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Cultivating excellent manufacturing leaders: The TDK Monozukuri Tradition Seminars

What is TDK's spirit?

What is real customer value creativity?

Learning how to boost expertise: Tomio Kato and his trainees help explain more about the TDK Monozukuri Tradition Seminars

Passing down TDK's spirit



Tomio Kato
Monozukuri Tradition Seminars,
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Production Engineering
Center,
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In a room in the TDK training facility in Nikaho City (Akita Prefecture), about a dozen of voices of trainees to the TDK Monozukuri Tradition Seminars can be heard saying, "Stand up!" "Bow!" and "Please go ahead." After the opening remarks were delivered, Tomio Kato stepped forward. He is the trainer of the TDK Monozukuri Tradition Seminars.

"In the last class, I mainly spoke about 'what is at the heart of manufacturing'.

Today, I would like to discuss how we can embody this by presenting a few core principles in manufacturing." Mr. Kato, speaking passionately, had captured the full attention of the trainees in the room.

The TDK Monozukuri Tradition Seminar was started in 2010 in order to cultivate the next generation of company leaders, such as TDK's future executive managers and plant managers. The catalyst for this new training program was top management concerns about the current state of manufacturing, which is, of course, at the core of all TDK business activities.

TDK's Corporate Motto is "Contribute to culture and industry through creativity." Based on our three corporate principles of "vision," "courage," and "trust," TDK has continued to contribute new values through manufacturing while continually striving to keep pace with the rapid changes underway in society. However, as our company continues past its first seventy-five years, employees from our early days, who knew the struggles and methods of manufacturing in those tough times, are not necessarily with us any longer. At the same time, research and manufacturing bases are being rapidly set up overseas. As the TDK group expands globally and we have more employees in TDK companies around the world, we realize that we don't want to lose sight of the spirit of our company.

The situation we find ourselves in now is that even when there are no real changes in the level of employees' technical capabilities and skills, these employees remain serving as

experts in their respectful fields, and we are therefore unable to attain overall optimization in manufacturing. We need to cultivate true "manufacturing leaders" who will be able to develop core principles which will serve as a foundation to support all the various processes involved in manufacturing. It is crucial that we create a place where we can pass on the legacy of TDK's "spirit of manufacturing," and the TDK Monozukuri Tradition Seminars was started with this purpose in mind.

Aiming for overall optimization: "through production"

For the past two years now, the TDK Monozukuri Tradition Seminar has been presented three times a year. Six seminars were held so far. The program, which lasts ten days, encourages trainees to think for themselves and implement things on their own. Run under the concept of learning through self-study, trainees attend lectures on TDK's history and manufacturing activities; they engage in meditation, take plant tours, and engage in on-site trainings. Discussions are held in small groups in which a variety of content is introduced. In addition, trainees have the opportunity for having conversations with top management executives. It is a valuable opportunity for them since it offers experiences not ordinarily available to employees during their normal work. During the seminar, the core lectures are mainly given by Tomio Kato. These lectures on TDK manufacturing are based on his own long and rich career as a technical expert at TDK. This "heart and soul of manufacturing" is approached from various different angles.

For example, one important perspective is that of "through production." In other words, holistic manufacturing. Rather than looking at only one process of manufacturing, it takes into account the entire life of a product from the materials stage and in-house production all the way to the delivery to customers. By looking at the big picture—and linking the plant to the market—consistency in manufacturing becomes a core principle around which manufacturing is implemented, and this can lead to greater optimization in management as well as manufacturing reforms and improvements.

Manufacturing "from the point of view of the products"



Masayuki Yamazaki
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Because my approach to manufacturing is based on years of experience, I have myself wondered if it's right or not. Taking part in the Monozukuri Tradition Seminar with Tomio Kato, I realized that my thoughts up till now about manufacturing were not off base and this gave me a feeling of great confidence.

The most important thing I became aware of during the seminar was to approach things from the perspective of the products. When Mr. Kato made a plant visit to the Shizuoka Plant, he said watching the packing process, "Aren't you all hurting inside? I feel pain since the products say they are in pain!" When packaging the product, the work called for pushing down lightly on the top of the product to enable it to fit inside the box. No one imagined that it could be hurting the product, but Mr. Kato's message was that we must always work keeping in mind the perspective of products.

We are currently trying to apply some of the key concepts learned from the seminar in order to recapture our position as the world's number one ferrite magnet manufacturer. In order to realize timely supply of our products with necessary quantity and high quality at a low price, it is necessary to implement the "through production" in other words, holistic manufacturing. In the "through production" line, all the manufacturing processes, from materials phase to shipping phase, are to be integrated into one process flow and realize maximum "output (sales)" with shortest lead times using minimum "input (materials, equipments, staff, energy, etc.)". With maximizing the throughput, we aim at providing the customer with the highest level QCDS (quality, cost, delivery, and service).

This expanded point of view will ensure a more thorough implementation of the ideals that "quality comes first" and "customer orientation." This perspective goes beyond just thinking about things from the manufacturing angle, but rather seeks to ask questions about the kinds of products that

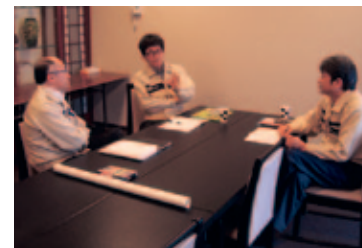
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The TDK Monozukuri Tradition Seminars



To help form the character of a leader, one part of the training is sitting in meditation



Practical training on site



Group discussion

Tomio Kato's journals
already number over
ten volumes



TDK's President attending a debriefing meeting on the last day of seminar

customers will truly look for and will enable us to continuously keep aiming to offer better products. "Not to merely state the obvious," says Mr. Kato, "but it is crucial that we don't just think about the results we want to achieve but rather we have to introduce the principles of thinking and behavior in to our manufacturing process.

Being capable of changing one's perspective and

changing one's thinking is crucial. No matter how advanced our technologies become, if we have a rigid way of thinking, we will never be able to solve problems. For example, sometimes we have to think outside the constraints of labor or costs. Alternatively, sometimes we have to think beyond the perspective of manufacturing and try to re-think things from the point of view of things or products. By doing this, we might realize that the manufacturing process, about which we had neglected, is actually causing a negative impact to the products. By making radical changes in the way we approach issues, we can make new discoveries that will lead to improvements in manufacturing quality.

Much of the content for these lectures on manufacturing has come from Mr. Kato's own journals. Mr. Kato, during the course of his career, kept a diligent record of things he noticed or learned on the job, and Mr. Kato urges his trainees to also keep a journal where they can jot down their thoughts about their work or things they learned at lectures. He recommends to all trainees that rereading the notes later will be a valuable experience for them.

that our ways of thinking may not be understood. However, the trainees were extremely attentive to the lectures and were very proactive in applying what they learned about traditional TDK manufacturing to their worksites. I could see progress in both the employees as well as in the plants and this was truly wonderful to see." Local plant employees attended the 5th term seminar and practical on-site training held in Malaysia.

Mr. Kato said that he wants to accelerate his continued contribution to human resource development in the Company so that TDK can become a truly competitive company which can generate new value in society by not only taking the direct customers into consideration, but also keeping the

end product consumers in mind. "And, it won't be me that will allow us to do this but each of the trainees who I hope will use the knowledge they learned in the seminar, become manufacturing leaders in their own right, and pass it down to the younger generation," said Mr. Kato.

It is the spirit of manufacturing that allows TDK to stand as "a company that is trusted by society." Our success in this is due to both our ability to evolve with the times while we recognize the traditions that have nurtured our company this far and pass them on into the future.

I want to convey what
I learned to the workplace



Cui Zhenshu
Manager,
WET Manufacturing
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Dongguan Changan
Huanan Electronics

Participating in the seminar, I was able to understand the importance of holistic manufacturing. I want to work hard without fear of failure as part of the TDK team, to achieve the goals of holistic manufacturing. To do this, we will all need to work together using our collective wisdom and strengths, I think. In the workplace already we are seeing the results of holistic manufacturing in terms of improved productivity, yield, and lead times.

I want to take what I learned in the seminar and help spread the ideas throughout the workplace to help all employees come together under the same aims and goals. I think this will be my role as someone who participated in the seminar to work toward these goals which will be a happy win-win for everyone—including our customers, consumers, as well as for us working at Dongguan Changan Huanan Electronics Factory.

TDK Monozukuri Tradition Seminar, held at Dongguan Changan Huanan Electronics Factory (July 2011)



The evolution of TDK manufacturing

Rather than focusing on individual employees, another theme of the seminar is to create a team made up of a broad range of manufacturing leaders from all the different areas of manufacturing, such as sales, development, design, manufacturing, production control, quality assurance, and manufacturing technologies to try and bring about a complete reformation in manufacturing. Based on the concepts of "through production" whereby manufacturing is approached from a holistic perspective that creates value from the point of view of the customer, the seminar will result in improvements to the entire manufacturing process, which will incorporate efforts from employees from a variety of departments.

So far, the TDK Monozukuri Tradition Seminar has seen 69 employees participating in 19 groups. The 4th term seminar, held at the Dongguan Changan Huanan Electronics Factory in July 2011, was the first seminar to be held outside of Japan. Mr. Kato described feeling slightly worried when he first learned the course would be held outside of Japan, saying "Because of the differences in culture, at first I worried

2012 CSR Activities Report

In order to strength the development of "self-sustained human resources" which is the objective of the human resources development, TDK has been carrying out a variety of human resource development programs.

As part of the company's human resource development policy, the company has so far organized IMD (International Management Development) seminars and cross-cultural communication trainings.

The overseas trainee programs are aimed at younger employees. TDK plans to increase the number of participants in Japan and overseas by focuses on the following:

- 1) to gain a better understanding of different cultures and to make use of the gained knowledge
- 2) to gain ability to engage in global business
- 3) to establish human network

In addition, a continued effort is being made to increase CSR-consciousness in-house through training courses targeting employees at different levels in their careers, group training, and e-learning, with the aim of putting into practice CSR activities in the TDK day-to-day operations of each and every employee.

Comments
from
the Expert

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TDK President Takehiro Kamigama has passionately spoken about how TDK can contribute to society through the creation of new and highly-unique materials and components. TDK, a company that came into being as the world's first business venture to sell ferrite, is a company with unique manufacturing traditions. I think it is very important that this seminar has been started to teach younger employees about the traditions of the company, and I think this seminar will surely come to bear fruit in many ways. I was also impressed by TDK's Corporate Principles of "vision," "courage," and "trust." Creative originality requires having a vision. Courage to challenge and trust coworkers is vital to achieve a vision. Often one finds that corporate principles are decorative phrases that only gather dust. In contrast, TDK's principles are those that create a vision or culture and are utilized in the company's everyday research and development. This was clear by reading TDK's CSR reports, where it was apparent that at TDK an independent and vigorous corporate culture actually serves to support researchers in their pursuit of perhaps unattainable dreams or to help promote various departments working together in development. I expect the Company to foster and develop their human resources, both in Japan and overseas, as a leading global corporation that values its unique corporate culture of manufacturing.