



TOSOH

TOSOH ANNUAL REPORT 2018
CORPORATE SOCIAL RESPONSIBILITY
KEY DATA & REFERENCES

TOSOH CORPORATION

ENVIRONMENT & SOCIETY



ENVIRONMENT & SOCIETY

Input and Output

In manufacturing its products, Tosoh reacts, breaks down, and distills a variety of raw materials. Reacting and breaking down these materials requires heat. That heat is provided by the steam generated by our power-generation boilers, which also produce the electricity needed to drive these processes. We suppress the heat created by the reaction process using industrial-use water and seawater. And we carefully monitor, manage, and work to reduce the atmospheric, land, and water emissions resulting from our manufacturing activities to ease the burden on the environment to the maximum extent possible.

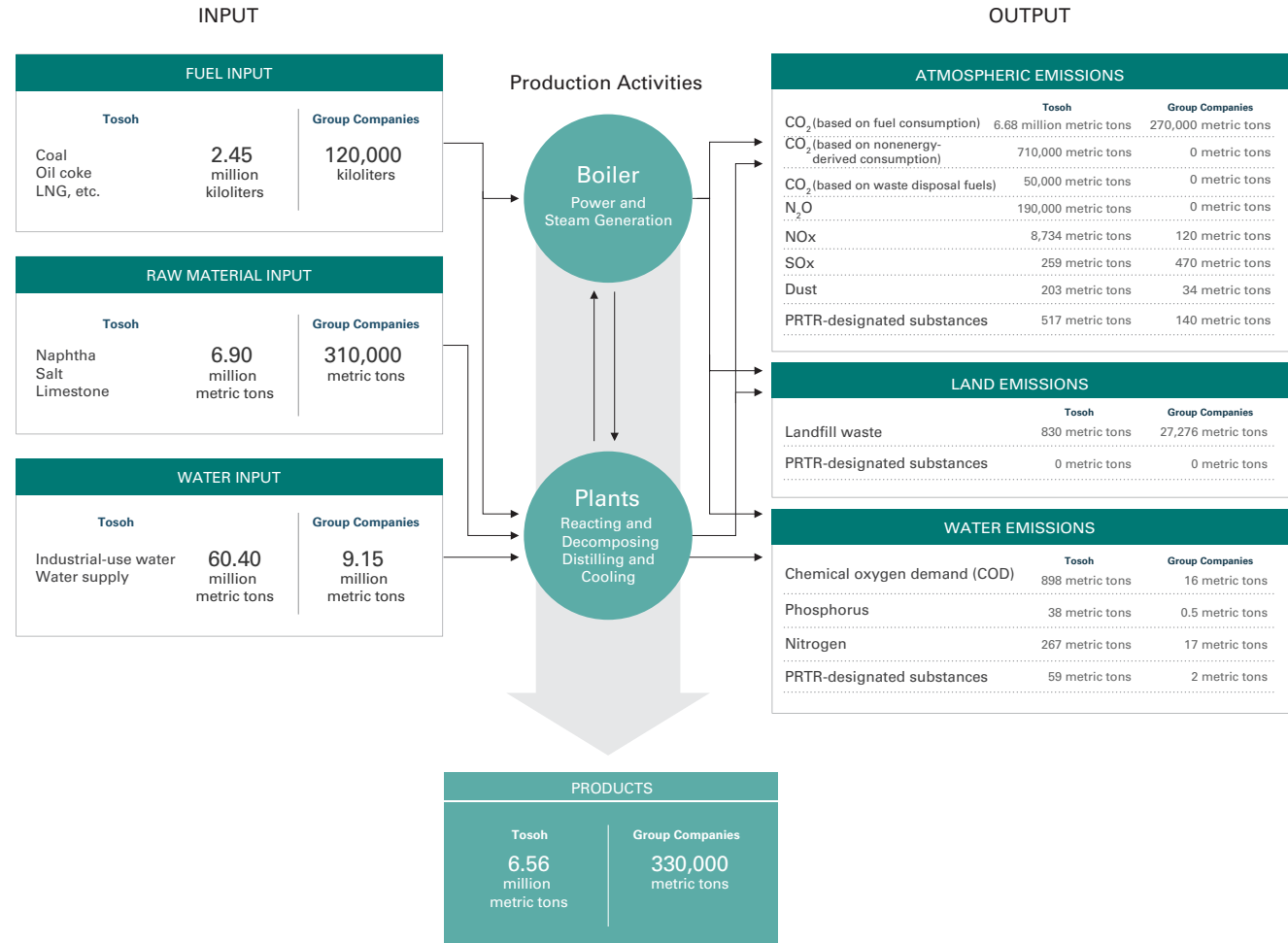
Scope of calculation

Tosoh:

- Nanyo Complex
- Yokkaichi Complex
- Tokyo Research Center
- Polyurethane Research Laboratory

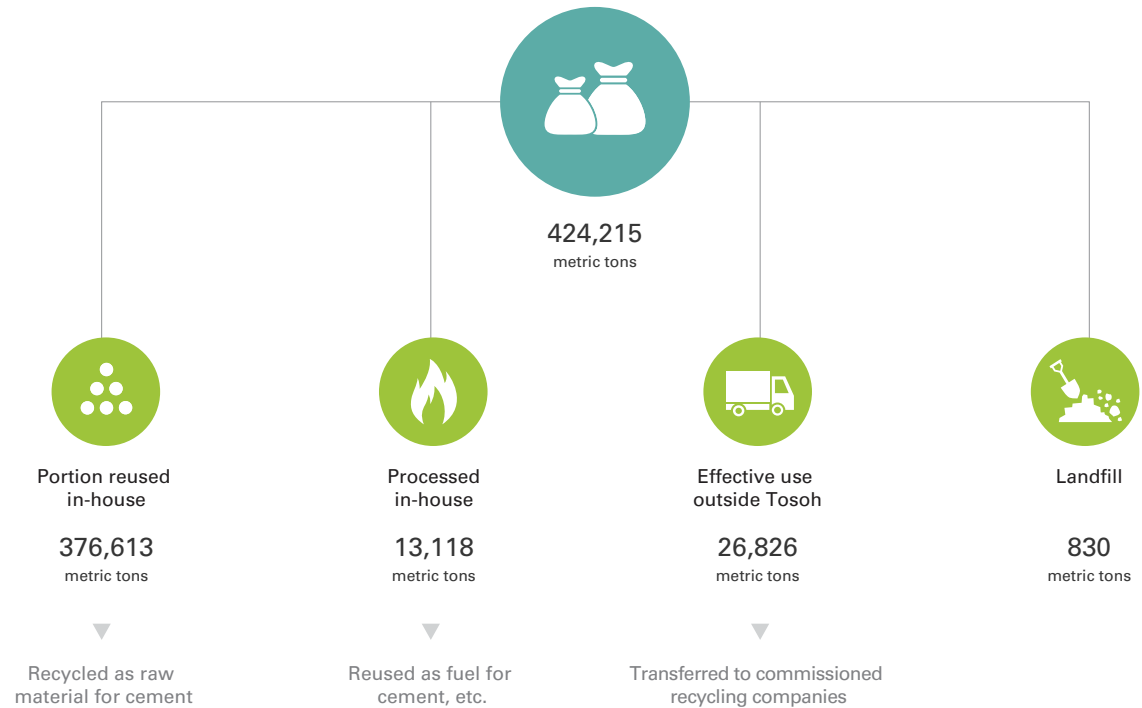
Group companies:

- Asia Industry Co., Ltd.
- Tosoh AIA, Inc.
- Tosoh Quartz Corporation
- Tosoh Silica Corporation
- Tosoh Zeolum, Inc.
- Tosoh Speciality Materials Corporation
- Tosoh Ceramics Co., Ltd.
- Tosoh Hyuga Corporation
- Tohoku Tosoh Chemical Co., Ltd.
- Rinkagaku Kogyo Co., Ltd.
- Toyo Polymer Co., Ltd.
- Hokuetsu Kasei Co., Ltd.
- Lonseal Corporation
- Nippon Miractran Co., Ltd.
- Tosoh SGM Corporation
- Tosoh Finechem Corporation

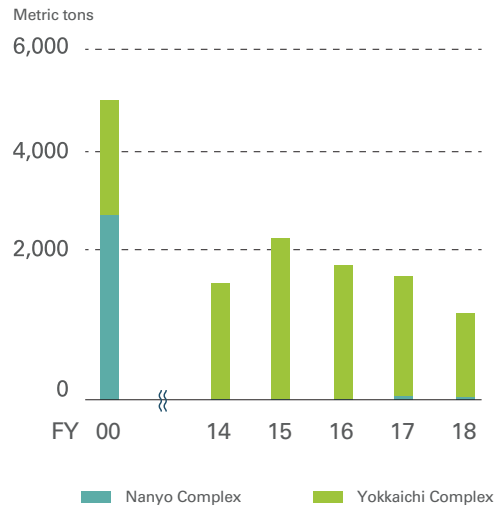


Industrial Waste Volume

The company is constantly working to discover new and innovative ways to reuse and recycle precious natural resources and the by-products of manufacturing. Most industrial waste from Tosoh's power generation facilities is recycled. Coal ash, for instance, is a key ingredient in Tosoh's cement. The Nanyo Complex reuses or reprocesses virtually all of its industrial waste and sources general and industrial waste externally for use as fuel in operating its cement manufacturing facilities.



Total Landfill Waste



In fiscal 2018, Tosoh disposed of 830 metric tons of industrial waste, or 0.20% of total industrial waste volume. This was far below the Responsible Care® (RC) target of 1,500 metric tons. When entrusting waste treatment externally, we publish a manifest for industrial waste management, ensuring appropriate management.

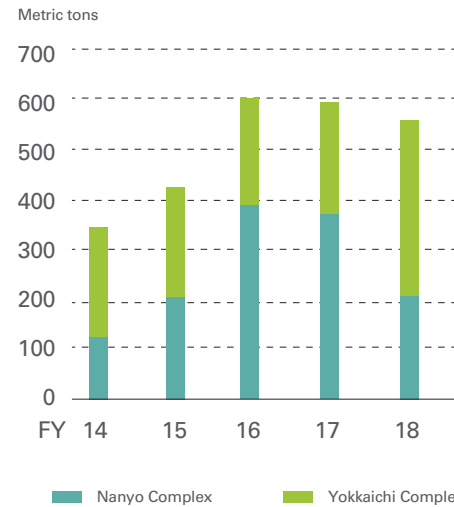
The company's goal for fiscal 2019 is to dispose of no more than 1,000 metric tons of industrial waste.

FY16: Total industrial waste 424,200 metric tons/landfill waste 1,705 metric tons, or 0.4%

FY17: Total industrial waste 419,850 metric tons/landfill waste 1,382 metric tons, or 0.3%

FY18: Total industrial waste 424,215 metric tons/landfill waste 830 metric tons, or 0.2%

PRTR-Applicable Substance Emission Volume

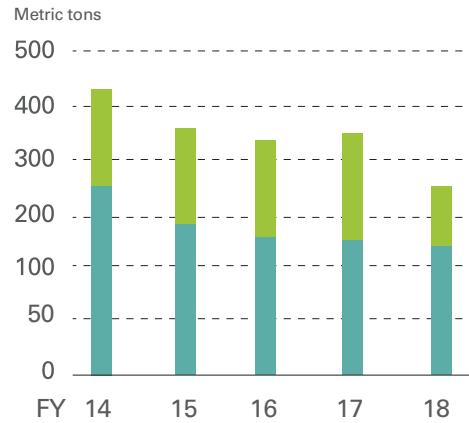


Japan's Pollutant Release and Transfer Register (PRTR) law requires businesses that deal with chemical substances to estimate and report the volume of chemical substances they emit. Tosoh complies with the law and works to reduce its emissions in the interest of contributing to a cleaner, healthier environment.

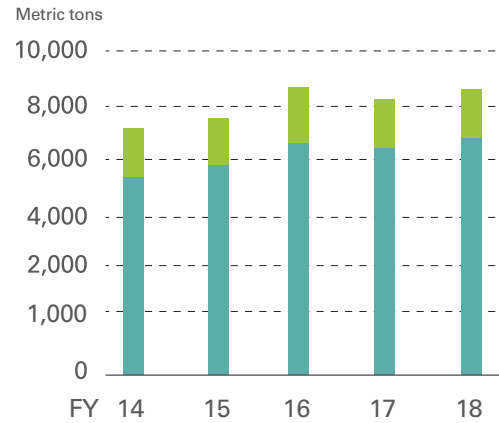
In fiscal 2018, Tosoh's Class 1 chemical emissions totaled 576 metric tons. That marked a decrease of 17 metric tons from fiscal 2017.

ENVIRONMENT & SOCIETY

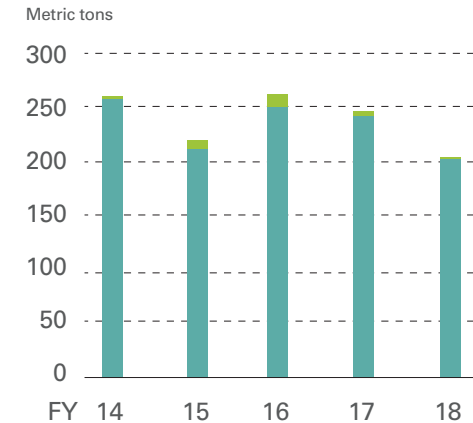
SOx (sulfur oxide)



NOx (nitrogen oxide)



Dust



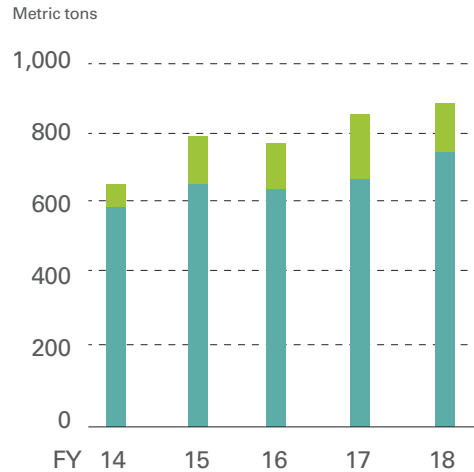
■ Nanyo Complex ■ Yokkaichi Complex

Tosoh's operation of boilers and furnaces that burn fuel results in the emission of smoke into the atmosphere that contains sulfur oxide (SOx), nitrogen oxide (NOx), and particulate matter. To mitigate the possible adverse effects on health from atmospheric emissions, Japan's Air Pollution Control Act sets regulatory values for each such facility and applies a total volume control structure to each business unit.

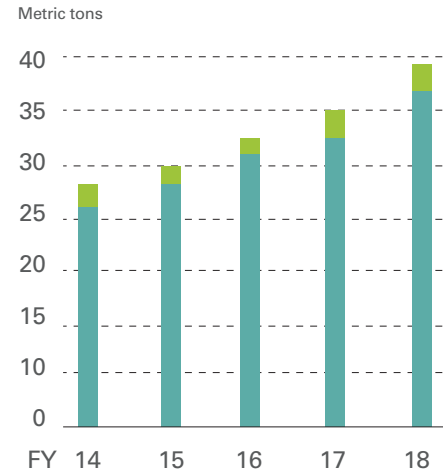
Tosoh has gone a step further. We work with the communities where we operate and forge agreements and formulate regulations for appropriate values for our local operations. We have also established our own stringent values in the interest of contributing to sustainable environmental preservation. We strive constantly to meet and better the various standards. We did not exceed any regulatory values in fiscal 2018.

ENVIRONMENT & SOCIETY

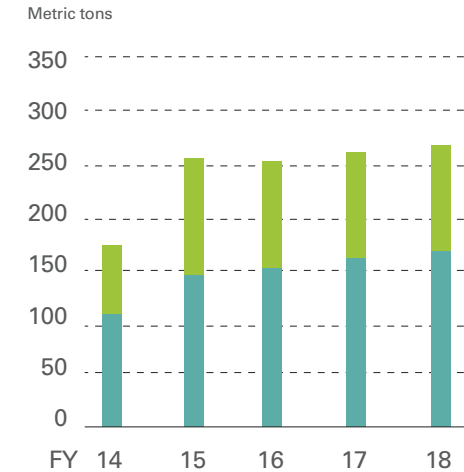
COD (chemical oxygen demand)



Phosphorus



Nitrogen



■ Nanyo Complex ■ Yokkaichi Complex

Japan's Water Pollution Prevention Act and additional regulations based on drainage standards that govern effluent protect open coastal areas and closed bodies of water including Tokyo Bay, Ise Bay, and the Inland Sea where industrial activity is concentrated. Tosoh's business units, in addition to complying with these and municipal effluent regulations and agreements, have established proprietary effluent values in the interest of sustainable environmental preservation.

Tosoh did not exceed any regulatory values in fiscal 2018, and will continue to work with greater effort to meet and improve upon the values established by regulations and agreements.

ENVIRONMENT & SOCIETY

Environmental Accounting

Tosoh's environmental accounting initiatives seek to better quantify the investments and expenses involved in environmental conservation.

Environmental investments in fiscal 2018 were 2.6 billion yen, with a focus on pollution prevention equipment. Environmental costs were 14.6 billion yen, an increase of 740 million yen compared to fiscal 2017. The economic effect totaled 5.0 billion yen, accomplished through the profit of sales of valuable waste and from cost reductions achieved through energy conservation.

1 Facility investment and other expenditures for environmental conservation.

2 Expenses, including variable and labor costs, for environmental conservation.

Scope: Nanyo Complex, Yokkaichi Complex, Tokyo Research Center, Polyurethane Research Laboratory
Target Period: April 1, 2017—March 31, 2018

For the most part, our figures follow "Environmental Accounting Guidelines 2005" released by Japan's Ministry of the Environment. Some figures, however, are unspecified by said guidelines and are aggregated based on in-house rationale.

Environmental conservation cost

unit: millions of yen

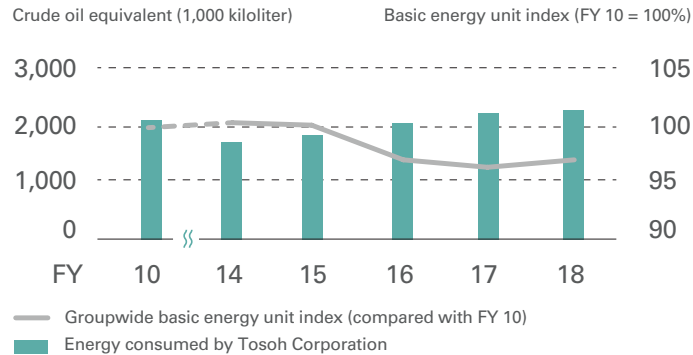
Classification	Major initiatives	Investments ¹				Expenses ²
		FY 16	FY 17	FY 18	FY 18	
Business area cost		1,230	2,610	2,500	11,730	
Public hazard prevention cost	Exhaust gas and wastewater treatment	720	1,940	1,830	6,920	
Global environmental conservation	Power and fuel reduction	360	490	290	1,960	
Resource circulation cost	Raw material and waste product recovery	150	180	380	2,860	
Administration cost	Environmental management, environmental impact assessment, environmental report publishing, environmental load monitoring	20	20	40	730	
R&D cost	Environmental load reduction technology, environmentally conscious product development	120	60	40	2,040	
Social activity cost	Association membership fees, replanting and beautification, community environmental support	0.0	0.0	0.0	30	
Other		0.0	0.0	0.0	80	
Total		1,370	2,690	2,570	14,610	

Economic benefit

unit: millions of yen

Details		FY 16	FY 17	FY 18
Revenue	Revenue from contract and sale of waste for recycling and from unusable products	580	800	1,230
Expense savings	Energy conservation	2,830	2,780	3,110
	Resource conservation	3,220	1,250	660
Total		6,630	4,830	5,000

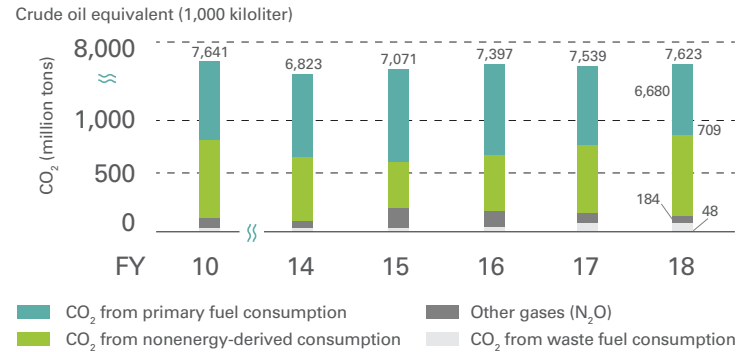
Energy Consumption Index of Energy Used



Values for the crude oil equivalent of energy used and for the energy consumption index versus fiscal 2010 are calculated using the method stipulated by Japan's Act on the Rational Use of Energy. Figures for fiscal 2015 take into account energy consumed in October and thereafter with regard to the merger with Nippon Polyurethane Industry Co., Ltd. (NPU).

The fiscal 2018 energy unit index stood at 97.0% compared with fiscal 2010, but increased 0.6 percentage points compared with fiscal 2017. These results are due to the increase in the number of days for periodic repair and reduction in production attributed to the operating status at the Nanyo Complex.

Greenhouse Gas Emissions



We calculated our energy-derived CO₂ emissions using the Mandatory Greenhouse Gas Accounting and Reporting System, which is based on Japan's Act on the Promotion of Global Warming Countermeasures. Values from fiscal 2010 through the first half of fiscal 2015 include emissions from NPU.

In fiscal 2018, GHG emissions, such as CO₂ from primary energy consumption, increased from fiscal 2017 due to a rise in energy consumption.

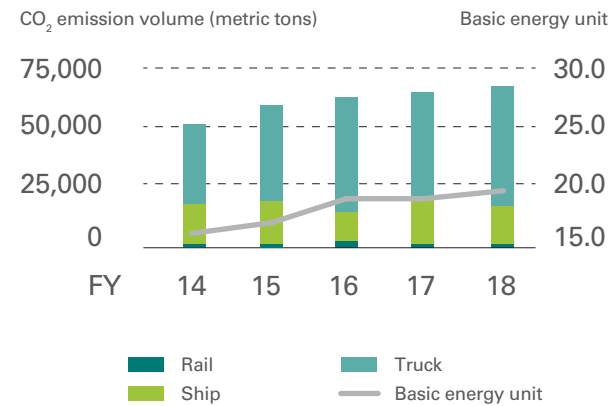
CO₂ Emissions and Basic Energy Unit

Fiscal 2018 saw a 1.6% increase in CO₂ emissions compared with fiscal 2017 that was attributable to the logistics of increased product shipments.

The logistics basic energy unit was 19.1, up 0.3 points from fiscal 2017.*This was attributable to the increased percentage of transportation by truck (in terms of transport ton-kilograms).

Tosoh will continue its efforts to reduce emissions through measures such as promoting a modal shift and energy-efficient operation of ships.

* Consumption converted to crude oil (kiloliter)/transport ton-kilograms (1 million ton-kilograms)



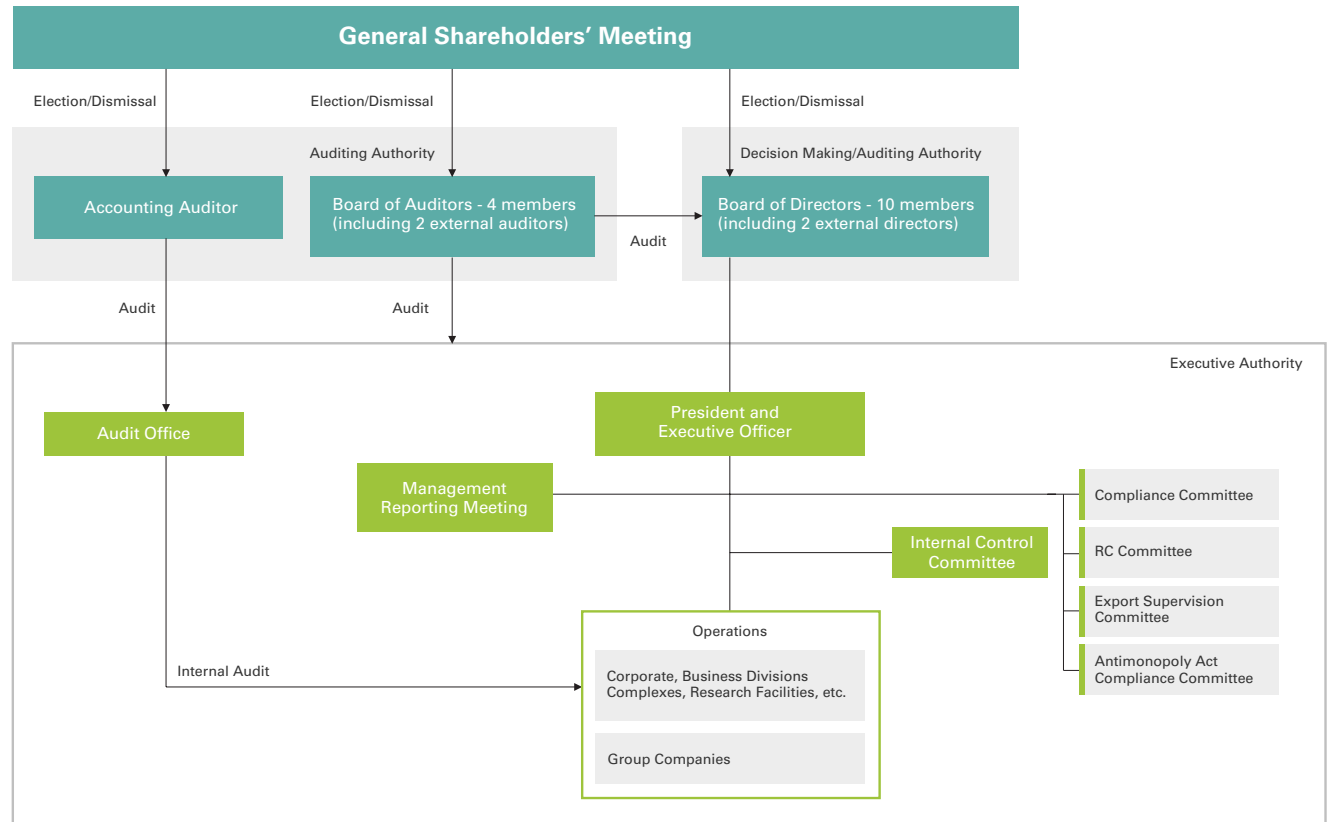
G O V E R N A N C E



GOVERNANCE

Governance Structure

Tosoh has established an organizational structure designed to enable it to respond in a flexible and agile manner to fluctuations in its business environment. The company is also aware of the need for a high degree of fairness and transparency in its management and day-to-day operations and of the impact on corporate value. In line with the importance and spirit of the Corporate Governance Code, Tosoh practices fairness and transparency in management, operations, and reporting. The company is also working to enhance its corporate governance structure and reporting mechanism to ensure proper information disclosure to shareholders and all others with a stake in the company.



GOVERNANCE

Overview of Committees

Tosoh's Board of Directors is composed of eight internal and two external directors, for a total of ten directors. At its meetings, which are in principle conducted once a month, the Board is tasked with addressing important issues related to management and is responsible for overseeing the performance of Board members and executive officers. The Board also makes final determinations concerning executive officer selection and dismissal.

Tosoh's Board of Auditors includes two internal and two external auditors, for a total of four auditors. At its meetings, which are in principle conducted once a month, the Board of Auditors assesses the Board of Directors' activity and execution of business. Members of the Board of Auditors are present at Board of Directors meetings to receive reports and review documentation related to important decisions. They also have the opportunity to communicate with members of the Internal Control Committee and with the accounting auditor to enhance audit efficiency and effectiveness. The Board of Auditors incorporates a secretariat for the purpose of maximizing the performance of its members.

The management board has preliminary deliberations on the Board of Directors' agenda items and discusses important matters related to overall Group management, establishing a structure that allows proper and efficient decision making for management.

Committee	Frequency (fiscal 2018 results)
Compliance Committee	Build structure to promote management from perspective of compliance, formulate measures such as educational opportunities, operate internal reporting system (2 times)
RC Committee	Build structure to promote Responsible Care (RC) activities, formulate annual RC policy (1 time)
Export Supervision Committee	Formulate measures to execute security export control in compliance with Foreign Exchange and Foreign Trade Act (1 time)
Antimonopoly Act Compliance Committee	Prepare internal regulations and manuals and formulate measures in support of compliance with Antimonopoly Act (1 time)
Internal Control Committee	Internal reporting system for financial reporting related to Financial Instruments and Exchange Law, prepare internal control system required under Companies Act (4 times)

R E S P O N S I B L E C A R E

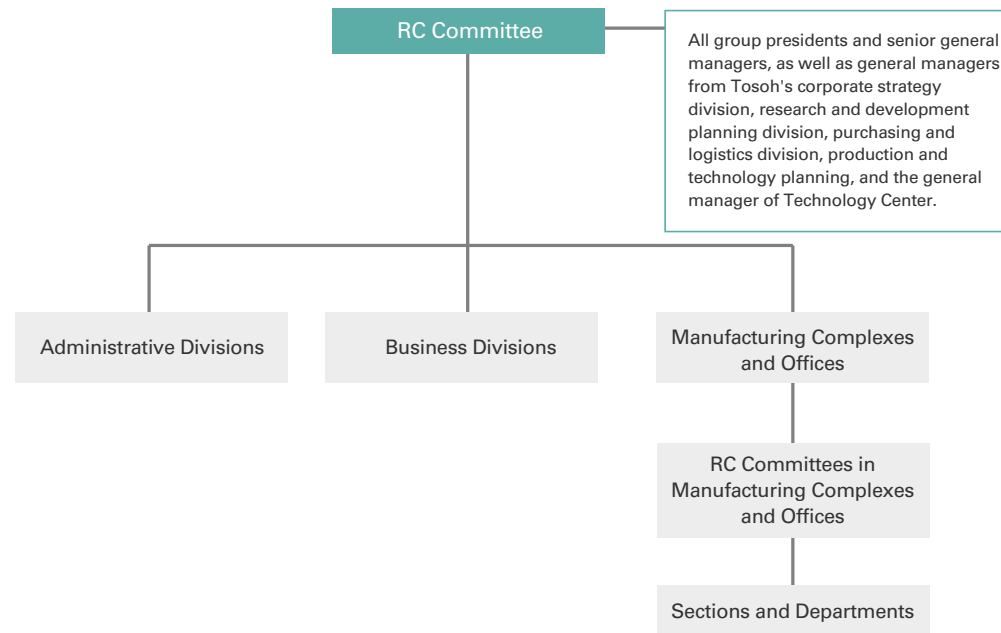


RESPONSIBLE CARE

RC Promotional Structure

The Responsible Care Committee, which promotes RC activities, is chaired by the director responsible for the company's Environment, Safety and Quality Control Division. General managers from Tosoh's Purchasing and Logistics Division, operating divisions, manufacturing complexes and offices, and research centers serve as members of the committee.

The RC Committee formulates action policies for the entire company, deliberates, advises, and approves important matters, and devises key measures related to activities. The results of the proceedings and annual action policies of the RC Committee are discussed at Board of Directors meetings. Based on action policies and other items approved at Board of Directors meetings, the RC Committee creates plans for each division and conducts activities.



RC Activity Results and Goals

	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Safety and Disaster Prevention and Occupational Safety and Health	<p>Abnormal events: 2; number of employees who lost time due to accidents: 9</p> <p>(1) Formulated 5S guidelines; continued Hazard Prediction Training with external instructors RC Committee chairman began 5S patrols*</p> <p>(2) Strengthened safety education through implementation of ‘know-why’ as planned; promoted rollout to operational support system</p> <p>(3) Promoted what-if study method at manufacturing complexes; prioritized implementation of studies concerning operations under dangerous conditions</p> <p>(4) Established Trouble Study Sheet (Nanyo), Process Trouble Measures Committee (Yokkaichi), fortified response</p> <p>(5) Implemented education for affiliated companies through gatherings prior to periodic maintenance, Disaster Prevention Council, etc. Identified high-risk locations for on-premises contract work centered around rotating machinery</p> <p>(6) Promoted IoT utilization for operational support, maintenance management; utilized big data such as PI (Nanyo); implemented “smart valve,” instrument diagnosis (Yokkaichi)</p>	<p>Achieve zero abnormal events, incidents of work time lost because of accidents</p> <p>(1) Comprehensive basic safety activities: rolled out voluntary Hazard Prediction Training activities</p> <p>(2) Continue to promote know-why education</p> <p>(3) Implement risk assessment for instances of unsteadiness, modification</p> <p>(4) Activities toward reducing similar, work-related accidents: detailed analysis, implementation of accident case studies</p> <p>(5) Ensure safe operations on manufacturing complex premises: implement risk assessment on premises, consider measures to reduce risk</p>
	<p>(1) Proceeded according to implementation plan of seismic measures for high-pressure gas storage tanks with goal of completing measures by fiscal 2021</p> <p>(2) Handling in accordance with plan to ensure seismic reinforcement of key buildings Nanyo Complex: tsunami countermeasures under consideration</p>	<p>Promotion of earthquake and tsunami countermeasures</p> <p>(1) Seismic measures for high-pressure gas facilities: concrete action to implement plan for earthquake resistance</p> <p>(2) Seismic measures of key buildings and promotion of tsunami countermeasures: planned seismic reinforcement construction (Nanyo), planning/implementation of tsunami countermeasures</p>

5S: An activity that maintains and improves workplace environments by sorting, setting in order, shining, standardizing, and sustaining.

RESPONSIBLE CARE

RC Activity Results and Goals (cont.)

	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Safety and Disaster Prevention and Occupational Safety and Health	<p>Nanyo: Completed high-pressure gas recertification (December 2017)</p> <p>Implemented certification investigation (security/completion) according to plan</p>	<p>Reconstruction of maintenance management system</p> <p>(1) Fortification of headquarters structure: active participation on part of Environmental Protection and Quality Assurance Division at headquarters</p> <p>(2) Concrete action concerning certification requirements: enhancement of maintenance management system</p>
	<p>Abnormal event at group companies: 2; number of employees who lost time due to accidents: 16</p> <p>Safe environment exchanges: 15 companies, 23 sessions</p> <p>Safe environment web conferences: 2 sessions (August, March); implemented accident case study education using external instructors</p> <p>Requested cooperation in handling at safe environment web conferences</p> <p>Confirmed status through survey</p> <p>Work audit: conducted for 1 company</p>	<p>Decrease group company accidents, work time lost because of accidents compared with previous fiscal year</p> <p>(1) Guidance for group companies:</p> <p>Safe environment exchanges: guidance, follow-up with companies where accidents have recurred; safety inspections on occurrence of accidents that require time off work</p> <p>Safe environment web conference: share positive examples of activities, safety education using external instructor, etc.</p> <p>(2) Promotion of earthquake, tsunami countermeasures at group companies</p> <p>Ensure earthquake resistance at key buildings</p> <p>Establish emergency contact system to secure life; secure escape routes, disaster prevention equipment</p> <p>(3) Cooperate with Audit Office in work audits of overseas group companies</p>

RESPONSIBLE CARE

RC Activity Results and Goals (cont.)

	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Environmental Conservation	<p>(1) No cases of exceeding voluntary control values</p> <p>(2) Facility investment, construction to combat leakage planned, scheduled for FY 2019</p> <p>(3) Conducted investigation of group companies' waste disposal management situation</p> <p>(4) Completed ISO14001:2015 certification at Yokkaichi Complex</p>	<p>Comply with mandated regulatory values, voluntary control values, do not exceed values</p> <p>(1) Comply with voluntary control values</p> <p>(2) Ensure thorough legal compliance (including facility maintenance, etc.)</p> <p>(3) Proper treatment of industrial waste: confirm maintenance situation at group companies</p> <p>(4) ISO14001: transition to 2015 edition; certification at Nanyo Complex</p>
	<p>PRTR-designated substance emissions of 576 metric tons; installed monochlorobenzene (MCB) reduction equipment according to plan, operation scheduled to start in FY 2019</p>	<p>Meet PRTR-designated substances emissions target of less than 470 metric tons per year</p> <p>Execution of plan to reduce MCB, n-hexane</p>
	<p>Final industrial waste disposal volume 830 metric tons, target achieved; implemented use of waste material from high-silica zeolite, zirconia plants as material for cement</p>	<p>Meet final reduction target for industrial waste disposal of less than 1,000 metric tons per year</p>
	<p>Formulated processing plan for disposal of equipment containing polychlorinated biphenyls (PCBs) based on other companies' results</p>	<p>Execute plan for disposal of equipment containing polychlorinated biphenyls (PCBs)</p> <p>Planned disposal of low-concentration equipment, disposal of high-concentration equipment by deadline</p>

RESPONSIBLE CARE

RC Activity Results and Goals (cont.)

	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Chemical and Product Safety	<ul style="list-style-type: none"> (1) Shared compliance schedule related to regulation on new/existing chemical substance registration with divisions, handled accordingly (2) Constructed check system for status of response when GHS regulations related to SDS/labeling revised 	<p>Proper response to overseas, domestic legal regulations, GHS regulations</p> <ul style="list-style-type: none"> (1) Respond to new domestic, overseas regulations/existing chemical substances registration system: prompt identification, response to new, revised information (2) Response to domestic, overseas GHS regulations: review outstanding SDS, respond accordingly, respond to Industrial Safety and Health Law
	<p>Education on laws and regulations relating to chemical substances carried out as planned</p>	<p>Continue education related to chemical substance regulations</p> <ul style="list-style-type: none"> (1) Explanatory sessions on overseas legal regulations (2) GHS regulations: conduct education on regulations in all countries, create self-study materials on SDS creation (3) Explanatory sessions on domestic legal regulations
	<p>Launched operation of Chemical Substance Management System</p>	<p>Construct database, improve functionality of chemical substance management system</p>
Quality Assurance/ Pharmaceuticals	<ul style="list-style-type: none"> (1) Implemented quality audits of 26 manufacturing contractors (9 of which were overseas) (2) Selected contractors with reliable quality management systems 	<p>Fortify quality assurance structure for outsourced manufactured products</p> <ul style="list-style-type: none"> (1) Implement quality audits of manufacturing contractors: identify, provide guidance concerning areas requiring improvement at all companies (2) Clarify quality assurance structure

RESPONSIBLE CARE

RC Activity Results and Goals (cont.)

	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Quality Assurance/ Pharmaceuticals	<p>Received 44 complaints concerning products, target not achieved</p> <p>(1) Continued to implement site visits, quality risk assessment, etc.</p> <p>(2) Created audit manual, checklist; promoted unified perspective for audits</p> <p>(3) Nanyo and Yokkaichi Complex successfully migrated to ISO9001:2015 system</p>	<p>Reduce product complaints to less than 35 ppm</p> <p>(1) Fortify contamination countermeasures: use consultants</p> <p>(2) Fortify cooperation with quality assurance, manufacturing divisions: continue site visits, quality risk assessments</p> <p>(3) Promote audits of raw material suppliers (including packing materials)</p>
	<p>(1) Formulated quality assurance structure</p> <p>(2) Implemented audits at 9 divisions (including multiple audits at single divisions)</p>	<p>Fortify quality assurance structure for Bioscience Division products</p> <p>(1) Conduct quality audits, shipping management for research reagents, measurement products</p> <p>(2) Conduct audits of diagnostic product manufacturing facilities, product design division</p>
	<p>Strengthening of pharmaceutical manufacturing plant (Tohoku Tosoh Chemical) audits, implementation of regulatory audits, education for Chlor-alkali Division implemented according to plan</p>	<p>Fortify quality assurance structure for pharmaceutical product manufacturing, sales operations</p> <p>Conduct audits of pharmaceutical manufacturing facilities (Tohoku Tosoh Chemical)</p>
Logistics Safety	<p>Incidence rate of 84ppm, target not achieved</p> <p>Continued to develop database; operation to begin in FY 2019</p>	<p>Reduce logistics incidents, complaints to less than 50 ppm</p> <p>Conduct follow-ups concerning prevention of recurrences, perform checks on effectiveness of these measures</p> <p>Classify incidents compiled in database, roll out measures horizontally</p>

RESPONSIBLE CARE

RC Activity Results and Goals (cont.)

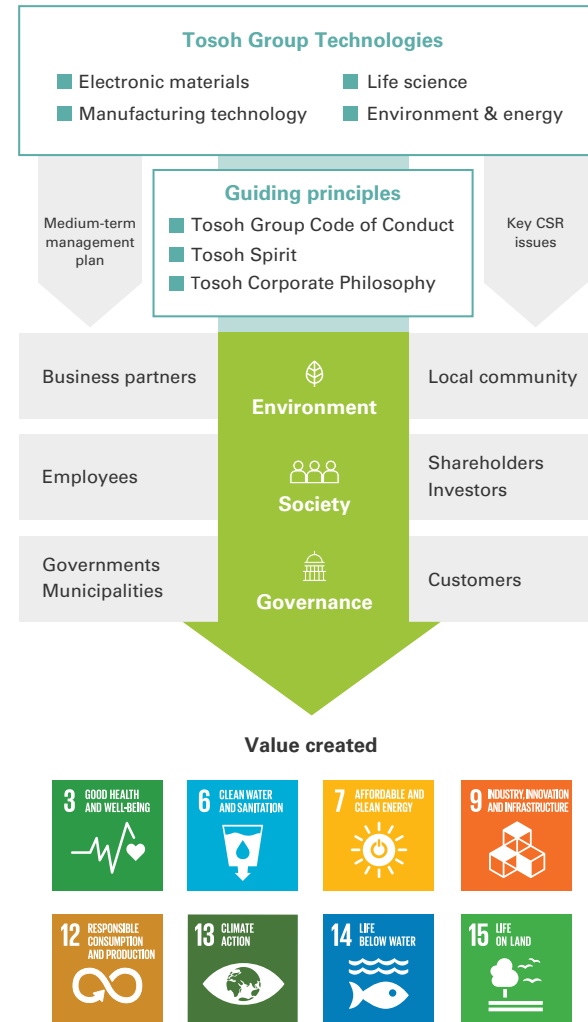
	Fiscal 2018 Activity Results	Fiscal 2019 Activities
Logistics Safety	Incidence rate for transportation of small vessels of 81ppm; target achieved; continue to implement new initiatives centered around handling of poisonous, deleterious substances, other hazardous substances	Continue to maintain low incidence rate of less than 100 ppm Promote company-operated transportation, share case studies relating to accidents with route operators
	Recorded no major accidents, target achieved Joined hazardous materials accident response services HAZMATers, HMSS Training for purpose of preventing human error for vessels under Tosoh's control	Aim for zero major accidents Continue BRM training for crew members on charters Support activities toward reconstruction of safety culture at logistics subsidiaries
	(1) Safety education for affiliated companies such as disaster prevention programs (2) Identify high-risk operational factors with focus on contract work with rotating equipment	Ensure safety of contract work on premises: (1) Enhance safety education, guidance, audits for affiliated companies (2) Implement risk assessment on premises, consider risk reduction measures (3) Ensure safety for truck delivery
Public Dialogue	Implemented media training (March 2018)	Promote risk communication: Continue media training
	Implemented according to plan with aim of strengthening dialogues with local communities; community dialogues with Shunan district (Nanyo), Kasumigaura regional public disaster prevention council (Yokkaichi), etc.	Promote continued cooperation with local community: dialogue with community, factory tours, conduct exchanges with residents' associations, etc.

RESPONSIBLE CARE

Value Creation

The technologies we own and are constantly working to develop constitute a sound foundation for the creation of value. The medium-term business plan and key CSR issues help to dictate our direction, and the Tosoh Group Action Policy and the five tenets of Tosoh Spirit serve to underpin our efforts. Further guidance is provided by Environmental, Social, and Governance (ESG) criteria.

We will continue to cooperate with stakeholders and strengthen those relationships of trust. We will also work to achieve sustainable growth and to contribute to the resolution of key societal issues such as the SDGs. These endeavors will bear fruit in the form of unprecedented value, which we return to society. Through these activities, while fulfilling our responsibilities as a company, we aim to contribute to the realization of a sustainable society.



RESPONSIBLE CARE

Relationships with Stakeholders

Tosoh provides information about its business activities through its annual report, CSR report, and other means. Tosoh also gleans valuable insight through dialogue with our stakeholders and from listening to their assessments of the company.

	Role	Communication Tools	Communication Opportunities
Shareholders and investors	Disclosing business results, business policies, management strategy, and other information at the right time and as appropriate Building relationships of trust with shareholders and investors Ensuring appropriate return on investment	Annual reports Financial summaries, financial presentations Securities reports Business reports	General meeting of shareholders Financial reports presentation Individual meetings Teleconferences Plant tours
Customers	Providing safe, secure, consistent, and high-quality products and service Building relationships of trust with customers Developing products that meet customer needs and improving customer satisfaction	Product pamphlets Safety data sheets (SDS) Help desk	Business activities Quality assurance support Exhibitions User audits
Local communities	Ensuring safe and secure operations Contributing to community development Building and maintaining relationships of trust with local communities	Pamphlets about the Nanyo and Yokkaichi Complexes and the laboratories	Plant tours Exchange through community events Community dialogues and opportunities to exchange ideas
Municipalities	Complying with laws Disclosing information appropriately and in timely fashion	—	Filings Meetings
Suppliers	Ensuring fair trade		Purchasing activities
Employees	Providing a pleasant and meaningful place to work Improving systems and education to maximize the abilities of employees Ensuring stable lives for employees and their families	Internal newsletters Intranet Consultation and reporting hotlines	Labor-management council Research Business reports (interviews with supervisors) Workplace meetings

QUALITY MANAGEMENT



QUALITY MANAGEMENT

Quality Assurance Structure

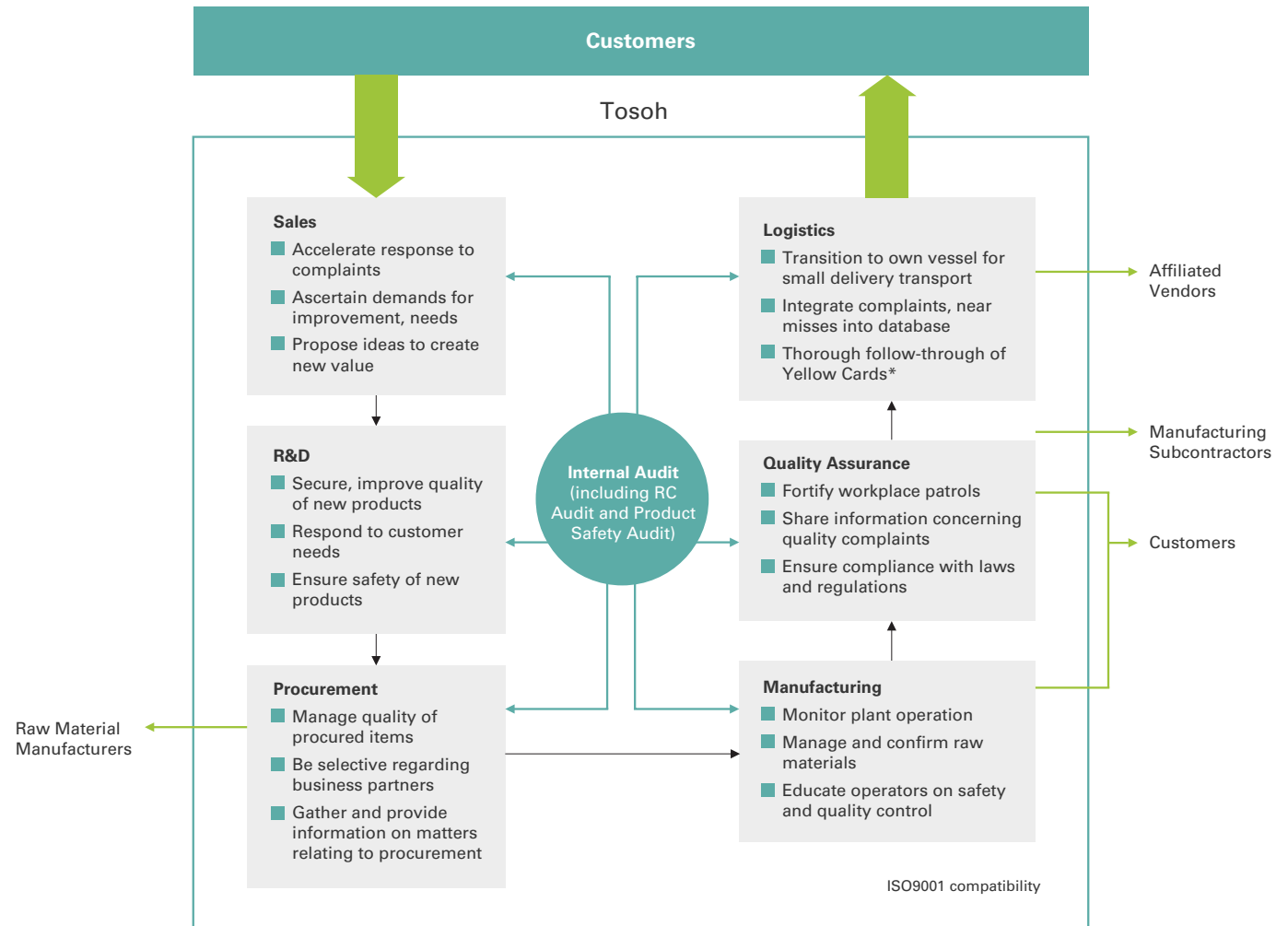
At Tosoh, we take the initiative to supply safe, secure, high-quality products at every stage of production, from R&D to product shipment.

In December 2017, in response to a request from the Japan Business Federation, we confirmed that no quality-related issues exist.

We acquired the ISO9001:2015 certification in fiscal 2018. We strengthened our quality management system based on these specifications, and are working to improve the quality of our products and the satisfaction of our customers.

Tosoh also performs audits at its main raw material producers and manufacturing subcontractors. Quality assurance systems, quality management conditions, complaint recurrence preventions, and related aspects are reviewed. In fiscal 2018, we conducted audits at a total of 48 raw material producers and manufacturing subcontractors.

*Yellow Cards are part of activities recommended by the Japan Chemical Industry Association (JCIA). The cards contain information about the right actions to take if an accident occurs. It provides contact details to ensure proper responses by transportation companies, firefighters and police officers if an accident occurs during the transport of chemical substances. Transport personnel must carry these cards at all times.

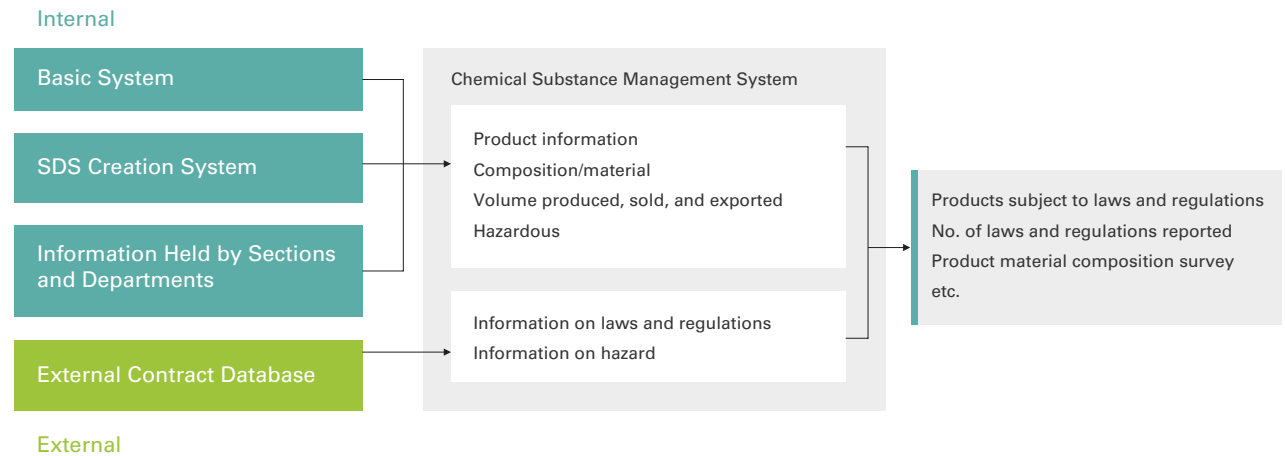


QUALITY MANAGEMENT

Chemical Safety Management System

Tosoh complies with domestic and foreign regulations, assesses product safety, and provides product information to customers in its efforts to ensure the safe handling of its chemical products.

For chemical management throughout the entire supply chain, Tosoh discloses and provides information about the chemical substances contained in its products.

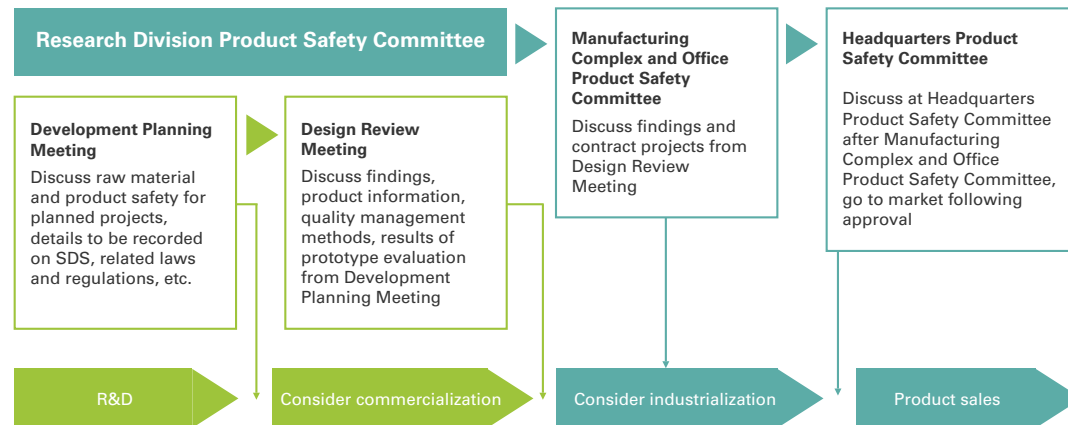


QUALITY MANAGEMENT

Product Safety Audit

In accordance with the intent of the Product Liability Act, all Tosoh employees work together in an effort to ensure the safety of products and provide appropriate product information.

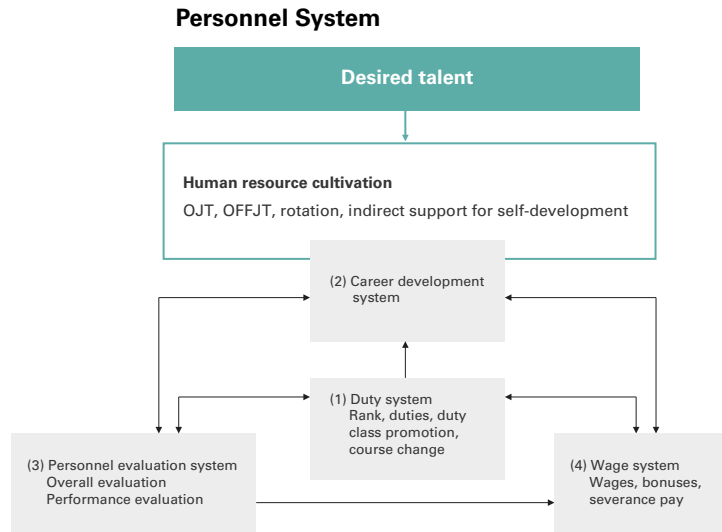
In addition, the Product Safety Review Committee of the company deliberates on safety and laws and regulations at each phase from R&D to sales.



IN HARMONY WITH
OUR EMPLOYEES



IN HARMONY WITH OUR EMPLOYEES



With the objective of developing employee capabilities and personnel cultivation, we are approaching job responsibilities, personnel development interviews, personnel performance appraisals, and the wage system in a coordinated fashion. Each employee, for example, meets twice annually with his or her supervisor for performance appraisals to set objectives and assess achievements. We deem these enhanced evaluations to be more persuasive in the development of personnel.

Overseas Study System

No. of users of Overseas Study System	FY 2016	FY 2017	FY 2018
1 month	5	5	5
3 months	3	5	6

The 1-month program is scheduled to be terminated in fiscal 2019, and the 3-month program will be upgraded

We are stepping up our efforts to develop personnel required in the globalization of our business activities. We are providing support for a variety of activities, including the introduction of the TOEIC examination within the company, the fortification of English- and Chinese-language study courses, and one- and three-month overseas study programs—all for the purpose of developing cognitive skills that will help Tosoh succeed in the global marketplace.

IN HARMONY WITH OUR EMPLOYEES

Company Employee-related Data

Tosoh is actively promoting measures to allow its employees to achieve a good work-life balance. We improve our workplaces to allow diverse human resources to find their work meaningful.

	FY 16	FY 17	FY 18
Regular employees	3,338	3,337	3,404
New employees	154	118	163
Employees with foreign citizenship	10	11	11
Number of re-employed workers	262	282	246
Disabled person employment rate ¹	1.85%	1.83%	2.03%
Average age of regular employees ²	38.6	38.1	38.0
Average years of continuous service	16.9	16.2	16.0
Employee turnover ³	0.5%	0.7%	0.6%
Employee retention rate (three years after joining)	98.7%	96.7%	98.7%

¹ Figures include dispatched employees.

² Figures exclude re-employed and part-time employees.

³ Figures reflect retirees during fiscal year, excluding mandatory retirees.

IN HARMONY WITH OUR EMPLOYEES

Annual Total Working Hours

We are making moves to reform the way we work, with a focus on reducing working hours and enhancing productivity. In fiscal 2018, we took initiatives aimed at increasing the rate of use of annual paid leave among permanent daytime workers, including the establishment of an internal schedule management system, creation of an atmosphere that permits those workers to take paid leave without hesitation, and awareness-raising activities in training sessions. Further, we have introduced the Refreshment Support Vacation System, which encourages employees to take at least five consecutive-day vacations yearly. In fiscal 2018, the rate of use of annual paid leave reached 77.7%. Therefore, we are maintaining high rates that exceed the government's target of 70%.

	FY 18 Results
Annual total working hours	1,915.21 hours/person
Annual total overtime working hours	210.07 hours/person
Rate of use of annual paid leave	77.7%

Excluding reemployed retirees, temporary employees, executive-level employees

Employer Action Plan regarding Promotion of the Active Engagement of Female Employees (April 2014 - March 2019)

- (1) Ensure that the percentage of women employed as career-track employees is 20% or higher.
- (2) Ensure that the number of women in management positions is 30 or more (3% or higher) at the end of fiscal 2026.
- (3) Assign female employees to departments with few female employees (including manufacturing and sales departments).

	FY 16	FY 17	FY 18
Number of female employees	273	295	302
Number of female new graduates or mid-career female hires	19	22	23
Number of management-level female employees	6	7	9
Proportion of management-level female employees	0.62%	0.71%	0.90%

IN HARMONY WITH OUR EMPLOYEES

Work-life Balance

Tosoh intends to help employees achieve work-life balance. For this purpose, the company promotes the reforms of systems and workplace culture.

Allowances for child-rearing and caregiving include leave for these purposes and reduced workloads for employees from pregnancy through child-raising. In fiscal 2018, Tosoh revised the systems to facilitate this utilization. Specifically, we changed the child care leave so that employees are paid for the first five days of the leave period. Family-care leave and sick-injured child care leave were converted into paid leave. We integrated maternity leave and child care leave and eased the requirements for taking the leave. Therefore, we encourage male employees to participate in child rearing and support employees with small children. In addition, to promote employee awareness and effective utilization of these systems, we have published a guidebook that introduces our internal systems, economic support, and required procedures related to pregnancy, childbirth, and child care.

We will continue with our policy of creating an environment where we can work with enthusiasm while valuing the diverse lifestyles of our employees.

	FY 16	FY 17	FY 18
Women's child care leave recipients (new) and percentage taken/returned to work	9 Leave taken: 100% Returned: 100%	10 Leave taken: 100% Returned: 100%	13 Leave taken: 100% Returned: 100%
Men's child care leave recipients	34 Leave taken: 30%	39 Leave taken: 30%	52 Leave taken: 37%
Men's child care leave recipients (new)	0	0	1
Employees taking advantage of reduced working hours to facilitate child care	7	12	8
Employees taking family-care leave	2	0	1

IN HARMONY WITH OUR EMPLOYEES

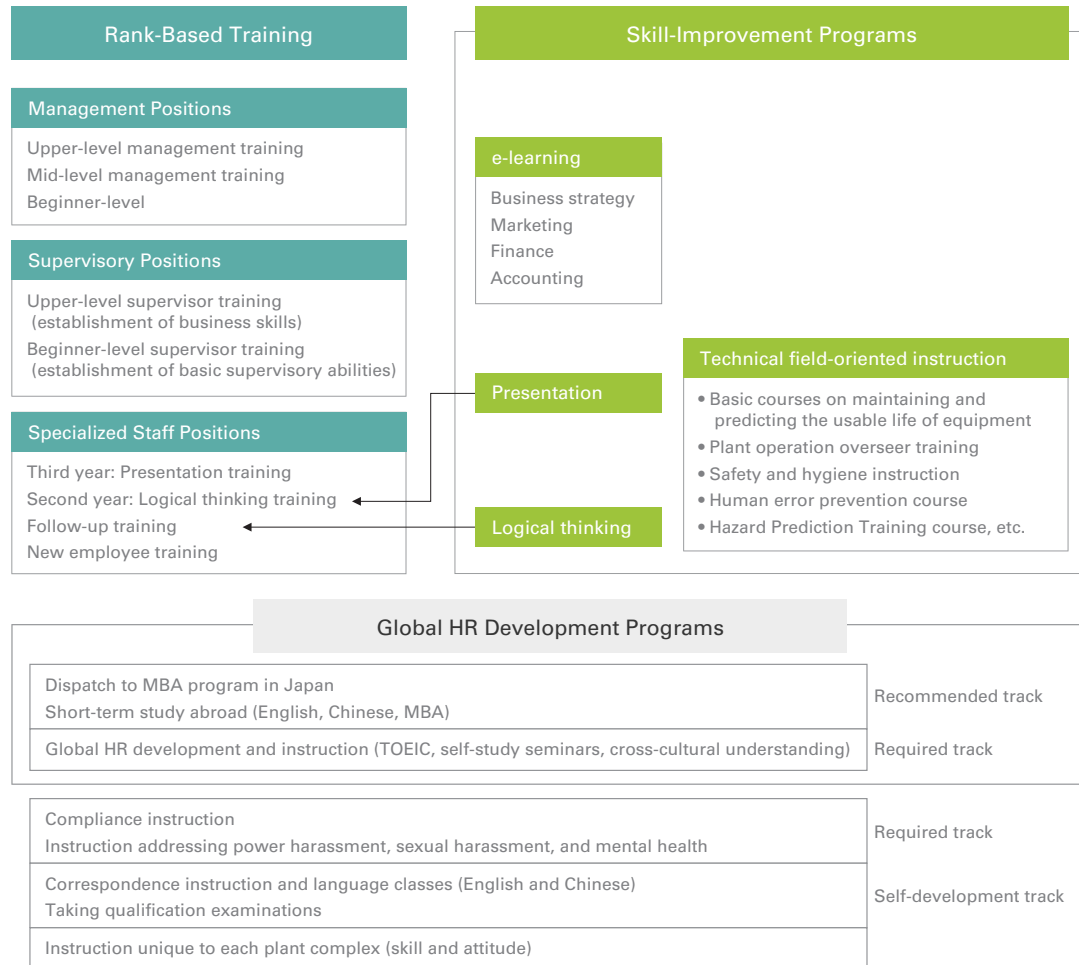
Rank-based Training

We provide training to employees in all job ranks, from new hires to those in management positions.

For young employees in their first five years at the company, we provide training aimed at enabling them to reinforce and acquire a solid foundation of basic skills as working members of society. We provide first-year employees with introductory training and follow-up training aimed at improving their stances on work. For second- and third-year employees, we provide logical thinking training and presentation training aimed at improving their basic skills as working members of society. For fourth- and fifth-year employees at the company, we provide beginner-level supervisor training, which is aimed at learning problem-solving skills.

For mid-level employees who have worked at the company for more than five years, we systematically provide e-learning training aimed at acquiring business skills (such as finance and business strategy). Finally, for those who will soon be promoted to management positions, we provide training including practical, case-based exercises as an opportunity to apply the business skills that they acquired through the e-learning training.

For employees in management positions, we provide training on the roles expected of employees in each rank and acquiring business management skills as future management executives, for example.





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