



Members of Section-2, Production Dep, Mie Plant

Mie Plant's Initiatives to Improve Its On-Site Capabilities

Creating and Passing On *Monozukuri* Culture Through 5S Activities

The Mie Plant is a core production plant engaged in manufacturing cutting-edge chemicals products, including polymer additives. It also provides technological support to ADEKA's overseas bases.

In order to gain the trust of customers amidst the increasing globalization of the business, it is most important to ensure accurate *monozukuri* (manufacturing) without mistakes, as well as proper compliance with the "fundamentals" of the manufacturing industry, which is to provide a stable supply of products with consistent quality in a safe manner, following a fixed set of procedures.

It is vital to raise the level of employees' motivation in order to keep up with the implementation of 5S activities, and elevate these to the level of a "*monozukuri* culture" that cannot be replicated by other companies. At the same time, management is also required to put in even more creative effort than before.

5S Activities

5S activities are initiatives for improving work processes, based on five strategies that begin with S—*Seiri* (sorting), *Seiton* (straightening), *Seiso* (sanitizing), *Seiketsu* (standardizing), and *Shitsuke* (sustaining). Activities include discarding unwanted items; ensuring that shared objects and information can be accessed easily by all; diligently carrying out regular cleaning and inspection; maintaining organized, neat, and clean conditions; and maintaining the above 4S and complying with workplace rules and work procedures.



Aiming for "*Monozukuri* Without Mistakes" that Makes Customers Happy Through the 5S Activities

The Mie Plant has been implementing MCFS (Mie Continuous Five S) -5G activities since fiscal 2011. MCFS-5G activities aim to achieve the thorough implementation of the 5G (five ways of developing the production site), in order to bring about the four areas of safety that ADEKA has set forth as a company-wide policy—occupational safety, environmental safety, equipment safety, and quality safety.

The Mie Plant has been implementing 5S activities continuously from early on since the plant commenced operations, and has achieved improvements through activities such as TPM and MPI-200 (Mie Plant Innovation, aimed at improving productivity by 200%).

As new activities aimed at revitalizing the initiative have not been put in place since the MPI-200 activities implemented up till fiscal 2008, and as many employees from the baby-boomer generation responsible for "cultural creation" at the production sites were beginning to leave the plant, Mie Plant began to initiate various efforts aimed at creation and passing down *monozukuri* culture through the lively revival of 5S activities as a fundamental strategy for improving the corporate value generated by a production plant.



ADEKA Mie Plant

As a production base for stabilizers, additives, and specialty plasticizers used for polymers, the Mie Plant of ADEKA Argus Chemical Co., Ltd. began operating in the suburbs of Kuwana, Mie Prefecture in 1965. After the merger in 1990 and the change of the company name in 2006, it changed its name to ADEKA Mie Plant. The plant plays an important role by supplying various high-end resin additives and Information media materials used in automobile parts and construction materials.

Certification Acquired
ISO 9002 (1993), ISO 9001 (2002), OHSAS 18001 (2001)
TPM Awards Received
TPM Excellence Category II (1989), TPM Excellence Category I (1995)

5G(Five ways of developing the GEMBA, "production site")

1. Creating a site with no accidents or disasters
2. Creating a site that does not generate pollution
3. Creating a site that does not produce defective or inferior products
4. Creating a site where work processes are not suspended
5. Creating a site that can increase the plant's contribution margin

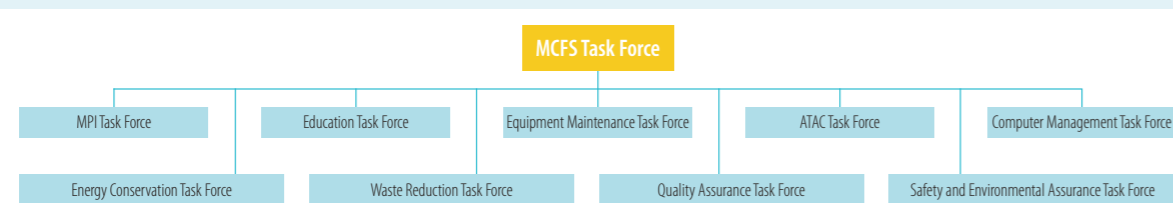
“Handmade Reform” That Harnesses the “Implicit Knowledge” of Experienced Employees

A characteristic of the MCFS-5G activities is that they do not rely on assistance from experts such as consultants, but rather, are implemented through a “handmade reform” that focuses on mid-level and expert employees who have developed “implicit knowledge” over their years of work and experience of improvement activities at the Mie Plant, including 5S.

It is essential to ensure a combination of “top-down” and “bottom-up”

management in activities such as 5S, which call for an awareness of various matters at the work site. The implementation of “handmade reform” can have the effect of nurturing positive ideas among employees, including young employees, of independently creating a workplace that customers and others recognize as being “characteristically Mie Plant,” and of aiming to be the best at something once you decide to do it.

“Handmade” MCFS-5G Activity Promotion System



The MCFS Task Force coordinates the nine task forces and subcommittees, and serves as the “pilot” for guiding employees in MCFS-5G activities. The monthly joint meeting is attended by the respective chairpersons of the task forces and subcommittees, as well as plant managers, general managers, and production managers. During the meeting, attendees verify the progress status of the activities and discuss improvement measures for problems. All members conduct cross-divisional inspections simultaneously, and communication is carried out smoothly across the various organizations. By doing so, employees are stimulated and inspired by the initiatives undertaken by other departments, and this in turn drives them to make improvements to their own activities.



Publication of the MCFS Newsletter



Each work process in the production divisions can only be handled by employees who have been certified as having passed the work certification standards

Passing Down Plant Revitalization Activities as a “Reliable Plant”

The improvement activities that the Mie Plant has implemented to date have been highly appraised by the customers.

In fiscal 2013, it underwent six cases of plant quality audits, and the production sites, including production processes and filling processes, were inspected by customers. As a result, the Mie Plant received praise for being a “reliable production plant,” based on its initiatives to create safe work sites and achieve high-quality *monozukuri* through its 5S activities and MCFS-5G activities.

Going forward, it is important for ADEKA Group companies within and outside Japan to stand united and promote activities in order to improve the degree of customer satisfaction. The Mie Plant will also continue to promote understanding of 5S activities and MCFS-5G activities through actively receiving trainee employees from Group companies overseas; and through communication with the work process representatives, share knowhow within the Group and pass down plant revitalization activities.



Sharing Mie Plant's knowhow with Group companies overseas



Tools that have been sorted (*seiri*) and straightened out (*seiton*)

“Be the best at anything you do.”

Production Divisions Receive Awards at the ADEKA-wide Presentation Seminar for Case Studies of Improvements Achieved

In order to supply products that can provide even greater value to society, win the trust of customers, and overcome intense competition, it is important to manage work sites by picking up even the smallest ideas and proposals on-site without fail.

ADEKA takes a proactive stance toward safety, putting in place initiatives such as the Presentation Seminar for Case Studies of Improvements Achieved (July) and the Presentation Seminar for Case Studies of Improvements Achieved in the “Four Areas of Safety” (December) held every year for all offices, including overseas bases. In fiscal 2013, Production Dep, Section Four of the Mie Plant was awarded the Excellence Award in the Presentation Seminar for Case Studies of Improvements Achieved, while Section Two received the Excellence Award in the Presentation Seminar for Case Studies of Improvements Achieved in the “Four

Areas of Safety.” The steady progress of work revitalization activities carried out at Mie Plant, including MCFS-5G activities, are beginning to show results.



Model area that has been kept sanitary

10th Presentation Seminar for Case Studies of Improvements Achieved in the “Four Areas of Safety” Case Studies that Received the Excellence Award

Taking on the slogan of “Reborn Section Two,” all members of Production Dep, Section Two took up the challenge of implementing improvements in a wide range of areas, based on new ideas that have never been tried before.

As a result of improvement initiatives that placed focus on enhancing security capability, such as capturing new educational information including safety and quality improvement “Know-Why” through voluntary maintenance activities, as well as training to deal with the leakage of hazardous substances, on DVD and using it in educational activities, the Division succeeded in maintaining a level of zero accidents and disasters in all four areas of safety.

With regard to activities pertaining to the *seiso* (sanitary) aspect of the 5S activities, the Division took top place for the second time running in the 5S Competition held by Mie Plant. This success was achieved by upgrading equipment and reviewing cleaning methods for model areas that have aged, and where it had become difficult

to recover residues. The results of these activities were highly appraised by customers who had visited the areas on plant tours and audit inspections.

In the aspect of occupational safety, the Division has put in place measures to ensure faithful compliance with various management standards. One example of these is the implementation of measures, undertaken by all employees, in the loading of the hazardous substance paraformaldehyde. By suppressing the generation of dust to a level that does not exceed the management concentration stipulated under the Industrial Safety and Health Act, the Divisions succeeded in stabilizing loading speed.

Other divisions and departments were also greatly inspired by the success of Production Dep, Section Two and Section Four that led to their awards. They are now establishing and implementing unique and creative measures, with the aim of being the next division or department to receive the awards.



“Four Areas of Safety” Award ceremony



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