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## 1. Group & Company Profile

### 1.1. Group Profile

TDK Group, headquartered in Tokyo, Japan, is a world-renowned brand in the electronics industry, which has been holding a leading position in electronic raw materials and components. Its products are widely used in information, communication, home appliances and consumer electronics.

With more than 250 business locations in more than 30 countries and regions around the world and approximately 103,000 employees, TDK's sales in fiscal year 2023 totaled \$16.1 billion.

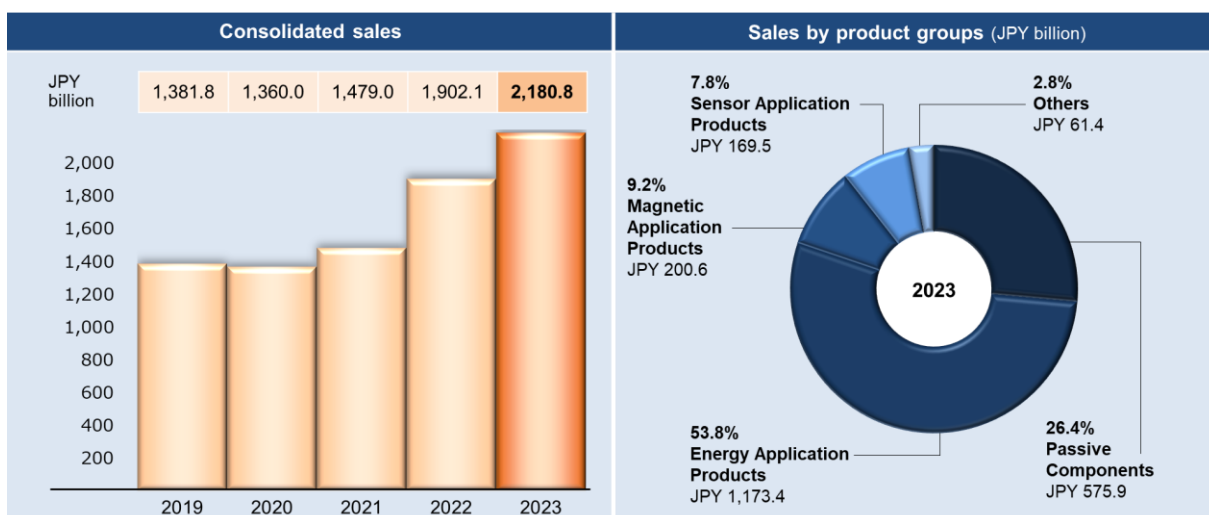


Figure 1-1 Group Sales Profile

### 1.2. Company Profile

#### 1.2.1. Company Overview

Located in Xiamen, Fujian Province, China, TDK (Xiamen) Electronics Co., Ltd. is part of the Aluminum and Film Capacitor Division of the TDK Electronics Group.

The company employs approximately 450 people and occupies an area of 33,800 square meters, and is dedicated in developing and manufacturing aluminum electrolytic capacitors.

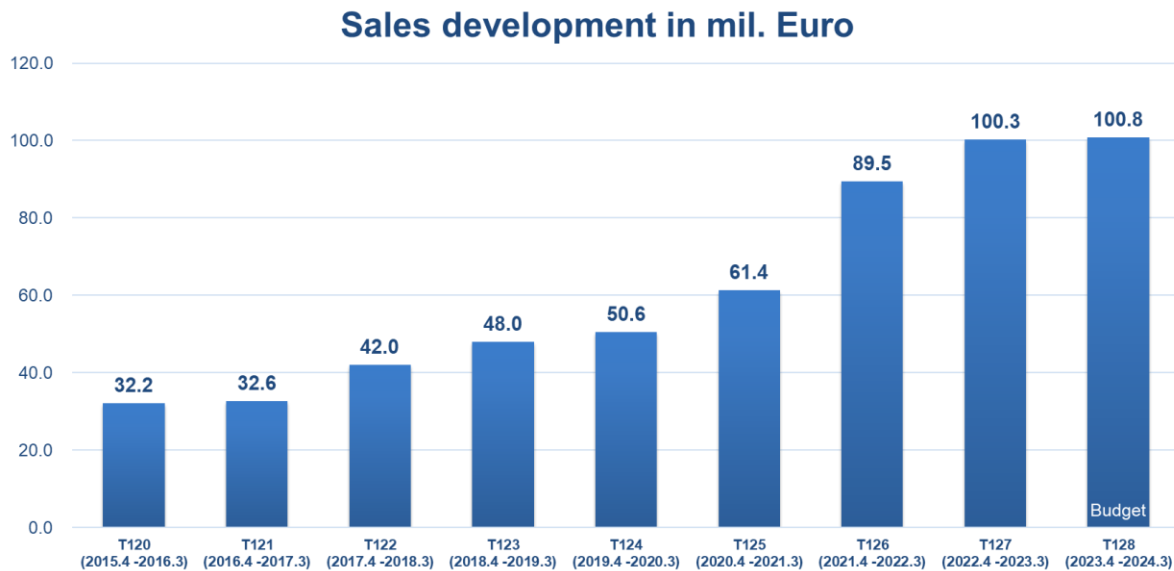


Figure 1-2 Trend of Company Sales

### 1.2.2. Production Process

The main raw materials of the products are aluminum foil and electrolyte, and the production process mainly consists of slitting → winding → impregnation → assembling & curling → sleeving → aging & visual inspection & packaging → warehousing.

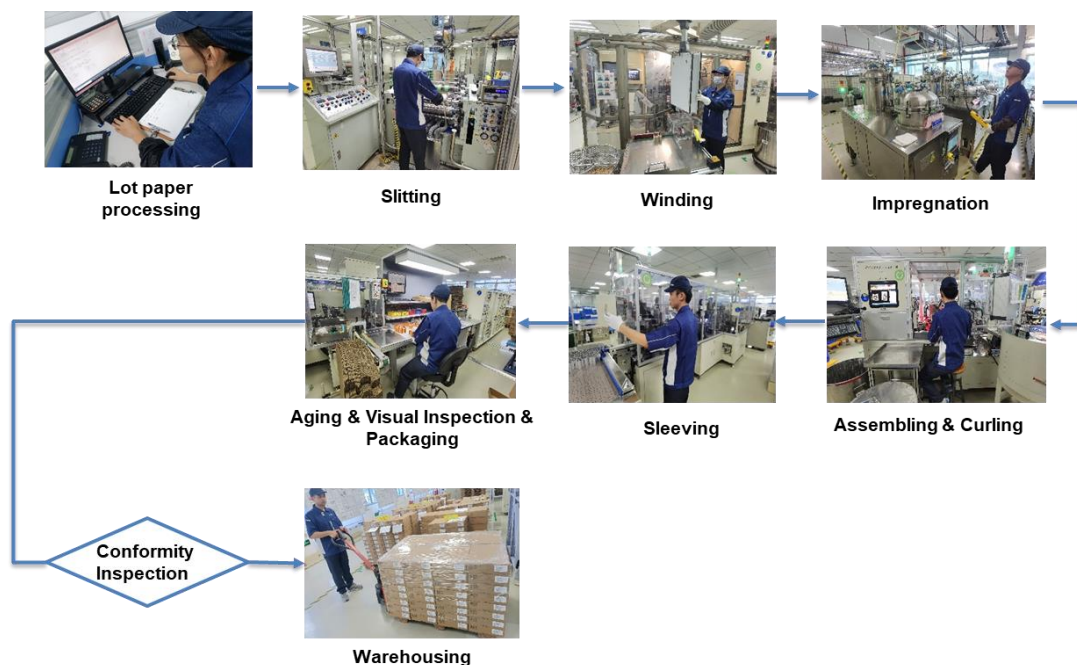


Figure 1-3 Production Process Flow

### 1.2.3. Equipment & Products

Our products can be categorized into Screw Terminal (or ST) and Snap-In (or SI) according to the type of mounting. As of September 2023, the total number of equipment is 263, therein 250 are used for production.

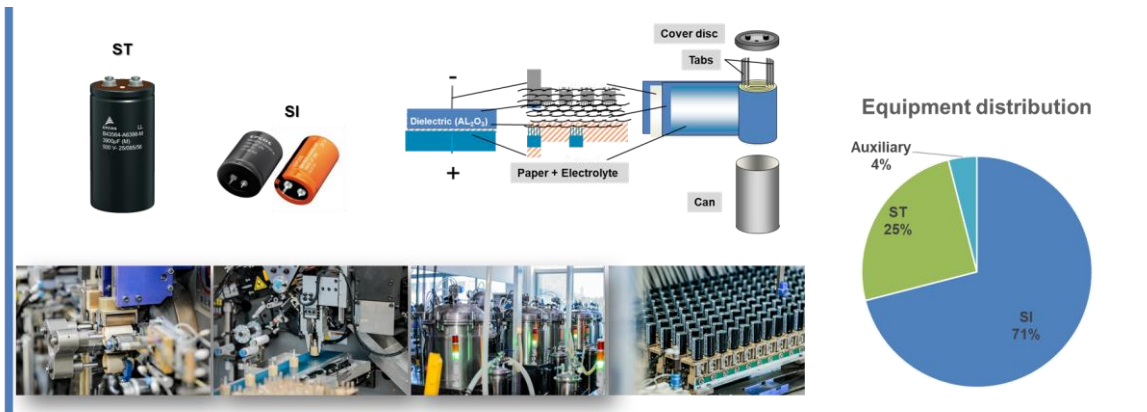


Figure 1-4 Equipment and Products

### 1.2.4. Company Organization

The company launched TPM activity in Aug. 2018 and officially established TPM department on Oct. 2019, under the direct supervision of plant CEO.

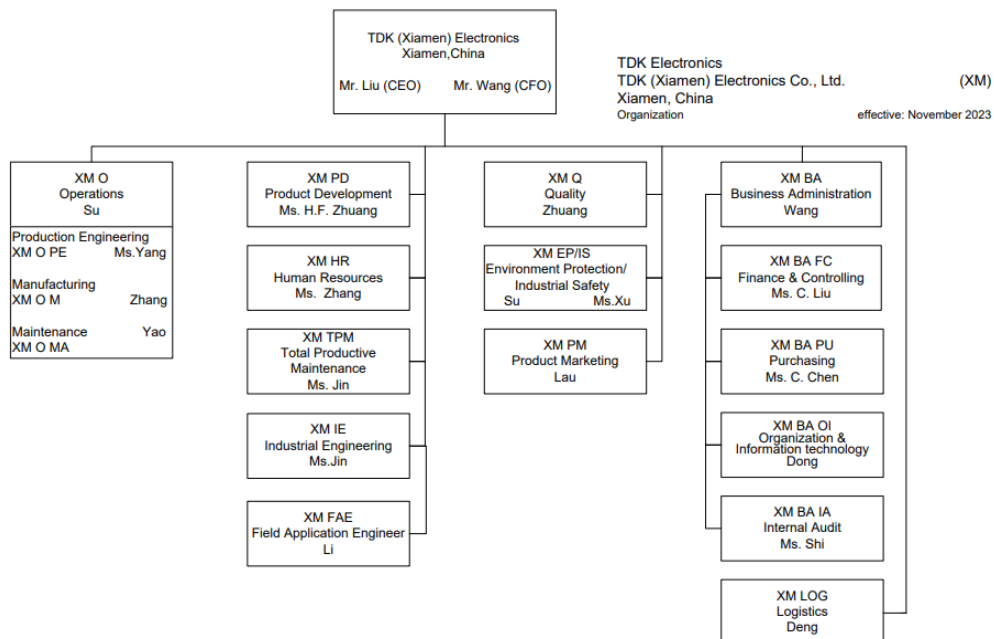


Figure 1-5 Company Organization Structure

### 1.2.5. Employee Profile

As of September 2023, the total number of company employees was 451, of which 250 were frontline workers with an average of 7 years of service. Employees are relatively stable, with the turnover rate basically remaining at a level of around 2%.

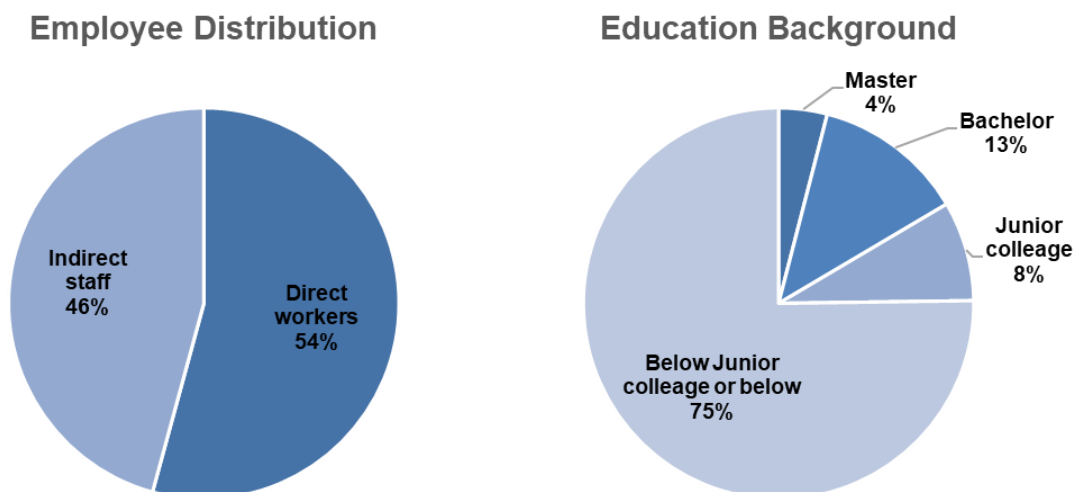


Figure 1-6 Company Employee profile

## 2. TPM Promotion History

TDK (Xiamen) Electronics Co., Ltd. was a state-run company in before, and its management was more experience-based and lacked systematic support, resulting in problems such as improvement activities being disconnected from the overall objectives of the company and the group, low participation of people in Kaizen activities, and difficult to maintain the results of improvements.

In 2018, TEG XM started the TPM journey. We hope that through the introduction of TPM, we can improve the ability and awareness of our personnel, construct a preventive management system aiming at 0 loss, and support the realization of the vision of the company. After 5 years of efforts, TEG XM has completed 4 phases of TPM activities: preparation, kick-off, system pilot, and system rollout.

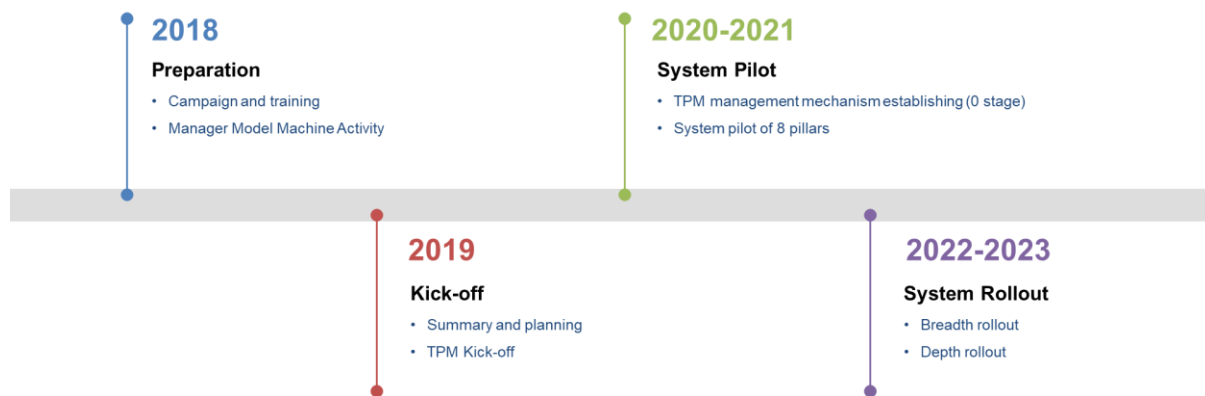


Figure 2-1 Roadmap of TPM activities

## 2.1. Preparation phase (2018)

In the preparation stage, we selected 4 oldest equipment to carry out a year-long Manager Model Machine (MMM) activity, realized significant improvement in the status and performance of the model machines, and established confidence and laid the foundation for the comprehensive kick-off of TPM activities.

## 2.2. Kick-off Phase (2019)

After the Manager Model Machine activity, we summarized the experience and made a master plan for TPM implementation on the basis of company vision and strategy. In November 2019, we officially held the TPM Kick-off ceremony with participation of all employees and top management of the company and the group.

## 2.3. System pilot phase (2020 - 2021)

After the official kick-off of TPM, the 8 pillars confirmed their vision, mission and established management mode based on company vision and strategy, and completed pilot of system building and loss eliminating within their selected model area.

## 2.4. System rollout (2022 - 2023)

Based on the success of the pilot, the 8 pillars established rollout plan and gradually rollout the system to more than 80% of the equipment and areas. In the process, each pillar developed a group of system experts and Kaizen experts, and gradually integrating TPM activities with department's daily work and management.

### 3. TPM Achievements

#### 3.1. Tangible result

After 5 years of TPM implementation, the company has achieved significant performance improvements in efficiency, quality, delivery, and safety.

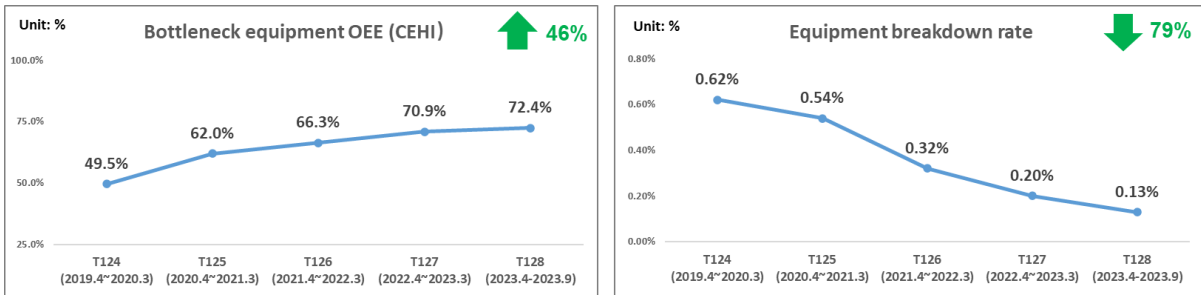


Figure 3-1 Results of TPM Activities in Efficiency (P)

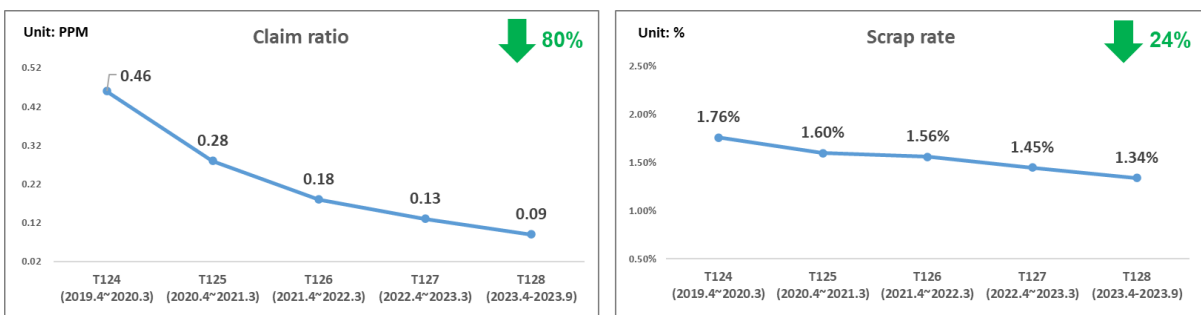


Figure 3-2 Results of TPM Activities in Quality (Q)

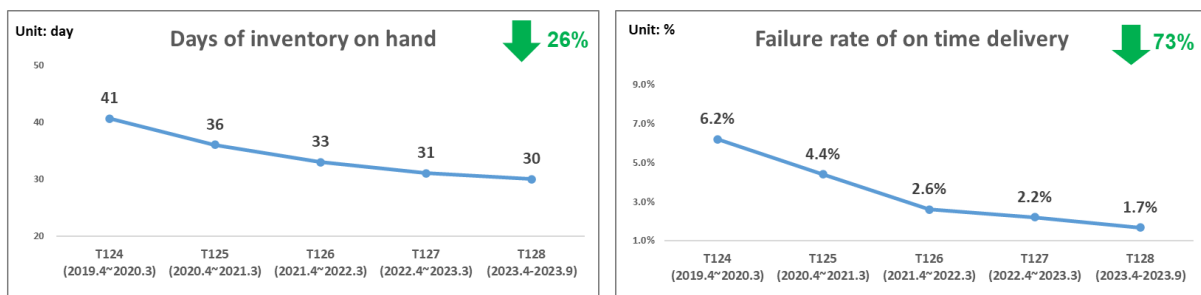


Figure 3-3 Results of TPM Activities in Delivery (D)

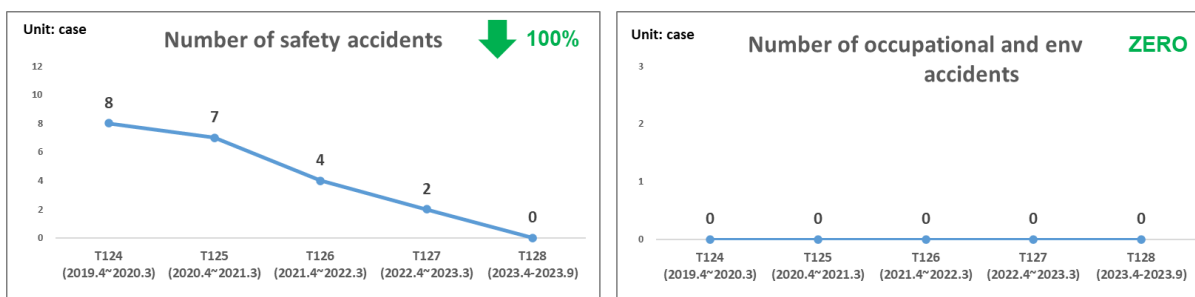


Figure 3-4 Results of TPM Activities in Safety, Health and Environment (SHE)

### 3.2. Intangible results

In addition to the performance indicators, TPM activities have also brought about significant changes in People. With the improvement of employee competence, more and more people are involved in Kaizen activities, and the number of improvement projects and the number of employee suggestions have achieved significant growth.

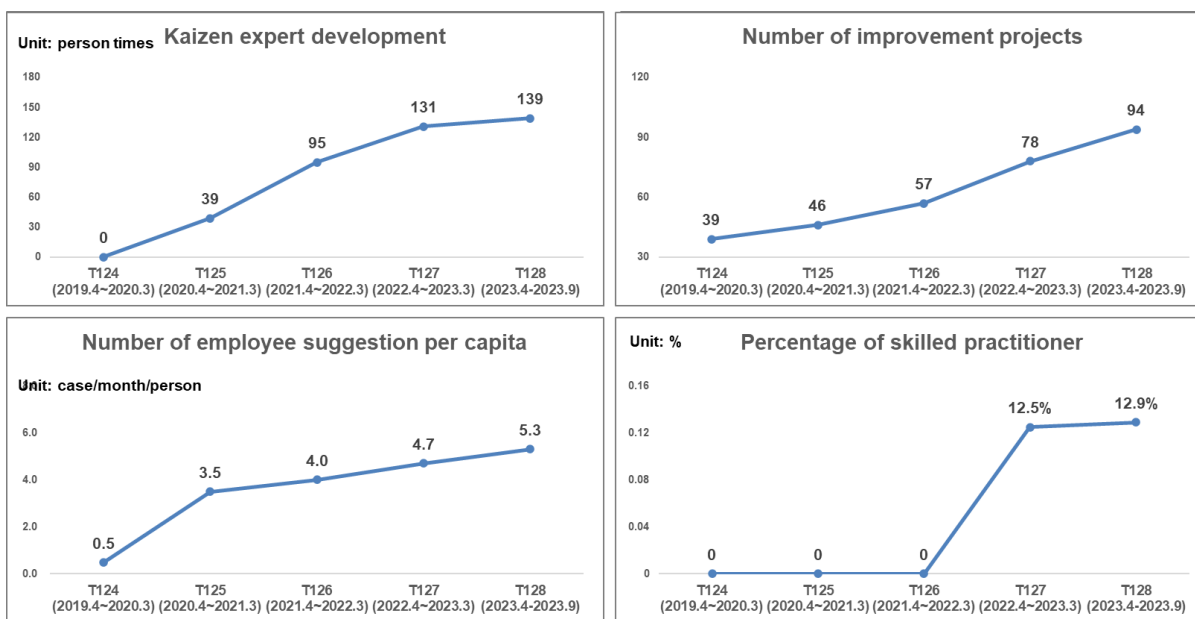


Figure 3-5 Results of TPM activities in Morale (M)

## 4. Keys to Success

TPM is a journey of change, and we have experienced a variety of challenges in the process of promoting it. We strongly believe that the following 4 factors are the key for the success of TPM implementation:



- ✧ **Top management's attention and participation:** The attention and participation of the company's top management is a decisive factor for the success of TPM, which determines whether TPM is pushed in the right direction and is the source of all the momentum of TPM activities.
- ✧ **Systematic promotion method:** The promotion of TPM is a systematic work, which needs to be carried out with the help of a professional consultant, combined with the actual situation of the company, and along the clear methods and steps to carry out the activities in an organized manner.
- ✧ **Integration with daily work:** TPM is like a long-distance running, in order to persist in the long run, it is necessary to closely link the content of TPM with the daily work of each department.
- ✧ **Enthusiasm of personnel:** the awareness and ability of personnel determine whether TPM activities can be carried out in a sustainable way. In the process of activities, it is necessary to continuously improve the sense of achievement, sense of engagement and enthusiasm of personnel to participate in activities.