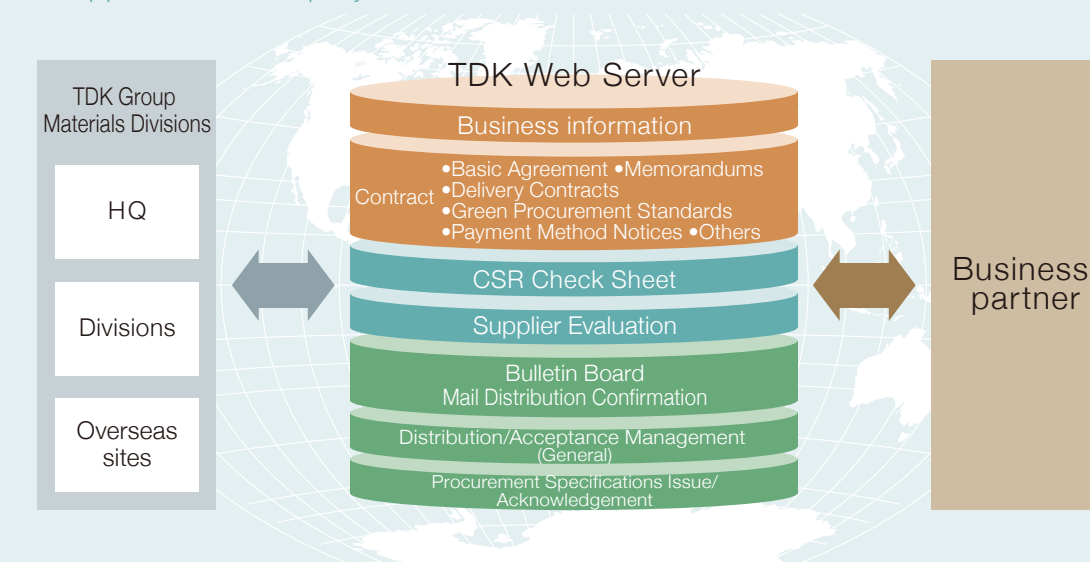
## Promotion of CSR Procurement

CSR procurement, which is also TDK's purchasing policy, is an important issue for our company. Since TDK is a component maker, it is necessary for us not only to promote our own CSR from our standpoint as a supplier, but also to require CSR of our business partners.

For this purpose, we request our business partners to respond to a CSR checklist using the Supplier Partnership System.\*1 The 60 items on the checklist questionnaire which are centered on human rights and

labor, the environment, fair trading and ethics, and information security, are matters that TDK believes to be especially important among those stipulated in the Supply-Chain CSR Deployment Guidebook of the Japan Electronics and Information Technology Industries Association (JEITA). In order to make business partners aware of the issues and increase their motivation to make improvements, after they answer the questions the results are immediately displayed on a monitor.

### Supplier Partnership System



\*1 Supplier Partnership System: A web-based system for consolidated management of business information, distribution of procurement specifications, and shared management of contracts and other data which conventionally were kept as paper-based documents or stored on magnetic media. For both the suppliers and TDK, it leads to the speeding up and increased efficiency of work.

No. of companies replying to CSR  
checklist and reply ratio (global)\*2

3,320 85%

No. of companies replying to CSR  
checklist and reply ratio (Japan)\*2

1,567 98%

\*2 As of end of May 2013

## Response to Conflict Minerals

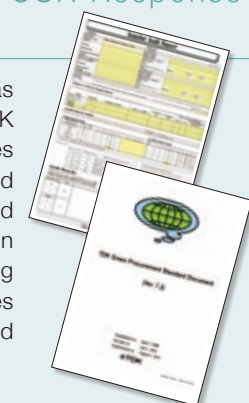
Following the US Securities and Exchange Commission's adoption of a final rule relating to the disclosure of conflict minerals in August 2012, TDK undertook a revision of its setup and compiled a policy on conflict minerals for the TDK Group. TDK also makes efforts to solve common issues in the industry by participating in JEITA's Responsible Minerals Trade Working Group.

Details of the TDK Group's policy on conflict minerals are available on the TDK website:

[http://www.global.tdk.com/csr/social\\_responsibility/csr02210.htm](http://www.global.tdk.com/csr/social_responsibility/csr02210.htm)

## Strengthening the Foundation of CSR Activities and CSR Response to Customers

The TDK CSR Self-Check has been implemented at the TDK Group's main production sites every year since 2009, and on-site CSR audits are carried out at some sites. In China in particular, efforts are being made to strengthen measures against child labor and involuntary labor.



## 4

Symbiosis with the  
global environmentMaking the Environmental  
Contribution of Electronic  
Components More TransparentWhat 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 judicious 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.

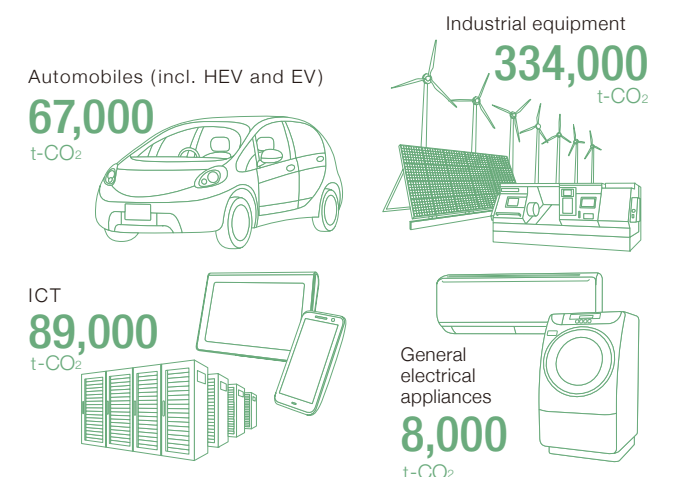
In 2011, TDK formulated the TDK Environmental Action 2020 Plan. Focusing on expanding environmental contribution of products, and on reducing the environmental load connected with the manufacturing process, the ultimate aim is the achievement of carbon neutrality, a first in the electronic components 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 efforts to make the environmental contribution of electronic components more transparent, as described below.

How do TDK products rate with  
regard to environmental contributions?

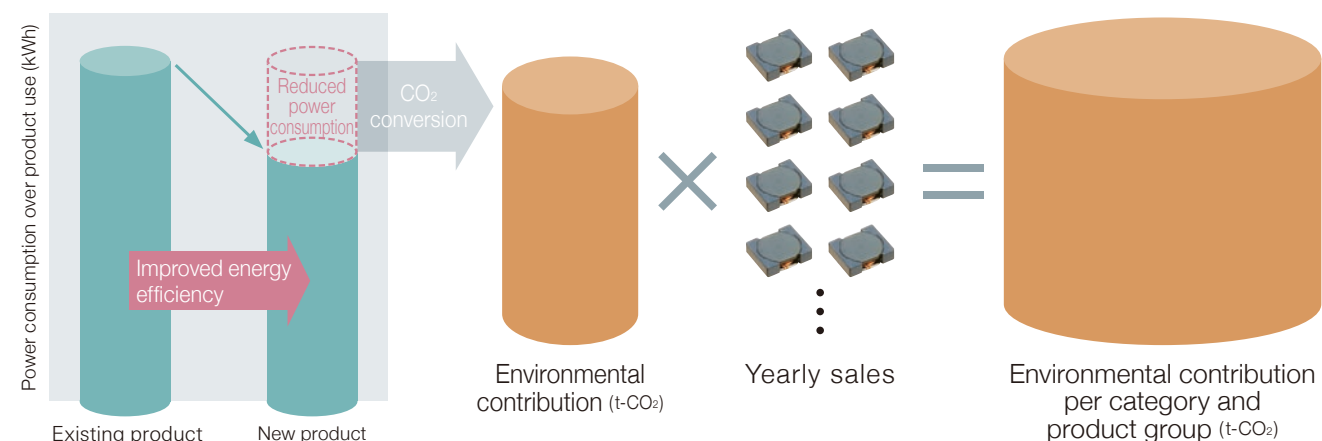
How then do TDK products measure up in terms of environmental contributions? For products where calculation standards have been formulated, the environmental contribution of TDK products in the respective categories is as shown on the right.

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-CO<sub>2</sub> by fiscal 2021.

## Environmental contributions of TDK products (by category)



## Calculation of environmental contributions

Comments  
from  
the ExpertEco innovation driven  
by eco components

Faculty of Environmental  
and Information Studies  
Tokyo City University  
Norihiro Itsubo



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, production of materials and parts, assembly, use, and recycling all the way to decommissioning, became internationally recognized in the 1990s. International standards for its implementation were adopted, and extensive research carried out in worldwide resulted 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 CO<sub>2</sub> 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 CO<sub>2</sub> emissions generated by its industrial activities with the CO<sub>2</sub> reduction provided by its products over their total life cycle. The company is working towards achieving this goal by 2020. In order to keep track of progress made in this area, the

company is establishing a methodology for making the CO<sub>2</sub> reduction gained by the use of eco components more transparent and quantifiable. As an attempt to raise awareness of eco components, this initiative can be expected to become a driving force that will further accelerate environmental innovation in the area of electronic components. The concept of evaluating the environmental contribution of eco components, and the efforts via 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.



# 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 (CO<sub>2</sub> emissions from manufacturing operations) and the environmental contribution (reduction of CO<sub>2</sub> 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



Shinya Yoshihara  
Senior Vice President, General Manager of Manufacturing HQ, TDK Corporation

formidable challenges ahead.

### 【Achieving carbon neutrality—the TDK way】

CO<sub>2</sub> emissions (environmental load) due to manufacturing operations — (minus) reduction of CO<sub>2</sub> emissions through products (environmental contributions) ≤ zero

\* There are many different aspects both to environmental load and environmental contributions, but the TDK Environmental Action 2020 identifies energy source CO<sub>2</sub> reduction as the major element and defines carbon neutrality as a state of balance in this regard.

## 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 our various manufacturing sites around the world. The entire process, from trials to practical implementation, is realized on a global basis. In fiscal 2013, we made use of 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 production in the Philippines, thereby expanding the scale 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 calculation. Using these standards to determine direct as well as indirect environmental contributions, TDK is promoting 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.

## TDK's goal of carbon neutrality

### Reduction of CO<sub>2</sub> emissions (environmental load) from manufacturing operations

#### 【FY 2013 target】

Reduction of CO<sub>2</sub> emissions (environmental load) from manufacturing operations: Less than 1,090 thousand t-CO<sub>2</sub>

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 CO<sub>2</sub> emissions as a major goal in the interest of reducing environmental impact. At manufacturing bases, energy-saving measures are being actively implemented with a target setting of at least 2% reduction in CO<sub>2</sub> emissions as compared to the previous year's total.

### Increase reduction of CO<sub>2</sub> emissions through products (environmental contributions)

#### 【FY 2013 target】

Increase the reduction of CO<sub>2</sub> emissions through products (environmental contributions): Preparation of own standards for calculating environmental contribution volume

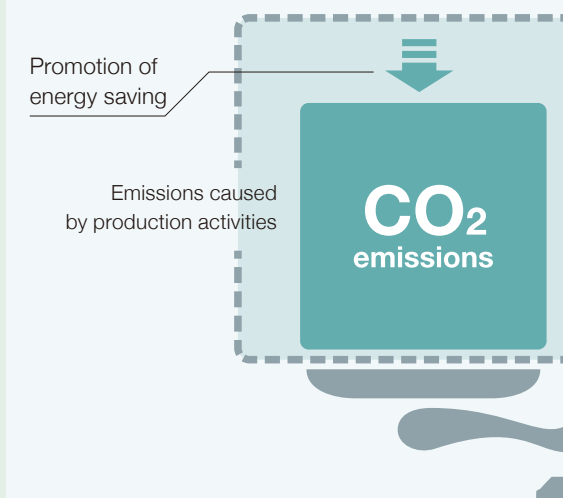
TDK products contribute to a reduction of environmental load not only in energy-related fields but also in various other sectors including industrial equipment, ICT, automobiles, home electric appliances, and more.

The TDK Environmental Action 2020 Plan aims to make the environmental contributions more transparent by establishing standards for the calculation of CO<sub>2</sub> emission reduction quantities.

### CO<sub>2</sub> emissions (environmental load) from manufacturing operations

1,031 thousand t-CO<sub>2</sub>

#### Activities to be downsized



#### Strengthening of existing measures (each plants)

- ☐ Fuel conversion/introduction of high-efficiency equipment
- ☐ Strengthening of management

#### Drastic improvement of methods/processes

- ☐ Optimization of local cleaning
- ☐ Increased furnace efficiency/Use of waste heat

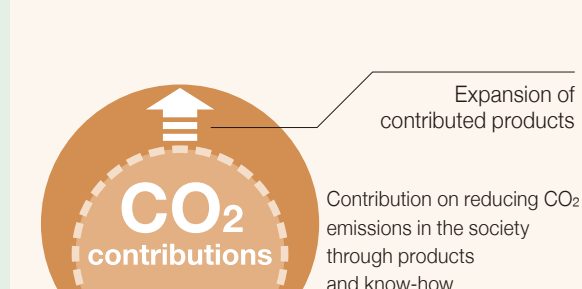
#### Development contributing to reduction of burden

- ☐ Materials enabling low-temperature calcination
- ☐ Smaller size, higher performance

### Reduction of CO<sub>2</sub> emissions through products (environmental contributions)

498 thousand t-CO<sub>2</sub>

#### Activities to be expanded



#### Development contributing to product contribution

- ☐ Materials/parts with no energy loss when used
- ☐ Expanded performance through product unitization/modularization
- ☐ Proposals to customers for better product contribution

#### Quantification/visualization of product contribution

- ☐ Making of rules for calculating product contribution
- ☐ Proposal of common calculating rules for the industry

Note: Promotion through industrial organization activities

# TDK CSR REPORT 2013

English version

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