Environment
Health
Safety

EHS Report | 2014 • 2015

漢民 Hermes Epitek

1 Introducing the Company

Hermes-Epitek was established in Taiwan in 1977 with its business headquarters stationed in Hsinchu Science Park (HSP). The company has over 1,500 employees throughout the world. We are one of the world's largest equipment sales agents and have established business locations in Taiwan, Singapore, Malaysia, Mainland China, and Germany.

Our business scope included manufacturing equipment and parts for semiconductor, photonics, and LED processes, offering special focus and comprehensive services for semiconductor manufacturing equipment in both front-end and back-end processes. Our services include sales, installation, software and hardware support, performance optimization of machinery and equipment, process development, yield improvements, moving of machinery and equipment, maintenance services, parts support, as well as training.

Our business vision is to become a world-class service provider for semiconductor and photonics industries and provide our clients with first class products and services. Service by Hermes-Epitek aims to build mutual trust and confidence between original manufacturer and clients. Reaching this state involves providing clients with the best integrated performance for their equipment while helping original manufacturers acquire maximum market acceptance.

Map of global operations and distribution of service locations of Hermes-Epitek

2 Corporate EHS commitments

In addition to managing our business and attaining our business objectives, Hermes-Epitek regards itself as an integral member of the global village and cares deeply about the finite availability of external resources as well as the value of internal resources. We are therefore fully committed to zero disaster and zero pollution objectives to ensure the safety of fellow employees, subcontractors, partners, and clients using Hermes-Epitek products or services. We are also dedicated environmental protection efforts to fulfill our obligations as a world citizen.

Armed with this spirit, we have established the following environmental, health, and safety (hereinafter abbreviated as “EHS”) operation plans:

Building a safe and healthy work environment. Protect the valuable and finite resources in nature. The following lists our commitments to achieve the aforementioned business guidelines:

Surpass legal and regulatory requirements and fulfill international standards

Fulfill or surpass requirements stipulated by legislations, international conventions, and customer regulations, gain full understanding of global EHS trends, and uphold international standards.

Treasure the value of life and dedicating proper safeguards to individual safety and health

Prioritize considerations for personal safety and health by improving the scope and depth of our services, introducing risk assessments, strengthening contingency response abilities, developing health promotion, and fully integrating safety and health awareness improvements.

Reduce environmental burden and promoting green management

Support global trends in environmental protection, reduce and minimize carbon footprint, full dedication to energy conservation, waste reduction, and pollution prevention, and continuing support for green management.

Establishing a management system and pursue continuous improvements to performance

Establish an EHS management system (EHSMS) and make continuous improvements to EHS problems, promote EHS awareness, supporting global EHS efforts, strengthen commitments to corporate responsibility, and become a sustainable enterprise.

3 EHS goals and present status

We shall uphold our belief and directives for building a safe and healthy work environment and protect the valuable and finite resources in nature. The following is a faithful representation of the outcomes of our EHS efforts implemented during the past 2 years.

The following lists the goals of projects implemented in 2014 to 2015 and the outcomes of these projects. The outcomes demonstrate our determination in upholding corporate environmental protection and social responsibility.

	Performance categorization	Project / performance indicators	Projects and goals from 2014 to 2015	Outcomes of 2014 to 2015	Compliance
EHSMS	Active	Establishing an environmental management systems (EMS)	Successfully acquire EMS certification	Acquired 3rd party certification in early 2015	●
	Active	Implementing the occupational safety and health management system (OSHMS)	Continue to maintain and implement the OSHMS	Verified the continuing validity of the company's certification	●
	Active	Project target achievement rate	Attaining a project target achievement rate of 100%	Project target achievement rate from 2014 to 2015 achieved 100%	●
Environmental protection	Active	Reduce energy and power consumption	Continued implementation of energy saving measures	Southern Taiwan Science Park (STSP) plant achieved the reduction goal of 1%.	●
	Active	Reduce water consumption	Continued implementation of water conservation measures	Increased number of R&D departments and production capacity prevented the company from achieving the target of reduced water consumption	▲
	Active	Reduce water consumption	Continued implementation of waste reduction measures	Reduced average waste production per capita by 6.87% from 2014 to 2015	●
	Active	Monitoring of waste (polluted) water discharge	Compliance to science park discharge standards	Partial non-compliance to the new standards in earlier stages	▲

● Compliant ▲ 75% compliance to the goal ✕ Failed to

	Performance categorization	Project / performance indicators	Projects and goals from 2014 to 2015	Outcomes of 2014 to 2015	Compliance
Employee safety	Active	Operational safety	Continued implementation of work safety analysis and completion of supplier assessments	Completed risk assessments and supplier assessment systems	●
	Passive	Accident response systems	Continued implementation of exercises and drills and completion of various incident response plans	Completed all scheduled emergency response exercises in every area	●
	Active	Proposal for establishing a near miss incident system	Proposal for establishing a near miss incident system	Completed the proposed work safety incidents and establishing improvement systems	●
	Passive	Reduce disabling injury frequency rate (FR, does not include traffic accidents)	Lower than the data announced by the Ministry of Labor	Average value announced by the Ministry of Labor in 2014~2015: 1.6 FR in 2014: 1.35 FR in 2015: 0.44	●
	Passive	Lower the severity of injuries (SR, does not include traffic accidents)	Lower than the data announced by the Ministry of Labor	Average value announced by the Ministry of Labor in 2014~2015: 1.6 FR in 2014: 1.35 FR in 2015: 0.44	●
Workplace hygiene and health	Passive	Health examinations and follow-up for abnormalities amongst fellow employees.	Establish a health examination abnormality managing system to periodically follow-up anomalies.	Health examination abnormality managing system established to implement periodic follow-up of anomalies.	●
	Active	Health promotion programs	Implement health promoting activities to help fellow employees implement health management	Arrange resident physicians in the plants to offer healthcare services and host multiple health seminars and activities	●

● Compliant ▲ 75% compliance to the goal ✕ Failed to

4 EHS management system

From 2013 to 2015, Hermes-Epitek continued to acquire certifications for its environmental, health, and safety management systems (EHSMS), including dual certification for OHSAS 18001 / TOSHMS and ISO 14001 environmental management systems (EMS).

4.1 Establishing an EMS

Starting from July 2014, we made plans to establish an environmental management system (EMS) according to the Occupational Health and Safety Management System Framework (OHSMS), carrying out tasks that include initiating preparations and preliminary review, integrating scope of consideration and risk assessments, integrating reviews of EHS laws and regulations, establishing a management plan that integrates EHS goals, integrating the establishment of EHS documents, integrating system operations, and sustaining activities during the verification period. Hermes-Epitek was successfully certified for ISO 14001 EMS in January 2015 with Figure 4.1.1 showing the official reward of our certificate.

Figure 4.1.1 Upper management being presented with ISO 14001 certification.

While establishing our ISO 14001 EMS program, we also learned that ISO 14001 had underwent a revision in September 2015. We therefore made plans to update our certification to ISO 14001:2015 in January 2018.

4.2 Current status of OSHMS implementation

After establishing the OSHMS and EMS, we complied with the spirit described by the clauses of ISO 14001, OHSAS 18001, and CNS 15506 to ensure the effective implementation of the systems.

5 Background of the Occupational Safety and Health Act and state of implementation

In June 18, 2013, the Legislative Yuan completed the 3rd reading for the revision of the work safety and hygiene act and renamed it to Occupational Safety and Health Act (hereinafter referred to the “the OSH Act”), with the new provisions and measures entering into force on January 1, 2015. Hermes-Epitek places great importance on the directives of work safety laws and thus ensured that proper response measures as well as planning were set in place to fulfill the new requirements. The following describes the measures that we initiated for this purpose.

5.1 Prevention of abnormal workloads and improving disease prevention

To prevent overwork, Hermes-Epitek initiated proper management and preventive measures for employee health conditions. High-risk groups such as those with long work hours and those with rotational shifts will be assessed, inquired, and undergo regular follow-up checks.

Annual health checkups were used to calculate the employee’s risks of cardiovascular diseases while correlating the results with estimated monthly work hours to screen for and identify high-risk cases (such as those shown in Figure 5.1.1). For those individuals with potential overwork risks, the Health Center shall arrange physician consultation to provide lifestyle, physical health, and medical care recommendations. Joint discussions were also held with the employee and the unit supervisor in order to establish a more comprehensive workload distribution system.

For high-risk mental health cases, the Health Center provided referral services to the Employee Assistance Program (EAP) offered by the Hsinchu County Lifeline Association. Resources needed by the employee were verified in order to create a healthier work environment and working conditions.

▼ 5.1.1 Classification of overwork consultation

Hazard classification and recommended consultation		Risk of cardiovascular diseases		
		Low risk	Medium risk	High risk
Overwork risks • Mental health assessment form • Overwork assessment form • Work model assessments	Low load	Not needed	Not needed	Recom-mended
	Medium load	Not needed	Recom-mended	Required
	High load	Recom-mended	Required	Required

5.2 Protecting maternity health of female employees

To safeguard the rights and interests of female employees and to provide them with pre- and post-natal care, Hermes-Epitek actively promotes gender equality at the workplace and has initiated various measures that include protection policies for pregnant and breastfeeding mothers in the workplace, implementing actual measures and awareness promotion programs, and offering maternity leaves to create a workplace more equitable to both genders.

▼ 5.2.1 Breastfeeding room

5.3 Preventing muscular or skeletal conditions as a result of repetitive work

To prevent improper posture, over-exertion, and high work frequency from leading to muscular or skeletal ailments, Hermes-Epitek referenced the provisions of the Occupational Safety and Health Act to establish and implement a plan for preventing ergonomic hazards. Measures include improvements to conveyor belt operations of the Production Department (after improvement, muscular and skeletal discomfort reduced from 64% to 28%). We also observed the work of our kitchen and janitorial staff and provided them with health education to instruct them of proper load carrying postures and stretching exercises to prevent muscular and skeletal injuries and conditions caused by conducting repetitive work over extended periods.

5.4 Management of harassments in the workplace

To safeguard the employees' mental and physical health and protect them from harassments, we have stipulated relevant operation procedures that included regulations in the employees' code of conduct in the work place. Any illegal assault shall be handled in a just, impartial, and standardized process. We also offered transparent incident appeal or reporting channels as well as subsequent handling systems. Hermes-Epitek clearly stated the principle of zero tolerance, which would be upheld for various harassments in the workplace, in order to establish a safe, dignified, non-discriminatory, mutually respectable, and tolerant work culture.

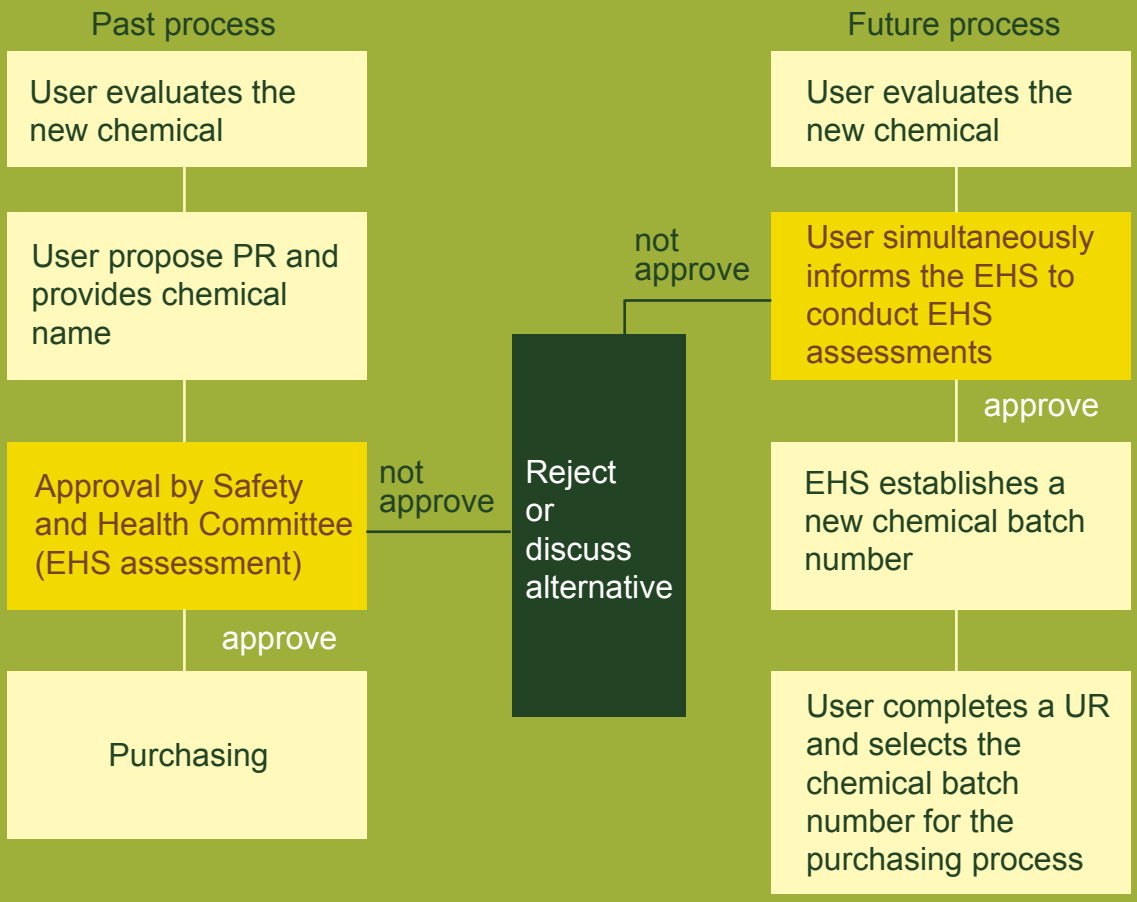
5.5 Management of health risk assessments and classifications of chemicals

Hermes-Epitek refers to the 5 steps of chemical management stipulated in the Chemical Classification and Management Guidelines to classify chemicals into different hazard groups. Degree of chemical diffusion and usage quantity were used to determine potential degree of exposure. A risk matrix is then used to determine the method of management employed (overall gas replacement, engineering control, isolation, and special regulations) in order to evaluate the sufficiency of on-site exposure controls. Outcomes for inhalable hazardous chemicals classification and management indicate that exposure control measures in place at the manufacturing floor are sufficient as shown in Figure 5.5.1.

▼ 5.5.1 Chemical classification and management

Classification Hazard group	Determine the state of spread	Select usage quantity	Check the form to determine management method	References Exposure control form
Source: SDS GHS health hazard classification	Source: SDS physical and chemical properties 1.Dustiness (for solids) 2.Volatility (for liquids)	Source: List of hazardous substances in the workplace 1.Batch processing: Single usage 2.Continuous processing: Daily usage	Reference 1.Hazard group 2.State of dispersion 3.Usage quantity Check form to determine the management method	Refer to the management method and reference the exposure control form
CCB measure: Reference the table to determine the hazard group	CCB measure: Check state of dispersion	CCB measure: Check the table to determine usage quantity		

We established a Chemical Batch Number Management System in 2015. The aim of this batch number system was to ensure that the Safety and Health Committee conducted environmental safety assessments in parallel of user evaluation of new chemicals in order to achieve the goals of early response, proper discussion of alternatives, and proper pre-usage review and assessments of chemicals as shown in Figure 5.5.2. A Qualified Chemical Database was also established so that fellow employees could select relevant batch numbers when purchasing chemicals. The system would also prevent the purchase of chemicals that have not been reviewed.



▲ 5.5.2 Process flowchart for chemical management

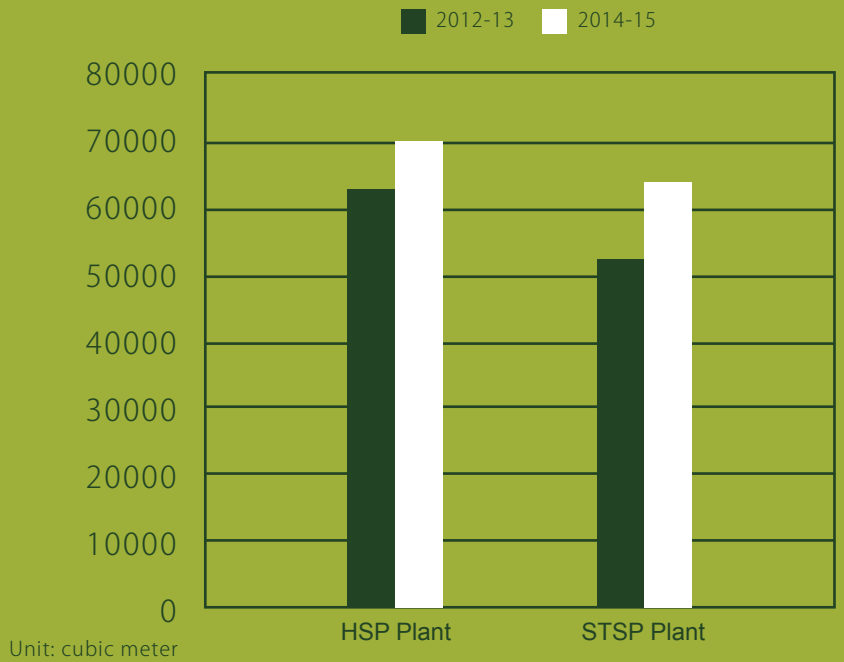
6 Process flowchart for chemical management

6.1 Management of water resources

Statistics showed that Taiwan receives an average precipitation of 2,500 mm every year, a figure that is 3 times the global average. However, due to our scarcity of land, high population density, and difficulties in storing water resources, water shortages are rather common in Taiwan. To prevent inadequate water resources from becoming a bottleneck for future development, we have continued to promote water conservation measures within our factories with the hope of achieving more effective utilization of water.

6.1.1 Water usage analysis

Water usage of this period (2014 to 2015) was compared to that of the previous period (2012 to 2013) as shown in Figure 6.1.1.1. Water usage increased by 8% and 18% for the HSP plant and the STSP plant respectively. The main reason for this was due to increased demands from expanded manufacturing capacities. We shall continue to review technologies and solutions for promoting water conservation in the factories to fulfill our commitment in preserving the world's water resources.



▲ 6.1.1.1 Water usage of the factories and offices from 2012 to 2015

6.1.2 Self-improvement and management measures for water discharge

Various district management bureaus in Taiwan have gradually imposed stricter water discharge standards for concentration of ammonia nitrogen. To comply with these environmental regulations, Hermes-Epitek has continued to implement measures that include self-monitoring and management of discharged water.

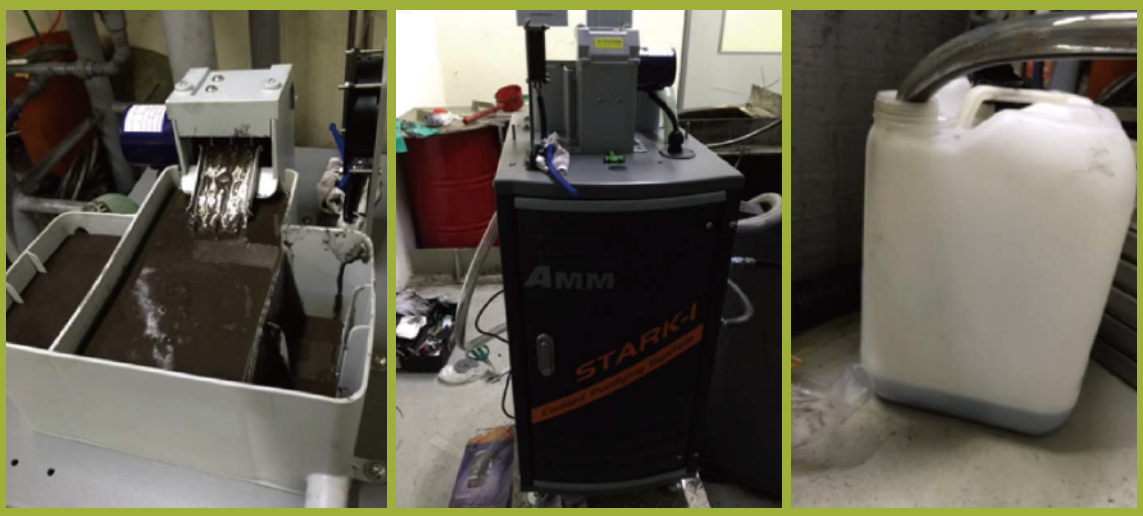
HSP plant : Ammonia gas used by the scrubbing tower would generate ammonium sulfate. The disposal of these waste fluids is currently subcontracted to already approved vendors to prevent the discharge of wastewater containing high concentrations of ammonia nitrogen. In the future, we will consider strategies for converting and reusing ammonium sulfate generated by the process to achieve sustainable utilization of resources.

STSP plant : Ammonia nitrogen in the discharged water is mainly derived from the wastewater of the septic tank. To prevent difficulties in ammonia nitrogen treatment due to varieties in discharge concentrations, an equalization tank was constructed for preliminary treatment before discharge.

Also, in order to ensure that the discharged water are compliant to current standards and regulations, ammonia nitrogen detectors were purchased in 2014 to shorten detection time, provide instantaneous readings, and facilitate subsequent implementation of ammonia nitrogen control measures.

Suspended solids (SS) also represent a key control indicator for discharged water in the science parks. In order to prevent SS and oils of processing from entering the discharge outlet, the HSP plant provided an oil skimmer in 2014 which directly improved the issue of floating oil on water as well as water content of the recovered oil. This solution helped to overcome the issue of SS in the discharge outlet while improving recycling efficiency. Figure 6.1.3.1 shows the oil skimmer utilized.

▼ 6.1.3.1 Oil skimmer



6.2 Energy resource management

Climate changes and environmental protection have both become universally accepted phenomenon and values. Hermes-Epitek shall continue to investigate energy conservation technologies and implement relevant energy reduction plans while providing awareness programs in order to promote familiarity with energy conservation concepts and develop energy saving habits amongst fellow colleagues.

6.2.1 Energy conservation programs and performance

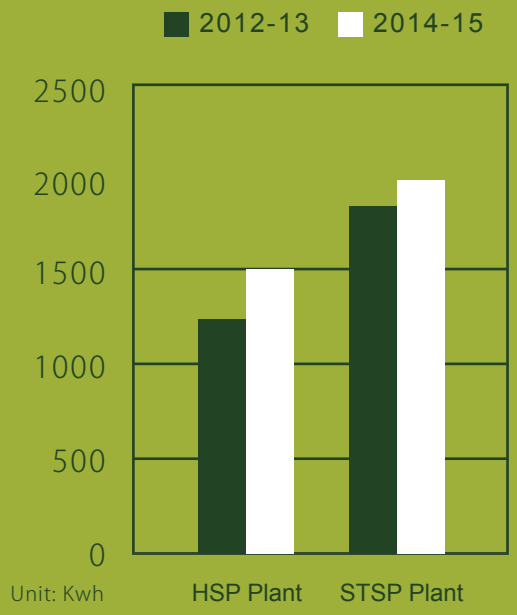
Hermes-Epitek places great importance on energy conservation and management. Such measures help to reduce costs, improve competitiveness, and lower carbon emissions in an effort to slow down the pace of global warming. Table 6.2.1.1 shows the performance of energy conservation programs and carbon reduction measures from 2014 to 2015.

Number	Plant	Year	Energy Saving Work	Average energy consumption(kwh/year)		Savings (kwh/year)	Carbon emissions reduced (kg/year)
				Before	After		
1	HSP plant	2014	FAB LED lighitng project	242,298	112,955	129,343	85,521
2	HSP plant	2014	Office Area A LED lighting project	49,744	24,824	24,920	15,899
3	HSP plant	2015	Office Area B LED lighting project	218,161	113,668	104,493	66,667

▲ 6.2.1.1 Energy conservation program and carbon reduction performance from 2014 to 2015.

6.2.2 Analysis of power consumption

Figure 6.2.2.1 shows that energy consumption in HSP and STSP plants during this period (2014 to 2015) grew by 13% and 7% respectively compared to the previous period. The main reason for this was the increase in production capacity as well as additional machinery and equipment used by the R&D department.



▲ 6.2.2.1 Power consumption of the factories and offices of 2012 to 2015

6.3 Waste management

In order to reduce environmental burden generated by wastes, we have continued to promote reuse of wastes as potential resources as well as waste reduction to achieve our ultimate objective of environmental conversation.

6.3.1 Waste management

Results of waste analysis provided in Table 6.3.1.1 showed that total waste produced from 2014 to 2015 grew by 20% when compared to that from the previous period (2012 to 2013) due to the increase in the number of employees. However, overall resource recycling rate also improved to 7.81%. Average daily waste generated per person also showed a decreasing trend. These results indicated that resource recycling and awareness for environmental conservation have been firmly established in the minds of fellow employees as they go about their daily lives and tasks.

Item	2014-2015 Compared to the previous period
Total waste generated (ton)	↑ 20.52%
Domestic waste transported (ton)	↑ 3.25%
Waste recycled (ton)	↑ 26.72%
Proportion of waste recycling%	↑ 7.81%
Average amount of waste generated per individual (kg)	↓ -6.87%

▲ 6.3.1.1 2014-15 Waste analysis for the period of 2014 to 2015

7 Safety and health management

7.1 Safety management in the plant

7.1.1 Safety assessment and management for chemical and gas delivery

A severe gas explosion occurred in the City Kaohsiung at 23:00 hours, July 31, 2014. In response to this incident, Hermes-Epitek carried out safety assessments of chemical and gas delivery systems within our plants. To reduce H2 and NH3 leakage risks, measures listed in Table 7-1-1-1 such as emergency response capacity, gas pipeline reliability, and gas leakage interlocking and shutdown mechanisms were implemented.

7.1.2 Monitoring of work environment

Hermes-Epitek prioritizes personnel health and safety and conducts 2 rounds of work environment monitoring every year. The items monitored shall depend upon the processes conducted in the facility. With the exception of a number of sites where ambient noise was greater than 85 decibels, monitoring outcomes from 2014 to 2015 were compliant to the legal standards. Noise hazard warning signs were placed in places that were too noisy. Fellow employees were also provided with earplugs or hearing protectors, improved training, and regular hearing examination.

item	Item	Improvements
1	Response capacity	• Gas detection alarms during weekends were used as the scenario to conduct tabletop simulations, notification, and response exercises. • An automatic message notification system was established for gas leakage alarms in order to notify facility and occupational safety personnel in the event of gas leakages.
2	Verifying the reliability of gas pipelines and components	Reliability inspections as well as regular pressure monitoring checks were conducted for pipelines from H2 / NH3 gas sources to the machine to prevent the risk of gas leakages.
3	Gas leakage interlock and shutdown mechanism	Interlock shutdown mechanisms include: Sensors in H2 / NH3 gas supply lines. Machinery, valve manifold box (VMB), and gas supply would be shut down when any of these sensors issue an alarm.

▲ 7.1.1.1 Improvements to gas delivery and management

▲ 7.1.2.2 Noise hazard warning signs

7.1.3 Subcontractor assessment

Assessments and audits were implemented to evaluate subcontractor construction and environmental safety. Results of these assessments were also used as a basis for subcontractor selection and management. Subcontractor assessments were first implemented in 2013 and were conducted by the person in charge of the construction project, Safety and Health Committee, and purchasing personnel who shall respectively review the subcontractor according to the indicators of construction quality, construction technique, and capability of independent environmental, health, and safety (EHS) management of the subcontractor, price, and timeliness of delivery on an annual basis. The following lists the 4 levels of subcontractor classification:

Excellent ····· >85	Consultation ····· 60-69
Qualified ····· 70-84	Unqualified ····· <59

Excellent and qualified subcontractors shall be assessed once every 2 years, while subcontractors rated as requiring consultation shall conduct relevant consultation and improvement plans before re-assessments. Unqualified

Supplier assessment results showed that every subcontractor was either rated as excellent or qualified in 2013 and 2014 as shown in 7.1.3.1. Table 7.1.3.2 lists the assessment results when subcontractors were classified according to the type of construction or services rendered.

Year	Proportion of subcontractors rated in this level			
	Excellent	Qualified	Consultation	Unqualified
2013	49%	51%	0%	0%
2014	52%	48%	0%	0%

▲ 7.1.3.1 Results of subcontractor assessments from 2013 to 2014

Category	Proportion of subcontractors rated in this level							
	Excellent		Qualified		Consultation		Unqualified	
	2013	2014	2013	2014	2013	2014	2013	2014
Construction	25%	17%	20%	17%	0%	0%	0%	0%
Repairs	8%	19%	22%	10%	0%	0%	0%	0%
Equipment	16%	16%	8%	21%	0%	0%	0%	0%

▲ 7.1.3.2 Subcontractor assessment results by type of construction or services

7.1.4 EHS performance management system

To improve work safety and encourage people to take personal initiatives in managing environmental health and safety (EHS), the Customer Service Department initiated an indicator-based management system and competitive rating scheme in 2008. Various objectives and assessment systems were suitably adjusted according to time. The Customer Service Department employed the comprehensive performance management and competitive rating scheme to help improve safety and environmental awareness for fellow employees. Results are shown in Figure 7.1.4.1.

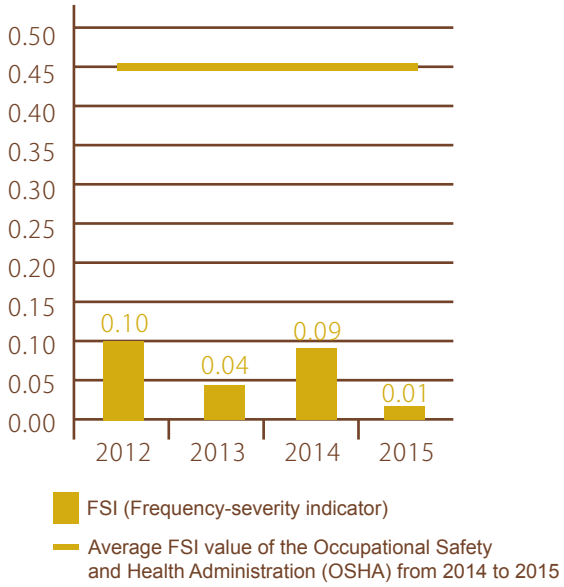
Since 2015, both the performance management and competitive schemes have been extended to manufacturing departments within Hermes-Epitek. Figure 7.1.4.1 lists the indicators used in this assessment. Fellow employees were encouraged to identify unsafe environments and given behavioral and self-monitoring training in order to identify the best method for eliminating work hazards.

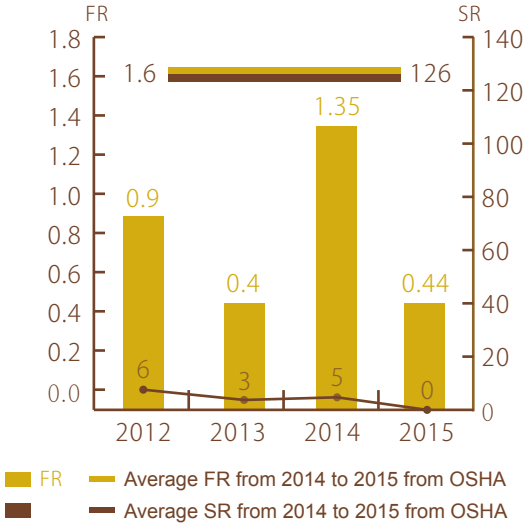
From May to December 2015, manufacturing departments within the company conducted in a total 34 safety training sessions and initiated 46 self-monitoring inspection tours.

7.1.5 Statistics on employee workplace accidents

For the indicator of number of disabling injuries, statistics from 2014 to 2015 exhibited similar trends to those of 2012 to 2013, with both being lower than the average value of disabling injury indicator for the manufacturing sector announced by the Council of Labor Affairs from 2012 to 2014.

FSI = (Frequency of injury * Severity of injury / / 1000)^0.5
(FSI，(Frequency-Severity Indicator)
FR = Number of people with injuries $\times 10^6$ / Total work hours committed
(FR，Disabling Injury Frequency Rate)
SR = Total days lost due to disabling injury $\times 10^6$ / total work hours committed
(SR，Disabling Injury Severity Rate)





7.2 Digitalization of the incident / accident investigation process

To ensure the effectiveness of accident management systems and to understand the trends or causes of various incidents, Hermes-Epitek completed the establishment of a digitalized incident / accident investigation process in 2014. Users could easily assess the progress of case handling, review the opinions of various stakeholders, and systematically collect accident data to facilitate subsequent statistical analysis and investigations.

The digital system included various categories for the cause of the incident. Examples include [Direct], [Indirect], and [Basic] that are all linked to risk assessment processes to verify whether the cause of the incident has been properly identified during risk assessment procedures. The system is also integrated with the workplace accident determination process.

7.3 Emergency response exercise / training

Comprehensive exercises / training systems have been established to strengthen emergency response capabilities to ensure that emergency rescue and response could be initiated promptly in the event of any accidents. Table 7.3.1 lists the routine emergency response exercises / training carried out every year. Hermes-Epitek also introduced the Immediate Response System as shown in Figure 7.3.1, Emergency Response Team Training sessions, as well as Night Time and Public Holiday Response Training for Security Personnel as shown in Figure 7.3.3.

Exercise / training	Purpose	Subjects of the exercise / training	Frequency
Plant-wide emergency evacuation exercise / training	To prevent possible personnel injuries, loss of property, or major environmental impact caused by accidents, and to contain the damages or hazards that may result from the accident, the plant should enact timely responses.	Every personnel within the plant	2 times / year
Immediate Response System	Formulating optimized emergency and immediate emergency response measures for equipment processing and requirements. The objective is to effectively contain disasters as early as possible. Plant-wide response measures will be initiated when the disaster can no longer be contained effectively.	Relevant departments	Once / quarter
Emergency Response Team Training	These training are carried out to ensure that members of the Emergency Response Team are capable of successfully implementing response procedures in the event of accidents, and demonstrate familiarity with the use of various emergency equipment.	Every member of Emergency Response Teams	Once / quarter
Night Time and Public Holiday Response Training for Security Personnel	Security personnel have been recruited for both HSP and STSP plants. In the event that accidents occur during nighttime or public holidays or non-working hours, the security staff may handle the incident accordingly and ask for external support to contain the disaster.	Security personnel	Once / quarter

▲ 7.3.1 Emergency response exercises



▲ 7.3.1 Immediate Response System



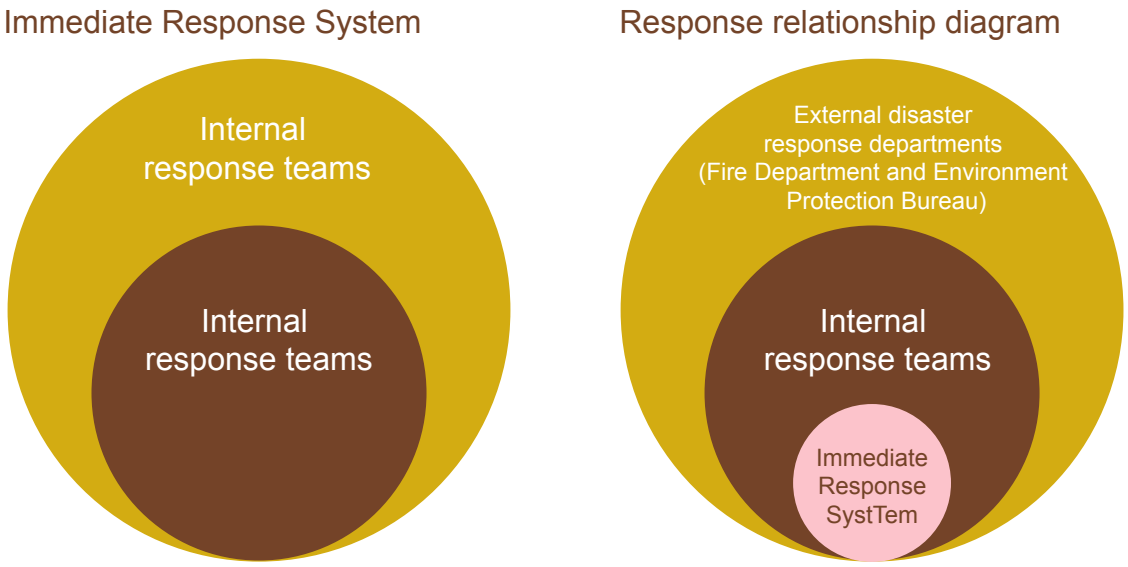
▲ 7.3.2 Emergency Response Team Training



▲ 7.3.3 Night Time and Public Holiday Response Training for Security Personnel



▲ 7.3.3 Night Time and Public Holiday Response Training for Security Personnel



▲ 7.3.1.1 Relationship diagram for emergency response procedures

7.3.1 Immediate Response System

Past emergency response exercises focused on the Emergency Response Team after the disaster has spread. The question is whether it would be possible to monitor abnormal signs and implement timely response for machinery and equipment before the disaster becomes significant to achieve effective containment. Such considerations gave rise to the establishment of the Immediate Response System. Figure 7.3.1.1 shows the relationship between the past and existing response systems employed.

Immediate Response System involves systematic analysis and simulation that focus upon machinery and equipment abnormalities and risks. Equipment departments shall focus on the sources of hazards to provide the consequences, descriptions, and symptom analysis of various abnormalities, which would then be used as the basis for stipulating Immediate Response Actions. The Safety and Health Committee shall then establish the Emergency Response Team, safety reminders, and hazardous substance characteristics as well as conduct cross-impact material hazard evaluations. To ensure that fellow employees are familiar with the Immediate Response Procedure, the system was included in the training material of newly hired employees in every department. Regular retraining was also organized once every quarter. Personnel shall monitor machinery and equipment status and initiate Immediate Response Actions upon detecting early signs of abnormality to prevent minor problems from growing into major disasters.

Title	Safe driving on scooters	Professional demonstration and training
Trainees	Seed personnel from various units	All personnel in the HSP plant + Seed instructor
Training time	2 days 1 night	1 to 2 hours
Training location	Hsinchu Safe-Educational Center	HSP Plant PDC
Implementation method	• Safe driving seed personnel shall provide regular monitoring and reminders for various fellow employees in all departments on the aspects of safe driving. • Seed personnel shall help create safe driving promotional videos • Course highlights: Safe driving techniques for various road conditions and actual practice	• Organize training for safe driving. • Seed personnel to promote safe driving awareness amongst fellow employees in their departments

▲ 7.4.1 Safe driving training plan for scooters

7.4 Promoting training for safe driving habits

Statistics on workplace accidents from 2012 to 2013 revealed that traffic accidents were the leading cause of personnel injury. All traffic injuries involved employees riding scooters. In order to reduce the incidence of traffic accidents, Safe Driving Courses for Scooters were held in 2014. Seed personnel in various departments took courses at the Safe Driving Training Center given by professional instructors to establish correct driving behaviors and attitudes. Course details are listed in Table 7.4.1. The number of traffic accidents decreased by 47% compared to the previous year after implementing training.

7.5 Health management assessment and recommendations

Since 2014, physician consultation services in the plant were constantly provided in the HSP Plant, Linkou Office, Taichung Office, and STSP Plant 1 to provide fellow employees with various professional services and information such as general health consultation, health education, prevention of workplace illnesses, and evaluation of post-injury recovery. To fulfill the requirements of the new occupational safety laws, Hermes-Epitek started working with specialists in occupational diseases to provide employee overwork management, muscular and skeletal injury prevention programs, and maternity protection programs. Such programs also helped specialist physicians to gain a full understanding of employee time management and working styles. Physicians conducted on-site tours of the workplace for professional health assessments and offered recommendations to achieve a personalized and in-depth evaluation of employee requirements. Constant improvements were enacted to achieve the goals of

7.6 Healthy workplace promotion activities

▲ 7.6.1.1 The creative Skybridge of STSP Plant

7.6.1 Enjoyable bliss at the Skybridge and Sky Gardens

The Skybridge of the STSP plant, as shown in Figure 7.6.1.1, provided a therapeutic resting place where employees can relax or interact with each other. The Skybridge can be divided into 5 theme-based areas, namely Coffee Expert, Art Exhibits, DJ Music Stand, Library, and Sky Gardens. The aim of the Skybridge is to provide employees with a place where they can relax their senses, enjoy natural elements, comfortably interact with fellow colleagues, and arrive at strokes of creative genius.

The Skybridge conveys the vision of the Chairperson: This Corporation belongs to everyone. Work is but a part of our lives. The purposes of the Skybridge and Sky Gardens are to help fellow employees appreciate the finer aspects of life, encourage work-life balance, establish positive interpersonal relationships, and bridge the distance between individuals.

7.6.2 Healthy Figure - Slimming Competition

To promote health awareness amongst fellow employees, the Health Center organized the Healthy Figure - Slimming Competition as shown in Figure 7.6.2.1. Registration for the event began in February 2015. A total of 208 participants managed to complete the competition, shedding a total of 714 kg for an average of 3.4 kg per individual. Average BMI dropped from 26.39 to 25.22 as a result.

Features of the competition:

Group competition: Multi-site and multi-departmental teams led by their respective leaders who were charged with boosting morale and maintaining enthusiasm.
Health Deposit: To encourage individuals to engage in exercises

▲ 7.6.2.1 Competition activities

- Oath Ceremony: Establish weight reduction goals and leveraging the formality of the event to encourage fellow participants and bolster their determination in achieving their weight reduction goals.
- Introducing physical fitness tests: Fitness levels were quantified to highlight weak areas for devising exercise schedules aimed at improving physical fitness. Results are shown in Table 7.6.2.1.
- Monthly achievements were publicized. Monthly reports titled Tips from Slimming Experts were issued in order to share the experiences of participants who achieved remarkable success in weight reduction and help other participants in jointly achieving their weight reduction objectives.

Health promoting activities_Slimming

208 individuals completed the competition to achieve a total weight loss of 714 kg
Total energy lost: 5.5 million kcal = 71 jogs circumventing Taiwan.

Before slimming (March 2015)

BMI: 26.39
Physical fitness age: 33 years
Self-professed waist and back pains, unbalanced diets, fatty liver, abnormal BMI, and overly high blood lipid levels

After slimming (August 2015)

BMI: 25.22 average weight loss of 3.4 kg / individual
Physical fitness age: 29 years
Results: Reduced warning levels in health examination reports, reduced fatty liver, and developing a habit for conducting routine exercises

Feedback: “The number of participants, level of participation, and actual improvements to physical examination demonstrated positive reception amongst fellow employees. Plans have been made to keep organizing similar health promoting activities in the future.”

▲ 7.6.2.1

Year of event	Item	Event theme	Event theme / participation
2014	Environmental conservation	GO Green - Resource Recycling (CDs and batteries)	CDs recycled: 23.70 kg Batteries recycled: 79.72 kg
	Occupational safety	Smoke experience, CPR, and fire safety questionnaire with prizes	About 420 individuals
	Health	Measurements for body fat, bone density, and eye pressure	About 150 individuals
2015	Environmental conservation	GO Green - Resource Recycling (CDs and batteries)	CDs recycled: 11.2 kg Batteries recycled: 68.6 kg
	Health	CO breath analysis, bone density measurements	About 298 individuals

7.6.3 Family day activities

Since 2014, a variety of Family Day activities and EHS stations have been organized, such as smoke escape experience tent, CPR training, eye pressure and bone density measurement, CO concentration testing, waste battery recycling, and waste CD recycling. These experiences and activities were designed to promote awareness for environmental conservation, safety, and health.



7.6.4 Company and club activities

Hermes-Epitek greatly encourages employees to organize or be part of various clubs to make exciting and interesting club activities as part of their daily lives. Currently, over 40 clubs have been organized that range from both engaging to relaxing activities. These clubs help employees ease off stress from work while improving their quality of life.

7.6.5 Blood donation drives

Hermes-Epitek regularly hosts blood donation activities. Blood donation not only provides the donor with the opportunity in saving lives, it is also regarded as a healthy activity. Employees are encouraged to engage in regular blood donation and be a happy blood donor. Each donation drive was able to collect more than 100 units of blood.




7.7 Awareness for large scale epidemics

In response to large-scale epidemics that occur in Taiwan, Hermes-Epitek also stipulated Corporate Disease Prevention Management Procedures for large-scale pandemics to achieve effective planning, implement various disease prevention measures, safeguard the health of fellow employees, and achieve sustainable management.

- Hermes-Epitek implemented vaccination efforts according to government policies and regulations stipulated by the Center of Disease Control (CDC) of the Executive Yuan. Our Health Center actively provided health education, awareness programs for various kinds of communicable diseases, and preventive healthcare plans such awareness programs as well as vaccination against influenza, Streptococcus pneumoniae, and HPV. We also worked with hospitals and medical centers to help improve accessibility to relevant medical services and vaccination for fellow employees.
- We would also activate our Corporate Disease Prevention Management Procedures for potential diseases or actual diseases that had already started to spread and shall enact various disease prevention measures such as: collecting information on the disease from Taiwan and other countries, preparing disease prevention supplies, conducting environmental hygiene and sterilization measures, providing disease notification, seeking medical assistance, and implementing case management.

7.8 Excellence in healthy workplace ratings

Our efforts in providing a healthy and friendly work environment as well as promoting employee health have not gone unnoticed. In addition to achieving the Health Workplace Accreditation - Health Promotion Label from the Health Promotion Administration (HPA), the STSP Plant was also the recipient of the prestigious Excellence in Independent Healthy Workplace Management of STSP in 2015.

8 Customer services

8.1 Safety management at the customer end

8.1.1 Management and measures for high risk processes

In order to strengthen safety management for construction work at the manufacturing floor, we began identifying high-risk operations and furnished them with management standards in 2014. Construction processes were provided with key control measures and independent management systems.

Severance of gas / chemical pipelines, work from elevated positions or raised floors, and any other process that may lead to personnel injury or significant material losses were defined as high-risk operations. Different processes were used to clearly define safety, protective, and control procedures that must be undertaken by construction employees.

- Additional monitoring was provided for operations with the highest risks, potential for personnel injury, or had the highest rates of violations.
- On-site operation observations, inspections, and consultations were conducted by the Safety and Health Committee to reduce risks.

8.1.2 Implementation and revision of hazard prevention

To enhance safety of processes at the manufacturing floor, Kiken Yochi (KY, or hazard prediction). Textual records as well as point-and-call strategies were employed to remind personnel of potential hazards and preventive measures as well as strengthen personnel awareness for various safety reminders.

KY forms used in the company were revised in 2014 so they would no longer be restricted to standard forms. For the new version of KY practices, the Safety and Health Committee made relevant adjustments to training and form structure, providing the forms with diagram-based guidelines so that employees may accurately assess hazard risks and adopt the relevant preventive measures.

- The contents of the revised version made use of diagrams to help guide fellow employees in making safety assessments, describe unsafe features, behaviors, observations (mode of the incident), and response measures in order to achieve precise assessment of sources of hazards and propose preventive strategies.

- Various departments can refer to their own requirements and make flexible adjustments to the contents of the form.

A total of 1989 on-site audits were conducted from 2014 to 2015. Outcomes revealed a KY implementation qualification rate of 100%.

8.1.3 Subcontractor management and training

Measures were taken to improve and strengthen the safety of subcontractor operations. Subcontractors conducting work for the first time in our company must undergo Safety and Health Training and obtain certification. Training contents include customer safety regulations, operational safety awareness, and emergency evacuation procedures.

A total of 18 training sessions were offered from 2014 to 2015, with a total of 79 individuals trained during the process. Regular on-job training shall also be provided once every 2 years.

8.2 Communication with customers and operators at the manufacturing floor

8.2.1 Organizing the Tokyo Electron Seminar and mutual exchange

In 2014, Hermes-Epitek organized the Environmental Protection and Safety Conference, inviting relevant departments from the original manufacturer Tokyo Electron and EHS experts from Taiwan to share their experiences. Occupational safety and environmental protection personnel or technicians from our clients were also invited to attend the conference to jointly promote environmental protection, safety, and health.

8.2.2 Site surveys for safety at the locations of new customers

To reduce the hazards caused by unfamiliarity with the environment when our employees provide equipment installation services for the first time, the Safety and Health Committee implemented Site Surveys, which are safety tours of the customers' location. The aim of the Survey is to understand and evaluate the state of software and hardware facilities as well as environment of the location.

A total of 10 Site Surveys were conducted in various districts from 2014 to 2015. These Surveys allowed our fellow employees to provide machinery installation and other relevant services at new customer sites and locations in safer conditions.

9 Rewards and recognition

Time	Unit	Title of reward
2015	Southern Taiwan Science Park (STSP) Environment Protection and Development Foundation	STSP Award of Excellence in Independent Healthy Workplace Management
2015	Health Promotion Administration, Ministry of Health and Welfare	Healthy Workplace Certification - Health Promotion Label
2015	Health Promotion Administration, Ministry of Health and Welfare	Healthy Workplace Certification - Health Activation Label
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 12B Subcontractor Award of Excellence for Independent Health Management
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 14A (P1 to P4) Subcontractor Award of Excellence for Safety Management KPIs
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 14B (P5) Subcontractor Award of Excellence for Safety Management KPIs
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 14B (P5) Subcontractor Award of Excellence for Safety Management KPIs
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 14 Subcontractor Award of Excellence for Safety Management KPIs
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Plant 15 Subcontractor Award of Excellence for Workplace Safety
2015	Taiwan Semiconductor Manufacturing Company (TSMC)	Subcontractor Award of Excellence for Access Control and PIP Management
2015	Powerchip Technology Corporation	Fab P1/2 Subcontractor Award of Excellence for Safety and Health

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