

CSR Report of Yokohama Tire Manufacturing (Thailand) Co., Ltd. (YTMT)

Business activities: Production and sale of tires for trucks and buses, small trucks and passenger cars

Total site area: 418,029 m² (plant), 1,690,000 m² (test course)

Number of employees: 2,092 (as of December 2016)

Location: 7/216 Moo.6, Amata City Industrial Estate, Tambol Map Yang Porn, Amphur Pluakdang, Rayong Province 21140, Thailand

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Message from the President



Makoto Takagi

So as to shift overseas to the extent possible a production base for general tires (TBS, PC/LT), a development in accordance with the Mid-Range Management Plan (GD100) of Yokohama Rubber, Yokohama Tire Manufacturing (Thailand) Co., Ltd. commenced operations in 2004. In 2009, to significantly strengthen the tire development and testing capacity of Yokohama Rubber, the Tire Test Center of Asia (TTCA), a tire proving ground, was built some 30 km from our plant. We expanded the WET and DRY handling courses in 2013, and in 2016 an off-road evaluation course was also completed. The

different courses with their surfaces comprised of mud, rocks, gravel and sand are used to undertake tire evaluation and development. Commencing in Thailand, sometimes called the "Detroit of Asia", and throughout the ASEAN Region, motorization has been developing with a tremendous vigor. For tires, which represent one important component of motor vehicles, both the degree of satisfaction with respect to required performance and the credibility issue with respect to quality have become increasingly important. At the same time, however, because being environmentally-considerate is also an important issue, a priority for us is to produce tires with minimum energy, using materials that place little burden on the environment from the stage of their being procured as raw materials, and through to the utilization of their properties. Based on this premise, we strive to achieve product development, marketing and production expansion.

Since obtaining ISO 14001 certification in 2007, by using our environmental management system as an axis on which to base activities, we have also addressed environmental preservation through participation by all employees. Each year, by establishing specific targets and working continuously to reduce environmental burdens, we see improvements in the various environment data categories. In 2011, we were the first in Thailand to obtain ISO 50001 certification (for energy management systems), and on an ongoing basis, we continue to actively improve our savings in energy and electricity usage.

In 2016, we commenced the Cogeneration Heat Plant (CHP) project in conjunction with NS-OG Energy Solution (Thailand) Ltd., and we are also considering how to achieve reductions in CO₂ emissions and how to realize energy savings.

On preserving the environment, for the purpose of reducing CO₂ emissions and in order to communicate positively with local communities, concerning the YOKOHAMA Forever Forest Project, since commencing plantings in 2008 we have planted a total of 71,000 trees. The seedlings used in these activities are sprouted from local acorns while the forest itself is created in accordance with the Miyawaki Method. Concurrent to employing this method ourselves, we have also taken steps to support its adoption by other companies and local schools. Furthermore, two years ago we became the first overseas location within the Yokohama Rubber Group to commence biodiversity protection activities. For the purpose of furthering our community integration, we have taken steps to introduce such actions to both government and the local people. In order to achieve ecological balance this financial year, we shall continue to monitor and improve the measures in which we are engaged.



Organizational Governance

Revising the organization and its structures

In aiming to create an organization that possesses a positive sense of unified team work, we employ organizational management practices. Since fiscal 2014, we have sought to combine into a single organization

the TBS tire plant and the PC/LT tire plant. Through the efforts of our locally-recruited Thai managers and supervisors, we have been able to achieve a stronger sense of organizational unity.

We revised our practices in accordance with the provisions of the new Policy Towards Occupational Safety and Health that was launched by Yokohama Rubber.

Health and Safety Principles

Safety and health are the basis of every operation and we aim to prevent occupational accidents while building up comfortable workplaces.

Policy Towards Health and Safety

1. Each worker must place their greatest emphasis on safety. Improved safety shall be obtained through active participation and cooperation between employees on one hand, and managers and supervisors on the other.
2. We shall thoroughly observe all regulations and laws that pertain to issues of health and safety.
3. The importance of health and safety shall be conveyed to every member of the labor force, and whereby necessary training shall be carried out.
4. To ensure the health and safety of every member of the labor force who engages in corporate activities, cooperation with the relevant partner businesses shall be strengthened.
5. To eliminate the hidden risks associated with both devices and work tasks, a plan-check-do-act (PDCA) cycle based on the occupational safety and health management system (OSHMS) shall be utilized, and it shall undergo improvement on an ongoing basis.
6. To preserve in good order the cleanliness that represents the basis of health and safety within the workplace, we shall thoroughly carry out 2S activities (*seiri* and *seiton*, or sorting and straightening).
7. While actively supporting increased mental and physical health, we shall promote the creation of comfortable working environments.
8. As a company who is involved in the automotive industry, we shall adopt measures for the purpose of preventing traffic accidents.

We continue to ensure safety and health as a top priority task. Based on the occupational safety and health management system, we promote activities in both terms of people (people and mechanism) and equipment, including open work observation activities and inherent safety of equipment activities, etc.



OSHMS Certificate



TIS Certificate

Open work observation activities

Open work observation activities (demonstration activities) observe the steady and unsteady work practices of employees to discover and improve safety and quality issues, etc.

In fiscal 2016, we continued with such efforts by carrying out some 6,370 demonstrations. We also conducted additional patrols and undertook to search out and improve dangerous practices within the workplace. Process improvement activities expanded from TBS to the PC/LT workplaces as well.



Kick off of the open work observations



Observations being carried out



Creation of evaluations and procedures



Presentations

In fiscal 2016, some 66 teams engaged in quality improvement activities. Education and training, follow-up exercises and presentations were all promoted. Such activities were not merely limited to what took place within the company, rather original equipment manufacturers (Toyota, Mitsubishi, Honda and Isuzu) also actively participated in those presentations that took place.



At Mitsubishi Motors

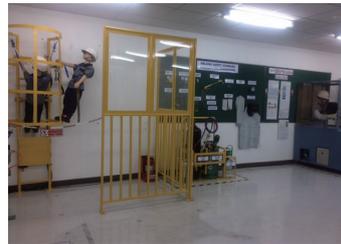


Within the company

Hands-on safety drills (Safety Dojo)

To make new hires and sub-contractors aware of the dangers associated with equipment, in 2016 all underwent training in the Safety Dojo. The safety of different work procedures was ensured by having workers appreciate what safe work procedures constituted. The dangers to which they were exposed while working were also pointed out. Such training allowed new employees to go about their jobs safely. It also reduced the number of accidents occurring during work.

To achieve the objective of having 100% of maintenance, improvement and electrical staff undergo hands-on training by October of 2017, in addition to maintenance, in December of 2016 safety inspections were conducted on four pieces of infrastructure (ones that involved various processes such as managing the operating records of infrastructure, working in high places, engaging in welding tasks and undergoing vulcanizing procedures, etc.)



Welfare explanation meetings

In 2016, training courses were jointly undertaken by labor and management, with there being a “knowledge provided to employees as to the nature of their basic social security and a revision of insurance benefits.” Through such educational initiatives, employees were able to deepen their understanding regarding the handling of the increased earnings resulting from their basic social security.



Sharing positive activities

The people of Thailand lost their beloved sovereign, King Rama IX, in 2016, and it was an event that had significant ramifications. By way of response, the company, the labor union and the welfare committee all agreed that it would be best if the planned sports day and the new year’s party were cancelled given the circumstances. However, even while the country was in a state of profound grief, agreement was reached among the parties regarding the organizing of a new event.

In the Buddhist tradition, the subsequent occasion was a ceremony that allowed individuals to express their condolences regarding the death of the sovereign. Furthermore, many employees of YTMT expressed a desire to participate, for which they created a numerical 9 to represent the late Rama IX. At the ceremony, participants listened to the prayers of a priest.



Together with people with disabilities

We encourage people with disabilities by enabling them to have a career so that they live in society with confidence.

We aim to develop people with disabilities that have the same level of skills as regular employees.

As of 2016, we have nine employees with disabilities working for the company.

We are an organization that values egalitarianism that is inclusive of people with disabilities holding jobs.

Management of a good working environment

In 2016, we continued with our efforts to develop good working environments through the employment of the following means: So that our employees never stop smiling, and so that they are able to feel a sense of contentment while they work, we are applying ourselves to creating environments in which employees are able to safely return home at the end of each day. If our employees are able to feel a sense of contentment with their jobs upon returning home, we feel that such a sentiment can be linked to the achievement of all tasks that are set for them. With that in mind, we initiated a program in 2016 called “8 Hours of Contented Work.”



To deepen the understanding of employees regarding their individual rates of income tax, the HR department conducted a program on tax and set about providing information about revisions that would allow for the increased number of items that can be claimed when filling income tax. By gaining a knowledge about taxation, it will become possible for employees to suitably order their own affairs.



Labor Relations and Welfare Award

With the aim of fostering good labor relations and overall corporate improvement, YTMT participated in the Labor Relations and Welfare Award activity organized by the Thai government in 2016. On August 17, 2016, a group of managers and union representatives attended the awards ceremony, held at the IMPACT Arena in Bangkok, joining together in the cheerful atmosphere at the ceremony.

A total of 860 business enterprises received awards at the ceremony in various categories, including 127 large enterprises from all over Thailand, 19 of which are located in Rayong Province.



Long vacation campaign

We are conducting a campaign that involves the distribution of sweets and an emergency contact network in the hopes that all employees will enjoy safe travel during long vacations.



Communication

Condolence visits to sick employees

We conduct condolence visits to sick employees in order to establish a good relationship between the company and employees. We visited 61 employees during 2016. These activities encourage sick employees and lead to an early return to work.



Supporting family relationships

Recognizing the importance of family relationships, YTMT has continued to hold Mother's Day event.

This year, we held a photography competition and poetry contest, with 30 employees submitting entries to the photo competition and 57 submitting poems.

YTMT is proud to be able to help employees build and maintain strong family relationships; we will continue to implement healthy activities of this type in the future.



Employee trip activities

The labor union and the company's social welfare committee continued to jointly organize employee trip activities in 2016. These activities include team-building exercises, while in the afternoons employees are able to relax and enjoy sightseeing at beautiful tourist attractions.



Birthday parties

Since 2014, we have been holding birthday parties for employees, with the aim of strengthening employee motivation while at the same time contributing to the enhancement of production activities. In 2016, we adjusted the schedule for employee birthday parties, which are now held during the lunch break, with the company arranging a birthday meal, and managers eating alongside employees. Although the participation rate fell slightly in 2016, dropping by approximately 4 percentage points to 80%, nevertheless, 99.66% of employees expressed satisfaction with the system.



Environmental policy

We aim to develop environmentally-friendly technologies while adhering to the principles of dealing fairly with society and fostering harmony with the environment.

1. Under the direction of top management, we will initiate environmentally-friendly measures in all activities, and we will ensure that all of our products are environmentally friendly ones.
2. We will endeavor to strengthen communication with stakeholders and to make a positive contribution to local communities and to society as a whole.
3. We will implement ongoing environmental improvement measures, by strengthening our environmental management systems, alleviating the impact of our activities on the environment, preventing environmental pollution, and adopting a proactive approach towards reducing sensory nuisance.
4. We will comply with relevant laws, regulations and agreements, and we will strive to implement activities that contribute towards environmental improvement on an ongoing basis.
5. We will promote resource recycling aimed at helping to combat global warming, save energy, and foster the cyclical use of resources.
6. We will strive to help safeguard biodiversity and to ensure that the organic resources utilized in our business activities are used in a sustainable manner.
7. We will endeavor to build a harmonious, symbiotic relationship with the local community, and will aim to be an enterprise that is trusted by the local community.

We will publicize this environmental policy and make sure that our employees are familiar with it.

Energy strategy

1. We will introduce appropriate energy management systems as an integral part of company management, and revise these systems as appropriate; we will comply with energy-related laws and regulations.
2. We will establish goals and provide platforms for ensuring adherence to our target energy profile and energy use methods; we will communicate with the employees to ensure that they all understand these goals and platforms and participate correctly in related activities.
3. We will raise energy-saving awareness among employees at all levels; we will make it possible for all employees to participate proactively in energy-saving and energy management activities.
4. We will provide the necessary resources, personnel, budgets and working hours to support the provision of platforms for ongoing energy improvement, including the provision of necessary training for all employees.
5. We will implement improvements from an energy-saving perspective, while ensuring that this does not adversely affect the environment or productivity, and we will make energy efficiency a key requirement when purchasing buildings, products, machinery and equipment.
6. We will publicize our energy management systems, and we will collaborate with local communities and organizations that have concerns regarding energy management systems.
7. We will adjust our company's management systems to improve energy efficiency on an ongoing basis.

We have actively acquired environmental and energy-saving management that we have incorporated into improvements at the company and its plants. The company became the first company in Thailand to acquire energy management system ISO 50001 certification in August 2011 in recognition of improvements in energy performance.

In addition, as part of efforts to start activities based on ISO 26000, we participated in the Thai government's social responsibility promotion project entitled CSR-DIW that was sponsored by the Department of Industrial Works, and we received the Beginners Award. We are implementing activities one step at a time in line with seven core issues.

Environmental data

Category	FY2012	FY2013	FY2014	FY2015	FY2016	
Waste generated (t)	1,065.5	2,002	2,241	2,277	2,545	
Proportion sent to landfill (%)	0.0	0.0	0.0	0.0	0.0	
Energy use (oil equivalent: kl)	Electric power	25,094	25,190	27,187	27,911	27,791
	Fuel	9,596	9,507	11,402	9,986	10,088
	Total	34,690	34,697	38,589	37,897	37,878
Greenhouse gas emissions (1,000 t-CO ₂)	73.5	73.5	81.5	74.3	74.3	
Water usage (1,000 m ³)	543	591	622	639	661	

* FY: January to December

* From FY2008 greenhouse gas emissions were calculated based on the Calculation and Reporting Manual for Greenhouse Gas Emissions jointly published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, Japan. Calculation of emissions from overseas business locations in FY2016 was based on the Greenhouse Gas Protocol Initiative.

Chemical substance reporting

In 2016, to comply with new legislation, we verified the current status of international chemical substance imports. The purpose of the new "Notification Of Ministry Of Industry: The List Of Hazardous Substances (No.2), B.E.2558 (2015)" legislation is to collect data on chemical substances used within Thailand and build a chemical substance database, thereby putting in place the framework needed to support hazardous chemical substance inspections.

YTMT submitted the following report:

1. Chemical substance safety datasheets (MSDS)
 - We have Chemical Abstracts Service (CAS) Registry Numbers and chemical names for all components. Content ratios must be specified for all components.
2. Chemical substance categories
3. Inspection results: Type 1 to Type 4, and also Types 5 and 6 (explosive substances, flammable gases, oxidizing agents, toxic substances, corrosive substances, irritants, and environmentally-harmful substances)
4. In the case of substances falling under Types 5 and 6, Thailand's Ministry of Industry is notified.

Noise, vibration and odor

Responding to the concerns of local residents regarding odor issues, YTMT formulated plans for the installation of 10 sets of deodorizing wet-scrubbing devices (scrubbers); the installation of all 10 units had been completed by 2016.

We also arrange for employees and security guards to carry out odor inspections in the vicinity of the plant, and hold meetings with local residents to explain our odor countermeasures system, as well as undertake odor monitoring etc. in collaboration with the local community.



ISO 14001 Certificate



ISO 50001 Certificate

Minimizing the risk of environmental incidents

In 2016, to ensure stable water quality right through to the final outlet, new sampling stations were established for the installation of oil detectors, pH meters, thermometers, etc. Monitoring devices were also installed at outlets to minimize environmental risk.



We continued to implement the Leak Zero campaign (aiming for zero leaks of water, steam, oil, or air) that was launched last year. With support from the maintenance team, all manufacturing departments carried out activities aimed at enhancing the capabilities of operatives in this regard, using the following operational flow: Kickoff → Training → Activity → Reporting of results.



Verification of TPM activities and capability enhancement activities by top management



Biodiversity conservation activities in 2016

As part of our business activities, we undertake regular monitoring of the butterflies, dragonflies and birds that live in and near the plant. Monitoring the habitats of all of these living creatures provides a benchmark for evaluating air quality, water quality and biodiversity, and regular checks are made on the ponds, the weather conditions in the area, and the water quality.

To help improve our biotope, we have collaborated with Rayong Botanical Garden on comparative research on other biotopes. Making use of the knowledge obtained through this research, we have redesigned the ponds located within the plant to make them more closely resemble natural ponds. By lining the bottom of the ponds with polyethylene sheeting, we have been able to ensure that there is enough water in the ponds to support aquatic life even in summer.



In fiscal 2016, we visited 37 local suppliers to confirm the current status of their activities. The findings obtained from these visits showed that YTMT has succeeded in building a good relationship with its suppliers, and that YTMT and its suppliers are working together to build a fair operating environment.



In fiscal 2016, we continued to dedicate ourselves to the development and production of environmentally-friendly tire products. YTMT is the first Yokohama Rubber plant to begin production of the G015 pattern tire, a new model developed from the G012. The G015 features a rubber compound that incorporates new technology, creating a lightweight tire that helps to improve fuel economy and contributes towards safeguarding the environment. We also undertook development work aimed at improving noise performance.

Both the YTMT plant and the Tire Test Center of Asia (TTCA), our tire testing facility, receive many visits from distributors and sales companies, providing us with opportunities to share our tire knowhow. A total of 23 groups of visitors were received in 2016.

Some of our visitors:

March 16, 2016: YTST (Yokohama Rubber's Thai sales company) arranged for a group of six people from Yokohama Club Network Thailand (YCN) to visit the TTCA testing facility to confirm the reliability of our Thai-made tire products.

April 27, 2016: Around 40 representatives of distributors in Asia, the Middle East, Africa and South America visited the TTCA testing facility to try out the new V701 and G0105 tire patterns.

May 11, 2016: Around 33 representatives of distributors in China visited us to confirm the reliability of our products through test-drives.

August 19, 2016: Around 50 representatives of distributors in Malaysia visited us to test the performance of our new V701 and G015 tire products.

October 10, 2016: Representatives of our Oman distributors visited us to test our G015 and G056 tire products; they commented that the visit had been a marvelous experience.

November 11, 2016: YTA (Yokohama Rubber's Australia sales company) arranged for a group of around 26 employees of Bob Jane T-Marts, an Australian distributor, to visit us to test our new V701 and G015 tire models. This visit helped to enhance our products' reputation for reliability, and boost tire sales, in Australia.

November 29, 2016: Our "New Products ASEAN Seminar" was attended by 27 sales and marketing managers from the Asia region; the participants were given a presentation on the follow-up sizes for our ES32 and RV02 models, which are our new global standard tires, and had the opportunity to try the new tire models out in a test track driving experience.

Besides visits from sales companies and distributors, we also welcome visits from university groups wishing to deepen their knowledge of tires. In 2016, YTMT was visited by five university groups.



A consumer-oriented approach

In 2016, we began production of new tire products for the Honda Civic and Mitsubishi Mirage. We are committed to maintaining high quality standards in our production processes, meeting our customers' needs, and abiding by relevant laws and regulations.

Since 2014, YTMT has been implementing safety activities in collaboration with the Toyota Collaboration Club.

These activities, which target all suppliers, form part of Toyota's Zero Accidents initiative.

In 2016, Toyota asked us to implement a risk assessment, aimed at improving conformity with equipment safety standards. Measures taken in response included the establishment of a working group and the making of improvements to the management of forklift trucks, etc.

1. Employees: Additional training in forklift driving was provided.
2. Equipment: A speed limit of 10 km/hr was established for forklift trucks.
3. Procedures: A Level 3 Operating Procedure has been issued.
4. Management: We have implemented access management with respect to footpaths and forklifts, and the working group has implemented activity follow-up with respect to both operatives and forklifts.

A preliminary audit was implemented in June, and a final audit in October. YTMT was ranked as "A" for forklift management. Since then, our management team has worked to realize further workplace improvements based on even higher workplace safety standards.

To this end, we stay in regular communication with original equipment suppliers, and work to build and maintain good relations with them.



Response to complaints

Information received from stakeholders is quickly deployed throughout the company based on the manual and analysis and countermeasures are established to answer and respond to customers.

In 2016, there were no complaints from stakeholders.

Relationship with local societies

In 2016, we implemented 40 major activities.

- Environment response activities, including the YOKOHAMA Forever Forest Project and planting instruction, etc.: 5 cases
- Activities for strengthening relationships with the local community, including participation in local events, etc.: 17 cases
- Cultural conservation activities, including conservation of temples: 5 cases
- Social contribution activities, including volunteer activities and donations, etc.: 13 cases

Environmental response activity

YTMT was one of six firms chosen out of 38 firms with factories in industrial parks to receive a Platinum Award (Outstanding Performance Award) for waste management from the Industrial Estate Authority of Thailand.



Repurposing of old tires (production of play equipment)

In July 2016, a team from YTMT used old tires to create play equipment for No. 9 Elementary School at Nicomsonthon, which is located near the Industrial Estate. The YTMT team was able to expand the school's play area by repairing existing play equipment and installing new equipment.



Environmental education in schools

In February 2016, members of YTMT's environmental safety team visited Map Yang Porn Elementary School, the nearest school to the YTMT plant. They gave a presentation to the School's students of five grades on the environment and energy-saving, with the aim of raising the students' environmental awareness. The team members also distributed socks to all 200 students at the School.



YOKOHAMA Forever Forest Project activities

To realize the goal of planting 50,000 trees by 2017 (within 10 years of the launch of the YOKOHAMA Forever Forest Project), a 9th tree-planting activity was implemented in August 2016. A total of 695 employees participated in this activity, in which 5,000 tree seedlings were planted over an area covering 595 m². A cumulative total of 71,725 trees have now been planted, representing a target achievement rate of 143%, and representing a reduction in CO₂ emissions of 573,798 tons per year.



Computer programming and English language education

In September 2016, in collaboration with Amata City Industrial Estate CSR Volunteers, YTMT personnel provided computer programming and English language education to 25 students at Banonragamu Elementary School.



Work experience

As part of our education support activities, YTMT provides students with opportunities to acquire knowledge that will be useful to them in the future. We have launched a work experience program, so that students can benefit from the experience accumulated by YTMT employees, many of whom did not have the opportunity to complete a full education themselves. Over a period of 2–4 months, participating students enjoyed a learning experience completely different from that at university, undertaking real work at different work locations, including work that requires specialist know-how and skills. In 2016, a total of 16 students from six universities underwent this training.



Participation in local rally competitions

In November 2016, a team from YTMT participated in a local rally competition, on a course that extended from Khao Yai to Nakhon Ratchasima.



Social contribution activities

Donation of inhaler spacers to Thai children

YTMT donated respiratory aids for children with asthma in hospitals in the Pluakdang district, as well as bicycles (for shared use) to help improve the children's state of health.



Donation of repurposed items made from waste to schools

A waste repurposing contest was held at Map Yang Porn Elementary School in August 2016. Items made based on the children's ideas—including plant pots, photo frames, post-boxes, swings, rocking horses, etc.—were donated to the schools.





Construction and donation of toilets for schools

Over the period April through September 2016, YTMT constructed toilets for a school in Map Yang Porn.

The toilet building has a total area of 48 m², and includes one toilet cubicle for boys, three cubicles for girls, and one cubicle for disabled students.

The total cost was 784,553 Baht, with YTMT providing 411,553 Baht in financial assistance to cover materials and equipment costs.



Cultural conservation activities

As in the past, YTMT participated in the Songkran (Thai New Year) Festival in April 2016. Several YTMT employees participated in local Elderly Day activities to support food delivery.

