



## **SUSTAINABILITY REPORT**

**2014 & 2015**

<b>ABOUT THIS REPORT .....</b>	<b>3</b>
<b>MESSAGE TO STAKEHOLDERS .....</b>	<b>4</b>
<b>VISION AND CORPORATE PRINCIPLES.....</b>	<b>6</b>
<b>COMPANY PROFILE .....</b>	<b>7</b>
Products.....	7
Industries & Sectors Served.....	8
Operational Structure, Markets and International Projects.....	8
Significant Developments During Reporting Period.....	8
Memberships .....	9
<b>APPROACH TO SUSTAINABILITY .....</b>	<b>10</b>
Corporate Governance .....	10
Sustainability Management.....	11
Strategic Sustainability Issues .....	11
Sustainability Goals .....	12
Dialog with Stakeholders.....	14
Management Systems .....	15
<b>OUR ECONOMIC PERFORMANCE .....</b>	<b>16</b>
Operational and Financial Indicators .....	16
Economic Value Generated and Distributed .....	16
Efficient Use of Raw Materials .....	16
Investments.....	17
<b>OUR ENVIRONMENTAL PERFORMANCE .....</b>	<b>20</b>
Energy Efficiency.....	21
Solid Waste Management.....	22
Water Management .....	23
Reuse of Waste Water and Water.....	23
Climate Change and Emission Management .....	25
Environment-friendly Products.....	27
<b>OUR SOCIAL PERFORMANCE .....</b>	<b>28</b>
Product Responsibility in Value Chain .....	28
Customer Satisfaction .....	30
Employee Satisfaction and Engagement .....	31
Occupational Health and Safety .....	40
Emergency Management.....	41
<b>APPENDIX .....</b>	<b>42</b>
Performance Indicators Tables.....	42

## **ABOUT THIS REPORT**

This is the fifth Communication of Progress by Ak-Kim since the company became a party to the United Nations Global Compact (UNGC) on December 13<sup>th</sup>, 2007; and it is prepared in accordance with the 'Core' option of G4 Sustainability Reporting Guidelines of Global Reporting Initiative. The Report states Ak-Kim's approach to the global principles besides the company's goals determined within this frame.

### **Report Content**

This report is developed mainly in light of the opinions and expectations of our company's senior management in addition to key stakeholders - employees, customers and business partners.

### **Boundaries and Limitations**

Unless stated as otherwise, this report covers, without any limitations and restrictions, all services and operations of Ak-Kim Kimya Sanayi ve Ticaret A.Ş. performed between January 1<sup>st</sup>, 2014 and December 31<sup>st</sup>, 2015, at the production facilities located in Yalova & Çerkezköy and at company head office in Istanbul. (G4-17, G4-20)

This report includes all production facilities and the head office; but excludes sub-contractors for logistics and sub-employers from which we receive support services at production sites. (G4-21)

### **Our Next Report**

Reporting frequency is bi-yearly. Our next report will be issued in 2018, covering the sustainability performance in 2016-2017.

## MESSAGE TO STAKEHOLDERS

Dear Stakeholders,

Ak-Kim is proud to present the 5<sup>th</sup> Communication of Progress covering our operations performed within the scope of our commitment in accordance with the United Nations Global Compact.

We held a sustainability workshop in 2014 to set our company strategies and create a roadmap with the participation of our entire senior management team. In consideration of Ak-Kim's social, economic and environmental priorities and successful implementations, we identified high priority aspects to manage and areas of improvement, by taking our key stakeholders' priorities into account as well. We are proud to be the first chemicals company in Turkey to have organized such a workshop.

In addition to the best practices in place, you can also review Ak-Kim's managerial approach to social, economic and environmental issues concerning chemical industry in this report where the above mentioned prioritized aspects constitute the main headings.

We continuously endeavor to ensure that all company processes, from product design to after-sales services, produce results protecting human health and the environment. Chemical industry, the third largest field of export in Turkish economy following automotive and textile, is required to focus on innovation and technology. In addition, developing markets such as Turkey have to invest in the industry to be effective within the global economy as well. In this regard, as Ak-Kim, we value R&D activities to be able to offer innovative and sustainable products. Upon our application to the Republic of Turkey Ministry of Science, Industry and Technology, we were granted license on October 25<sup>th</sup>, 2013 as an "R&D Center". Currently we employ 52 researchers to develop innovative products and solutions for different sectors.

To this end, through studies of five years,, we developed high performance hollow fiber based ultrafiltration module specially designed for ultrafiltration process and we launched the product in 2015. In this project that realized with an investment of 35 million USD, Ak-Kim started the production of the high technology and high value added equipment with the experience the company has gained in the field of water chemicals. Ak-Kim Ultrafiltration Module encompasses many innovative features for perfect filtration.

"Sustainability" stands as one of the corporate values in 2015-2019 strategical roadmap of Ak-Kim. We have set strategic goals regarding employee engagement, environment and health & safety subject to a group of critical success factors and various projects.

We also aimed at creating a company environment supporting sustainable employee development. With this inspiration, we trained and encouraged our employees to enable them to create and develop a sustainable life cycle culture, sustainable processes, products and services in Ak-Kim. Furthermore, we developed policies and implementations to ensure employee engagement for sustainable human resources. The technical and personal development training courses provided to our employees during 2014-2015 reporting period is approximately 25 thousand hours.

Another focus for our sustainability efforts has been occupational health & safety. Ak-Kim continues to improve its systems and programs to mitigate and eliminate the potential risks of workplace accidents in the future, as well as accidents which may happen during shipment and delivery of our products to our customers.

We will continue growing globally, keep developing innovative products and support sustainable development. We will always give high priority to our responsibilities within the scope of sustainability by enhancing dialog with our stakeholders and supporting voluntary initiatives such as the Responsible Care program.

One of the oldest chemical companies of Turkey, Ak-Kim is pleased to share with you its know-how, standards and policies with a sustainable production goal. We would very much appreciate your feedback and opinions about the content of this report, as they would enable us to create even greater value for you.

Kind Regards,

Ali Raif Dinçkök

Chairman

Onur Kipri

General Manager

## VISION AND CORPORATE PRINCIPLES

**Our Mission:** Being a dynamic solution partner developing innovative products and services, creating value for the industry and its stakeholders.

**Our Vision:** Becoming the largest private chemical company in Turkey and a global company with minimum 1 billion USD turnover by 2023.

### **Our Values:**

- **SUSTAINABILITY:** We work in accordance with our sustainability strategy and principles in all our processes.
- **BUSINESS ETHICS:** We observe our code of business conduct in our relations with our colleagues and external business partners.
- **OCCUPATIONAL HEALTH & SAFETY:** Occupational health & safety always comes first in all our production activities.
- **CUSTOMER ORIENTED:** Customers are always at the center of our processes; we protect their rights and create value for them.
- **INNOVATION:** We increase the company business value through new investments, ideas, projects and products.
- **EMPLOYEE ENGAGEMENT:** We add value to our employees and ensure engagement through new career opportunities.
- **COMMUNICATION:** We foster transparent, clear, open communication based on trust.
- **INITIATIVE:** We value initiative and support new ideas and being open to change.

## COMPANY PROFILE

Established in 1977 in Yalova within Akkök Holding organization founded in 1952 by decedent Raif Dinçök, Ak-Kim has gradually broadened its production activities throughout years.

Today Ak-Kim is a global player serving customers in five continents with its broad product portfolio including chlor- alkali and derivatives, methylamines, persulfates, peroxides, bisulfites, textile auxiliaries, pulp & paper and water treatment chemicals, cement and concrete additives.

Ak-Kim uses state-of-the-art and environmentally friendly technologies in its facilities to produce more than 500 chemical raw materials and auxiliary products with a total capacity of 600 thousand tons.

Sodium metabisulphite, ammonium persulfate, potassium persulfate, dimethylacetamide, hydrogenperoxide, sodiumpercarbonate are amongst other chemicals that are in the product portfolio of Ak-Kim. These chemicals are produced using our own technology and they are first time ever products in Turkey.

### About Akkök Holding

The Holding maintains its business activities in chemicals sector with Ak-Kim, Aksa Akrilik and DowAksa companies, in energy sector with Akenerji, SEDAŞ and Sepaş Enerji within AKCEZ and in real estate sector with its companies Akmerkez GYO, Akiş GYO and AkGirişim. With more than 5,000 employees, Akkök Holding realized a combined turnover of 3.1 billion US Dollars in 2015.

## Products

- Basic Chemicals
- Pulp & Paper and Water Treatment Chemicals
- Hollow Fiber Based Ultrafiltration Modules
- Cement Grinding, Concrete Admixtures and Construction Chemicals
- Textile Chemicals
- Project & Engineering

## Industries & Sectors Served

1. Home Care, Personal Care
2. Textiles, Fiber and Composites
3. Water Treatment, Conditioning and Disinfection
4. Chemical, Pharmaceutical, Agricultural Pesticides
5. Pulp & Paper, Cardboard, Cleaning Paper
6. Construction, Concrete, Cement
7. Metal, Mining, Drilling
8. White Appliances, Kitchenware, Ceramic & Glass

## Operational Structure, Markets and International Projects

Exporting products to 65 countries in five continents, Ak-Kim makes both direct sales and dealer/agency based sales. Ak-Kim has been exporting its know-how and technologies to foreign companies since 2002 and rendering all services, from engineering to turnkey contracting.

## Significant Developments During Reporting Period

### 2014

- Ak-Kim Betaine Plant was commissioned. Adwan Ferric III Chloride Plant project was completed.
- Ak-Kim Phase I Sodium Persulfate Plant was established with production capacity of 1,200 tons/year.
- Ak-Kim acquired water treatment chemicals business line of Dostel Group within Akferal organization.
- Ak-Kim received level GRI A approval for 2013 Sustainability Report and won the LACP award.

### 2015

- Ak-Kim acquired total shares of Gizem Frit, second largest enamel and ceramic frit producer in the world.
- Ultrafiltration project, one of the most significant investments of Ak-Kim has been completed.
- Capacity increase project was signed for Adwan Chlorine Alkali plant previously established by Ak-Kim.
- Ak-Kim became entitled to obtain ISO 14064 Greenhouse Gas Inventory and ISO 50001: 2011 Energy Management System Certificates.
- Ak-Kim ISO 27001 Information Security Management System was put into effect.

## AWARDS

### ***Ak-Kim Was Awarded with the Grand Prize in "R&D Project Market"***

Ak-Kim was awarded with the Grand Prize in "R&D Project Market for Chemicals and Chemical Products Industry" organized by Turkish Exporters Assembly (TIM) and supported by TÜBİTAK (The Scientific and Technological Research Council of Turkey).

The support for the event came from İstanbul Chemicals and Chemical Products Exporters' Association (İKMİB), Mediterranean Chemicals and Chemical Products Exporters' Association (AKMİB) partnership and TÜBİTAK. Ak-Kim succeeded to take part in the shortlist of 30 firms among a total of 120 and was awarded with the Grand Prize in "Dyes and Adhesives" category with its "Nanotech Surface Protection Chemical" project.



## **Memberships**

### **ASSOCIATIONS ON ECONOMY**

Board Member, Sectoral Assembly of the Union of Chambers and Commodity Exchanges of Turkey  
Board Member, Sectoral Assembly of İstanbul Chamber of Industry  
Board Member, Turkish Chemical Manufacturers Association  
President, Yalova Association of Industrialists  
Member, İstanbul Chamber of Commerce  
Member, İstanbul Commodity Exchange  
Member, İstanbul Union of Mine and Metal Exporters  
Member, Central Anatolian Exporters Union  
Member, Federation of Industrial Associations  
Member, YALKİM Organized Industrial Zone  
Member, Carbon Association  
Member, Chemport

### **ASSOCIATIONS ON ENVIRONMENT**

Member, Environmental Working Group of İstanbul Chamber of Industry  
Member, Environmental Working Group of the Turkish Industry and Business Association  
Member, Environmental Working Group of the Turkish Chemical Manufacturers Association  
Member, Turkish Association of Chemical Tanker Cleaning  
Member, Quality Association of Turkey  
Member, Turkish Marine Environment Protection Association (Deniztemiz Turmepa)

### **PARTNERSHIPS IN SOCIAL RESPONSIBILITY PROJECTS**

Board Member, Global Compact Local Network (2013-Present)  
Member, Corporate Social Responsibility Association of Turkey  
Member, Community Volunteers Foundation  
Member, Educational Volunteers Foundation of Turkey  
Member, Turkish Association for People Management  
Member, Women Entrepreneurs Council of Yalova Chamber of Industry and Commerce  
Member, Quality Association of Turkey

## **APPROACH TO SUSTAINABILITY**

### **Corporate Governance**

Akkök Holding is aware of the importance of joint and participatory approaches in shaping the future of societies. Therefore, the Group signed the United Nations Global Compact in late 2007 and thus assured that it will protect rights of its employees, contribute to the society and act in an environmental-friendly manner in all of its operations.

Having reinforced its reliable and strong image with this initiative, Ak-Kim Group continues its commitment to fulfill voluntary responsibilities in global and sustainable development. A Board Member of Ak-Kim represents Akkök Holding in the Global Compact Local Network.

### **Board of Directors**

Ak-Kim Kimya Sanayi ve Ticaret A.Ş. is a non-public joint stock company. Ak-Kim Board of Directors is comprised of nine members with a gender distribution of seven male and two female members. The Chairman of the Board is not a member of the Executive Board. CEO represents the Board of Directors and has executive responsibility.

Within the social scope of the responsible care, the Board gives the final approval for corporate social responsibility projects. Approval and authorization of all projects and budgets related to environmental practices is also within the responsibility of the Board of Directors.

In terms of economic scope, the Board's responsibility includes approving the budgets of sustainability practices and encouraging such practices in other companies of the Akkök Holding. All strategic issues within the framework of sustainability are equally adopted by the Board.

### **Committees**

Akkök Holding has a special committee focused solely on sustainability. Ak-Kim has committees for sustainability, environment, occupational health & safety and labor rights.

Additionally, Akkök Ethics Board was established and commissioned in 2014. The Board members are Directors of Audit, Human Resources and Legal Affairs Departments of Akkök Holding. Human Resources Directors of each company within the Group are also represented at the Board.

The Ethics Board guides the Group in thorough adoption and implementation of Akkök Business Ethics Principles as fundamental and indispensable corporate values. Akkök Holding companies issue monthly bulletins and run employee surveys to raise awareness in this regard.

## Sustainability Management

Ak-Kim has voluntarily committed and approved sustainability initiatives in place.

- Ak-Kim is one of the first Turkish companies to commit to Responsible Care and implement the program. (February 11th, 1993)
- Ak-Kim is one of the pioneering Turkish companies to sign the UN Global Compact. (December 13th, 2007)
- Ak-Kim is a member of the Executive Board of the Global Compact Local Network, on behalf of Akkök Holding. (2013- 2016)

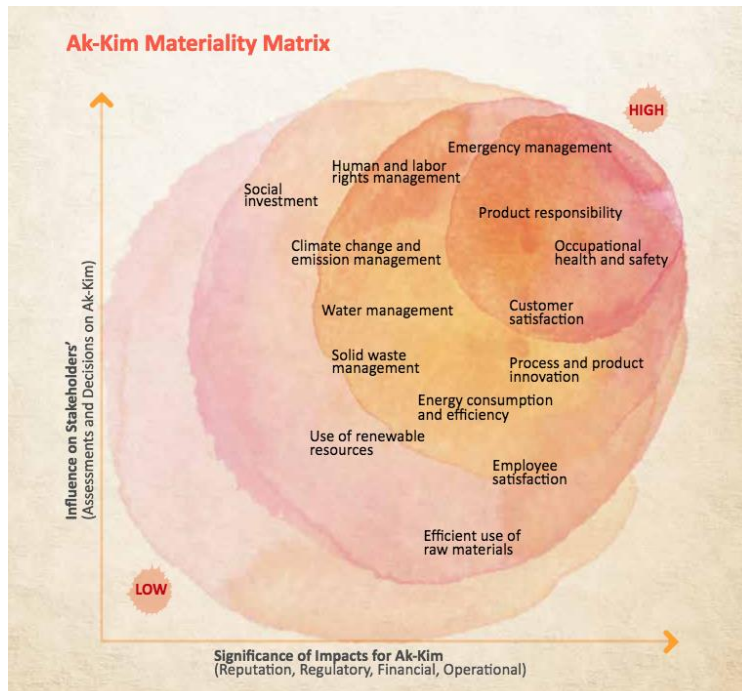
Responsible Care is a program primarily considering the protection of human life, environment and natural resources in all stages of activities and giving particular importance to this consistently.

The idea was initially suggested by the Canadian Chemical Producers' Association in 1984; then it spread all over the world and today it is implemented in more than 50 countries. Responsible Care Program is a voluntary initiative for the chemical industry. It is coordinated by the Turkish Chemical Manufacturers Association (TKSD) in our country.

In accordance with the Responsible Care Program, Ak-Kim attaches importance to protection of the environment and human health as well as technical safety at every stage of feasibility, planning, project designing, assembly, production activities, transportation, maintenance, and other services.

## Strategic Sustainability Issues

As the leading chemicals producer of Turkey, Ak-Kim makes five-year strategic plans in line with the mission and vision to ensure continuity of growth. Accordingly, we identified our sustainability strategies in 2014 and held a workshop to design our roadmap. Strategically material issues for our company were examined, prioritized and provided with clear boundaries in three groups: economic, environmental and social. Thus, we created the **Ak-Kim Strategic Sustainability Issues Matrix**. (G4-18, G4-19)



## Sustainability Goals

Strategic Issues	Goals Set for Previous Reporting Period	Current Status
Employee Satisfaction	Drawing career maps to meet well-trained human resource and career planning needs at Ak-Kim	Career maps were created for all employees during this reporting period. Preparation of training and development plans to support this is ongoing.
	Improving employee satisfaction	
Human and Labor Rights Management	Improving processes for management of human and labor rights	Akkök Holding Professional Code of Ethics was issued and trainings were provided to employees.
Emergency Management	Increasing number of emergency drills from 2 to 3 per year	Each plant performs emergency drills 3 times a year.
	Receiving fire trainings from the Fleet Command of the Turkish Naval Forces	Fire trainings are taken from Fleet Command of the Turkish Naval Forces and Kocaeli Metropolitan Municipality Fire Station Training Center (KOBİTEM).
Product Responsibility	Producing sustainable and environment-friendly products; ensuring traceable and sustainable product responsibility processes	Under the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), regulative requirements and liabilities are fulfilled under the supervision of Dangerous Goods Safety Adviser during product loading, handling, transportation and unloading processes.
Information Security	Assuring protection of all assets having contact with information, all information and information assets both internally and at/before all stakeholders to ensure sustainability of all processes in Ak-Kim.	Information Security item is included in Company strategic plan and relevant technology and infrastructure investments are planned.
Occupational Health and Safety	Completing the safety report in accordance with the Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances (Seveso) and submitting the report to the Ministry of Labor and Social Security	The safety report is delivered to the Ministry of Labor and Social Security on June 29, 2016. Safety report includes 18 folders and is comprised of approximately 5,500 pages.
Climate Change and Emission Management	Restructuring the persulfate facility to reduce emission sources by 50%	Sodium Persulfate plant is completed and currently trial productions are made. Construction of Ammonium Persulfate plant is still ongoing.

	Replacing direct use of steam with the existing boiler system at Textile Auxiliaries Facility	A revision process with the purpose of improvement shall be implemented in major portion of Textile Auxiliaries Facility. Boiler system shall also be replaced within this scope during the subsequent reporting period.
<b>Water Management</b>	Joint Waste Water Treatment Project	Waste water produced by Ak-Kim is being sent to the Joint Waste Water Treatment Plant as of July 21, 2015. For this reason, the treatment plant previously used is deactivated, resulting in power and resource savings.
	Using alternative water resources instead of limited surface waters	We continue to use dam water.
<b>Solid Waste Management</b>	Minimizing all sorts of wastes at source	First priority practice in waste process is to reduce the waste at source, use it as secondary raw material and ensure recovery; And ensure disposal of the last remaining waste in proper ways not harming the environment.
	Launching processes and technologies that generate less waste	We prefer processes which would generate less amount of waste during the design stage of any current or future investments. For instance, Sodium and Ammonium Persulfate Plants.
<b>Energy Management</b>	900,000 kWh/year energy saving with the electrolyzer investment in persulfates facility	Electrolyzer investment in persulfates facility was realized during 2014 and 2015, resulting in 800,000 kWh power savings achieved.
	1,500,000 kWh energy saving with the activation of Sodium Percarbonate (SPC) facility	1,600,000 kWh/year of electric power savings is ensured due to optimization of compressed air consumption in SPC Plant.

## Dialog with Stakeholders

Ak-Kim defines its stakeholders as “all people and institutions that are affected by our products, services and operations and that might affect our company in reaching its strategic targets”.

We reviewed the existing stakeholder portfolio and prepared a stakeholder map during the sustainability workshop we held in this reporting period with the participation of our senior management team. During prioritization, we gave special importance to those that have high influence on managing our impact on sustainability and those that might be most affected by our operations. (G4-25)

In addition to these platforms, during the reporting period, we held a **sustainability awareness survey** with the participation of all White-collar employees. With such practices we ensured involvement of our employees in the reporting process. The survey included questions on all sustainability issues related to the chemicals industry. The two main purposes of the survey were to improve sustainability awareness in our employees and to receive their opinions on this issue. During the reporting period, we run another awareness survey to learn about the opinions of our dealers on our strategic issues. (G4-24)

Feedback from the dealers revealed that Ak-Kim’s idea of sustainability has positive influence on the subjects of occupational health and safety (92%), improving quality and durability of products (75%) and preventing water pollution (75%). These subjects completely coincide with the material sustainability issues we identified in the strategy workshop. (G4-27)

## Key Stakeholders

- *Employees*
- *Customers and Dealers*
- *Shareholders*
- *Local Authorities*
- *Local Communities*
- *Public Institutions*
- *Suppliers*
- *Media*
- *Non Profit Organizations*
- *Group Companies*
- *Students and Potential Employees*

Our key stakeholders and current communication platforms are provided in the following table.

<b>STAKEHOLDER</b>	<b>MEANS OF COMMUNICATION</b>	<b>FREQUENCY</b>
<b>Employees</b>	Employee Satisfaction Survey (ESS), conversation meetings with CEO, Ak-Kim Social Activities Club (ASEK), internal department meetings	ESS: Biannually; Conversation Meetings with General Manager: Once per 6 months
<b>Customers and Dealers</b>	Customer Satisfaction Survey (CSS), dealer meetings, fairs, product launches, customer visits	CSS: Annually - domestic and international, alternately; dealer meetings: Annually;
<b>Shareholders</b>	Board Meetings	Monthly
<b>Local Authorities</b>	Visits	Periodically
<b>Local Communities</b>	Open Door, Akkök Children's Festival, social responsibility projects	Open Door: Upon request; Akkök Children's Festival: Annually
<b>Public Institutions</b>	Visits	Periodically
<b>Suppliers</b>	Supplier visits and audits	Periodically

(G4-26)

## Management Systems

<b>Economic</b>
ISO 9001 Quality Management System (1995)
<b>Environmental</b>
ISO 14001 Environmental Management System (2004)
ISO 50001 Energy Management System (2015)
ISO 14064 International Standard for GHG Emissions Inventories and Verification Management System (2015)
<b>Social</b>
OHSAS 18001 Occupational Health and Safety Management System (2009)
ISO 27001 Information Security Management System (2015)

## OUR ECONOMIC PERFORMANCE

### Operational and Financial Indicators

	2014	2015
Number of Employees	491	516
Share of exports in total sale volume	20%	18%
Number of main product groups	28	30
Total Sales Realized	397,782 tons	394,685 tons

### Economic Value Generated and Distributed

USD	2014	2015
<b>Economic Value Generated</b>	<b>159,188,627</b>	<b>176,326,791</b>
Revenues	159,188,627	176,326,791
<b>Economic Value Distributed</b>	<b>176,896,743</b>	<b>185,473,450</b>
Operational Costs	135,170,381	168,857,005
Employee Wages and Other Benefits	9,649,772	8,710,097
Payments to Capital Providers	22,687,527	2,981,985
Payments to Government	9,250,966	4,714,281
Community Investments	138,097	210,082

### Efficient Use of Raw Materials

Ak-Kim performs all production operations in its integrated production facilities. In other words, outputs of a facility are used as raw material in another facility. This brings us a considerable advantage in costs and competition. For instance, we not only produce and sell hydrogen peroxide, but also use it as raw material in another facility (sodium percarbonate). Similarly, we produce and sell methylamines but we also produce dimethylformamide by using these methylamines.

Ak-Kim has more than 20 facilities where more than 400 different materials and auxiliary raw materials for production. We also have a Process Development & Technology Transfer unit that benefits from the robust engineering infrastructure and team of Ak-Kim. Thanks to this unit, we monitor efficiency of facilities, make improvements where required, and increase efficiency of raw materials. With the changes made in the process, the amount of scrap used in Ferric III chloride production increased. This sets a good example for both efficient use of raw materials and reuse of waste materials.

Ak-Kim facilities also monitor raw material consumption with process control devices and improve processes when necessary. Raw materials and products are properly stored and checked regularly for shelf life thanks to the computer-based storage management system. Based upon the "First In First Out" principle, these storage center practices reduce the loss of raw materials.

Among practices to involve employees in the resource use processes are including raw material efficiency into individual production goals, training the staff on raw material efficiency, and giving instructions to improve raw material efficiency.



## **Investments**

Continuing the inorganic growth which would support achievement of future goals and taking the available acquisition opportunities, Ak-Kim acquired full ownership of Gizem Frit in 2015, the second largest enamel and ceramic frit producer in the world with a global market share of 11%. Producer of enamel, ceramic, pigment and non-stick coating materials widely accepted in international markets, Gizem Frit completed its composite ceramic facility investment expanded its product range in 2015.

Ak-Kim allocates 4-5% of its total budget each year to R&D activities and technology investments. The company restructured its R&D Center in 2015. Following the global trends, Ak-Kim's R&D Center focuses on process improvement with performance chemicals and in addition to R&D on fundamental chemicals; the Center also conducts R&D for Gizem Frit for boron based chemicals, biotechnology, nanotechnology, healthcare products and food additives. Ak-Kim R&D labs developed 45 new products in 2014 and 39 in 2015.

Phase I of the sodium persulfate facility with an annual capacity of 1,200 tons was commissioned in 2015. The company targets to reach a total annual capacity of 7,200 tons by completing Phase II in 2017 and Phase III in 2018. Thus, Ak-Kim created value addition by manufacturing a raw material in Turkey which used to be entirely dependent on import in the past.

In 2015 Ak-Kim executed a new international engineering project for doubling the capacity of Chlorine Alkali plant previously established by the company in Mostaganem, Algeria. The target list of Ak-Kim for near future includes Kazakhstan, Iran and Middle East countries.

Shifting its R&D activities from chemical substances to high tech & high value added products, Ak-Kim continues to take firm steps towards becoming one of the largest chemical companies of Turkey by 2023 with an annual sales turnover of minimum 1 billion USD.



### **Ak-Kim Ultrafiltration Plant Investment**

Ak-Kim entered a new segment on water treatment technologies and started equipment production for the first time at 2015 year end. With R&D continued for five years, Ak-Kim developed the high performance hollow fiber based ultrafiltration module specifically designed for ultrafiltration systems with specifications superior than those of similar modules available in the market.

Annual production target planned for the Ultrafiltration Production Plant located within 2,800 m2 confined area in Yalova is approximately 20,000 modules. 350 m2 of the total plant area is comprised of the laboratory and the pilot facility. The first and only producer within Turkey and neighboring countries, Ak-Kim targets to reach an annual sales volume of 42-45 million USD upon starting to work with full capacity in this plant.

Ak-Kim shall be creating valuable advantages for its customers due to being a manufacturer of water chemicals at the same time in addition to pre-sales project engineering support and after-sales technical support services provided.

**Specially modified PVDF based fiber to**

- Reduce the fouling
- Improve the permeability
- Controlled pore size and distribution
- Improved mechanical strength of the fiber

**Unique module design**

- U-PVC tube allowing chemical resistance and UV protection
- Improved feed water circulation between the fibers
- Reduced sludge accumulation
- Facilitated back wash and air scouring
- Increased life time of the membrane
- PUR potting

**Ak-Kim Ultrafiltration Module can be used in many applications**

- Industrial waste water treatment
- Municipal waste water treatment
- Effluent, brackish and surface water treatment
- Drinking water treatment
- Pretreatment for SWRO

**We can also offer**

- Hollow fiber supply
- Squid design and supply including the backwashing, air scouring and chemical cleaning cycles depending on the quality of your feed water

## OUR ENVIRONMENTAL PERFORMANCE

Akkök Holding shows maximum effort to minimize its environmental impacts and aims to continuously improve its environmental performance. Sustainable growth has become one of the most important current issues in today's world where the natural environment is rapidly getting polluted and sources getting scarce. A member company of Akkök Holding, Ak-Kim particularly values environmental sustainability and aims at producing environmentally friendly products allowing reduction of chemicals consumption.

Taking every required measure to prevent environmental pollution in every process and prioritizing environmentally friendly technologies in line with continuous improvement in all its operations, Ak-Kim carefully considers the utility of power and natural resources both during the design of its processes and during production stages. Ak-Kim intends to raise awareness on protection of the environment through cooperation with suppliers and customers and works to reduce its environmental impact not only in production phases, but also during the use of its products.

Environmental activities are conducted by environmental specialists within Health Safety Environment (HSE) Department. All Ak-Kim employees are trained and competent in performing environmental as well as occupational health and safety (OHS) activities; they assume responsibility and actively participate in improvement efforts. Improvement of Environmental and OHS processes are material issues; root cause analyses are performed and concluded. There are a number of committees to improve these processes, including the Suggestion, Emission, SEVESO (Prevention of Major Industrial Accidents), Energy Management, Odor Group, OHS committees as well as the Akçevre Board coordinated by Akkök facilities in Yalova.

As Ak-Kim, we provide energy efficiency trainings to all employees. Waste and energy training was provided to 14 employees in 2014 and to 445 employees in 2015. Ak-Kim allocated USD 6,540,000 for environmental and waste treatment practices in 2014 and 2015.

## Energy Efficiency

Efficient use of energy resources, energy saving and recovery has become important in every aspect of life with technological and industrial advances. Efforts for establishing the ISO 50001: 2011 Energy Management Systems continued during 2015 to ensure two significant items in Ak-Kim's agenda - sustainability of energy resources and decrease in emission of greenhouse gases and the company was qualified for the Certificate in October 2015. Energy Management System is to be integrated in existing management systems to maximize the benefits; the system is also quite significant for cost reduction, easier legal compliance regarding GHG emissions, increased business performance and application to Efficiency Increasing Projects.

Ak-Kim purchases a portion of the energy and steam it uses from its sister company, Aksa Akrilik, and thus achieves cost advantage. Energy consumption of the facilities is monitored through process control devices and improvements are made by Production Department when necessary. In addition, electricity and steam are directly purchased from auto producer and thus no additional emission is caused. All forklifts are electrical vehicles, causing no fossil fuel consumption or emission.

In the facilities that Ak-Kim built with its own know-how and technology, energy efficiency and savings are given priority in the selection of processes and equipment. For instance, while establishing the ICI-licensed Chlorine Alkali Facility in 1992, Ak-Kim selected membrane process which is more environment-friendly compared to other processes. Ak-Kim has been the first company to implement the high-investment membrane technology, which does not generate hazardous waste as it does not use mercury in the process. (Changes made in regulations in recent years ban the use of mercury based systems and therefore other chlorine alkali facilities in the world have recently started to replace mercury and asbestos-based processes with membrane systems.)

Employees are given individual targets not only for raw material efficiency, but also for that of energy. In addition, there are company instructions to improve the efficiency of raw materials.

Following savings were made during 2014 and 2015 as a result of the activities for increasing efficiency regarding power and steam consumptions:

- 1,600,000 kWh/year of electric power due to optimization of compressed air consumption in SPC plant,
- 800,000 kWh energy by investment of electrolyzer in the persulphate plant,
- 9,500 tons/year of steam due to optimization of steam consumption in DMAC plant,
- 385,000 kWh/year of electric power due to membrane replacement in chlor-alkali plant electrolyzers,
- 200,000 kWh/year of electric power due to efficiency improvements in hydrogen and carbon monoxide plant for hydrogen compressor.

<b>Secondary energy purchased and consumed from non-renewable energy sources</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Electricity	GJ	543,608	516,485
<b>Secondary energy purchased and consumed from non-renewable energy sources</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Steam	GJ	548,232	551,862
<b>Secondary energy purchased and consumed from non-renewable energy sources</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Natural Gas	Sm3	9,262,154	10,663,432

## Solid Waste Management

Ak-Kim separately collects and stores wastes in waste stations built within the field and ensure proper recycling or disposal of wastes according to their qualities. Hazardous wastes are stored in standard temporary waste storages built in accordance with related laws and regulations. These wastes are delivered to licensed recycling or disposal institutions by vehicles licensed by the Ministry of Environment and Urbanization.

Ak-Kim has a variety of projects to reduce wastes. For instance, R&D works are performed to ensure that activated alumina wastes used in hydrogen peroxide production are used in the ceramic industry as raw material or as concrete admixture, resulting in recovery of 200 tons of activated alumina per year. In addition, personal scorecards of employees include targets for reducing wastes.

Another example is hydrochloric acid, one of the chemicals produced by Ak-Kim and used in many areas, including metal cleaning. After being supplied to the galvanize industry, hydrochloric acid is used in metal cleaning and then it becomes waste. This waste is called "Ferric II chloride solution" or "rotten acid". The waste is transferred from customers' facilities with vehicles licensed by the Ministry of Environment and Urban Planning and is then recovered at Ak-Kim's Ferric III Chloride facility, which is also licensed by the Ministry. After being processed, this waste is turned into Ferric III Chloride. Ferric III Chloride is used in wastewater treatment. With this system, environmental damage to be caused by rotten acid is prevented and the waste is recovered. Average amount of rotten acid or Ferric II Chloride solution recovered per year is approximately 6,000 tons.

In addition to performing waste management practices, Ak-Kim also contributes to such processes of its customers.

Collecting the 44% of the paper and plastic packing materials of its products in 2014 and 48% in 2015, Ak-Kim contributed in recycling.

<b>Waste Weight by Type and Discharge Method</b>	<b>Examples</b>	<b>Discharge Method</b>	<b>2014 Total tons/year</b>	<b>2015 Total tons/year</b>
Hazardous wastes (Information on type, amount and discharge in line with the official information given in hazardous waste statement)	Contaminated wastes (a)	Incineration	91	79
	Process-generated wastes that are incinerated (b)	Incineration	664	536
	Waste oils (c)	Recovery	3	2
	Waste batteries (d)	Burial	0.0078	0
	Contaminated galvanized barrels, plastic drums, IBC tanks	Recovery	354	382
	Inert Wastes	Burial	520	227
<b>TOTAL (hazardous wastes)</b>			<b>1,632.1</b>	<b>1226</b>
Non-hazardous wastes	Domestic wastes	Burial	200	250
	Paper, cardboard, plastic, wood, glass etc. Packaging wastes	Recovery	240	209
	Scrap, metal wastes	Recovery	100	120
<b>TOTAL (non-hazardous wastes)</b>			<b>540</b>	<b>579</b>

## Water Management

Today, over one billion people have limited access to drinkable/fresh water throughout the world where only 2.5% of the total available water sources are drinkable. Water shortage could turn into a serious crisis in many parts of the world within the next 20-25 years. Therefore, efficient use of water and treatment & recovery of waste water becomes more and more important every day. Sea water treatment is the alternative solution utilized where the above mentioned methods prove to be insufficient.

Efficient use and saving of water, which is one of the most vital resources for sustainable development, has an important role in Ak-Kim's environmental practices. Ak-Kim procures the water used in its two factories in Yalova from the Gökçe Dam and from Aksa Akrilik, which is a sister company. Utility water is received directly from the Dam. Amount of utility water may differ in line with the increase in operational activities.

Water used in processes is procured from two sources. In the Southern Ak-Kim facilities, water from the dam is softened before usage, whereas in the Northern Ak-Kim facilities water is received from Aksa Akrilik. Approximately 60-65% of water used in processes becomes product component and the rest becomes waste water. Cooling water is taken from the dam and Aksa and used in a closed circuit system. Thus water is added only when there is loss due to evaporation/leakage. The water taken from the dam goes through a treatment system to be used as drinking water.

In the production facilities in Çerkezköy, untreated water is procured from the well within the borders of Ak-Kim. This untreated water is softened at the Ak-Kim facility and then used as process water and in steam generation. Drinking water is outsourced.

The personnel are given periodical training on efficient use of water and water savings. Recent projects enabled significant savings in the amount of water consumed.

Water Consumption (m <sup>3</sup> /year)	Source	2014	2015
	Dam water	785,000	554,068

## Reuse of Waste Water and Water

Each of the two factories in Yalova has its own waste water treatment facility. These facilities treat waste water containing chemicals. In the Southern Ak-Kim facilities, domestic waste water is delivered to the sewage system to be treated at the treatment facility of the municipality, whereas the Northern Ak-Kim uses the existing waste water treatment facility for domestic waste water.

Northern Ak-Kim Waste Water Treatment facility is composed of physical treatment, chemical treatment, biological treatment (anaerobic-nitrification-aerobic denitrification), and sludge dewatering part. The water treated there is then discharged in accordance with the limits stated in Table 14.12 of the Water Pollution Control Regulations issued by the Ministry of Environment and Urbanization. Southern Ak-Kim Waste Water Treatment facility uses physical and chemical treatment. The water treated there is then discharged in accordance with the limits stated in Table 19 of the Water Pollution Control Regulations issued by the Ministry of Environment and Urbanization.

In addition, 14,500 m<sup>3</sup>/year waste water generated in the Sodium Percarbonate Facility is recovered for reuse in the production system. In this way, not only water saving is achieved, but also loss of products within the waste water is prevented. Similarly, the water regained from cooling water is used in watering green areas, thus enabling approximately 6,000 m<sup>3</sup>/year water saving in the summer.

205,000 m<sup>3</sup>/year waste water was disposed of through treatment in 2014 and 219,350 m<sup>3</sup>/year in 2015 at Ak-Kim Yalova Plant.

<b>Water Discharge (m3 / year) Ak-Kim</b>	<b>Location of discharge</b>	<b>2014</b>	<b>2015</b>
	Marmara Sea	231,000	247,500

Domestic and industrial waste water generated at the production facilities in Çerkezköy is treated at the waste water treatment facility of the Organized Industrial Zone. 18,500 m<sup>3</sup>/year waste water generated in Çerkezköy Production Facilities and recreational facilities is delivered to the treatment facility of the Organized Industry Zone.

### **Joint Treatment Plant**

Akkök initiated a "Joint Treatment Plant" project at Yalova production facilities in 2012 to make the energy and chemicals consumption more efficient. Under this project the company decided to collect the waste water previously sent to different treatment plants and treat this aggregate waste water volume in one single plant. The joint treatment plant's construction began in 2014. Upon completion of the plant in July 2015, its operation is transferred to YALKİM Organized Industrial Zone. All companies at YALKİM Organized Industrial Zone started to send their waste water to YALKİM Organized Industrial Zone Joint Treatment Plant to be treated.

The Joint Treatment Plant, now treating the entire volume of domestic and industrial waste water collected from YALKİM Organized Industrial Zone companies including Akkök Holding companies Aksa, Ak-Kim and DowAksa, is established over approximately 17,303 m<sup>2</sup> area. 18 million USD investment was made to establish this plant with a daily waste water flow meeting capacity of 15,000 m<sup>3</sup>. The plant includes physical treatment, chemical treatment, biological treatment and sludge dewatering units. The majority of the water treatment chemicals utilized in the joint plant are provided by Ak-Kim. In the plant, there is also a pilot plant where Ak-Kim ultrafiltration modules are used.

Aim of this project that is implemented to simplify treatment processes by using the synergic effect of waste water with different characteristics, to allow reuse of water by using advanced treatment (ultrafiltration) technologies), to ensure easy operation/maintenance, to optimize land and natural resource use in the production facility and to sustainably meet future increase in capacity.



## **Climate Change and Emission Management**

Ak-Kim performs the following activities for fighting against climate change and for reduction of emissions:

- Selection of suitable technological equipment and process improvement
- Assigning an odor team and making odor measurements
- Calculating greenhouse gas emissions (carbon footprint)
- Weather modeling
- Making internal monitoring measurements

Within the scope of these practices, Ak-Kim pays utmost attention to ensure that the state-of-the-art equipment is purchased for existing or new production facilities and that environmental impact of such equipment is minimal.

With the odor prevention team established with participation from various departments of the company, emission sources in the facility are identified and such emissions are prevented. In addition, in conformity with the directive on controlling odor-generating emissions, odor generated at emission funnels are measured regularly.

Emissions of facilities are stored in absorbers of process funnels before reaching out to the atmosphere and are re-fed into the system. This way, air quality is maintained, resource use is reduced, and chemicals are reused. In addition, organic steams are burned in the incinerator system to avoid any environmental damage. 1,750 tons/year steam power is generated during the incineration and this energy is used for heating the facilities.

Air quality distribution modeling aims to identify how the pollutants generated during our operations (dust, CO, NOx, SOx, VOC, etc.) may be dispersed in the working area under existing meteorological conditions and what may be the potential ground level precipitation of such pollutants.

During air pollution distribution modeling, the distribution of air pollutants in the atmosphere are mathematically simulated by using parameters such as source data, meteorological data, land forms, etc. Related computer programs analyze mathematical equalities and algorithms of pollutants. Ak-Kim performs all such practices within the coordination of management systems.

With a variety of emission measurement devices, Ak-Kim makes internal measurements in emergencies or pre-defined periods and thus prevents environmental pollution by timely intervention in case of any problems. In addition, Ak-Kim actively participates in activities of related non-governmental platforms, public institutions and business world and contributes to such practices.

Ak-Kim conducts required operations regarding global warming and reduction of gas emissions causing global warming, the global issue which has gained even more importance after execution of Kyoto Protocol. Ak-Kim prepares greenhouse gas emission monitoring reports within this scope and has delivered the internal greenhouse gas emission monitoring plan to the Ministry of Environment and Urbanization in 2014 in accordance with the Communiqué on Monitoring and Reporting Greenhouse Gases. The company was qualified in 2015 for “ISO 14064 Greenhouse Gases Inventory”, forming the basis of activities conducted to reduce carbon emissions. With this certificate, the company made a significant progress towards reduction of its carbon footprint through ensuring measurement of current emissions and approval of such measurements by an independent body.

Performing all operations and activities with the consciousness of environmental protection, these efforts of Ak-Kim to reduce carbon emissions is quite significant particularly in terms of sustainability and for solution of environmental issues. This Certificate also enabled Ak-Kim to achieve the company goal of "making sustainability a company culture" included in the list of 2015-2019 company strategies.

## Environment-friendly Products

Investigation of environmental dimension is among the acceptance criteria of a new chemical designed with an R&D process. Today, resource savings; especially energy and water is a significant issue. In full awareness of our responsibility towards future generations, we, as Ak-Kim, do not develop any products that could be harmful for the environment. In addition, we give priority to efficient use and saving of existing resources while developing R&D projects.

Ak-Kim has adopted the vision of “offering tailor-made integrated solutions to its customers”. One of the important aspects in its R&D practices is enabling customers to save resources by improving processes through environment-friendly chemicals. Other environment-friendly chemicals developed at Ak-Kim R&D Center and offered to customers during the reporting period are listed below.

**AKUA END 6133 and AKUA END 6140** - Used as decolorant and for sedimentation in treatment of particularly textile waste water and also for paint, pulp and paper, printing ink and similar industrial waste waters. Ensures reuse of treated water in appropriate processed and thus contributes to water saving and reduction of sludge and waste amounts.

**AKUA SAN 1012** - Prevents corrosion without inhibiting heat transfer by creating a barrier between the monomolecular film adsorbed on metal surfaces and water & metal. In this way the product ensures efficient functioning of steam and condensate systems and prevents energy losses.

**AKSOFT CSK** – Used as cationic and organic softener in palette form by textile plants. This product can dissolve in cold water contrary to the other commercially available products which can only dissolve in hot water, and thus and helps save energy since it enables preparation of solutions with cold water, eliminating the heating and post process cooling operations entirely.

**AKSOFT CNS** – Used as nonionic and organic softener in palette form by textile plants. This product can dissolve in cold water contrary to the other commercially available products which can only dissolve in hot water, and thus and helps save energy since it enables preparation of solutions with cold water, eliminating the heating and post process cooling operations entirely.

## **OUR SOCIAL PERFORMANCE**

### **Product Responsibility in Value Chain**

Ak-Kim R&D Department closely monitoring the developments in the sector was established in 1996 with the aim of ensuring the production of goods with high added value, working on product and technology development in areas that are likely to gain importance in the future, and improving the quality and reducing costs in current technologies and processes.

The R&D Center was certified by the Ministry of Science, Industry and Technology on October 25<sup>th</sup>, 2013. The Center continues operations with approximately 60 employees. Ak-Kim R&D Directorate performs with the vision of “becoming a leading R&D center that generates know-how” and the mission of “offering chemical and engineering solutions that create value added products, processes and new implementation areas by using advanced technologies in performance, basic chemicals and byproducts”.

### **Compliance with International and Local Regulations**

#### ***REACH (Registration, Evaluation, Authorization and Restriction of Chemicals)***

Ak-Kim signed a contract with Dincox Handels GmbH, its representative company in Europe, for pre-registration and license procedures of REACH (Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals). Registration of all Ak-Kim products exported to Europe has been completed.

#### ***Authorized Economic Operator Certification***

Ak-Kim's EU Distributor Dincox Handels GmbH has successfully obtained the AEO (Authorized Economic Operator) Certification. With this certification, Dincox possesses the conditions required for safety of supply chain, starting from loading at the factory (Ak-Kim Kimya San. ve Tic. A.Ş.) until delivery to the end-user and the following rights:

- Reliability
- Accountability and Traceability of Commercial Records
- Financial Competence
- Security and Safety Standards
- Material Safety Data Sheet
- Technical Data Sheet

Certificate of Approved Economic Operator implementation, which has facilitated Ak-Kim's import and export processes and made the company a trusted international merchant, shall cease in August 2017. We have started the necessary procedures for obtaining the Certificate of Approved Economic Operator. The company shall ensure receipt of this document within 2017, as the substitute for the above mentioned certificate.

***The Directive of the European Agreement Concerning the International Carriage of Dangerous Goods by Road and Relevant Practices***

Within the scope of this Directive effective as of 2013, Ak-Kim:

- Obtained Hazardous Material Operation Certification in 2014. Has provided awareness trainings to employees on the Directive.
- Two employees were trained as hazardous material consultants and were certified as accordingly.
- Audits transporters to ensure that they fulfill the requirements of the Directive. (SRC5 inquiry, sign checks etc.)
- Continues efforts to systemize its existing practices for conformity with the Directive (integration software for alignment with the Directive, software for hazardous material transportation etc.).

Ak-Kim has adopted and since then has been implementing the rules of the European Agreement concerning the International Carriage of Dangerous Goods by Road (known as ADR) as early as 1997, whereas many articles of the Directive started to be implemented in Turkey in 2014.

Ak-Kim has long been monitoring national and international standards and obtains all certifications and documents required for its facilities and products. Within the scope of this principle, Ak-Kim holds Good Manufacturing Practice (GMP), product-based Halal and Kosher certifications as well as Biocidal product licenses

## Customer Satisfaction

Always attaching great importance to customer satisfaction, Ak-Kim runs domestic and international customer satisfaction surveys every year, alternately. With this survey, customers' opinions on issues such as Corporate Image, Products and Production, Pricing and Payment Terms, Quality of Logistics, Quality and Competence of Technical Support, and Quality of Sales and Marketing are obtained.

Some customer assessments regarding Ak-Kim's stand on a scale of 0-5 as taken from 2014 customer satisfaction survey are provided below.

Reliable firm	<b>4.50</b>
Environment friendly	<b>4.22</b>
Provides sufficient documents about products	<b>4.03</b>
Informative labels on product packaging	<b>3.94</b>
Produces high quality products at international standards	<b>3.97</b>

Ak-Kim's corporate image was assessed with quite high scores by both national and international customers. The company has planned to make improvements in line with the sub criteria included in the main aspects analyzed in this survey to increase customer satisfaction and loyalty.

Ak-Kim considers each and every complaint that it handles in the Customer Relations Management process as an opportunity for continuous development. We examine complaints in an objective, effective, fast and careful way and offer solutions. In parallel with this principle, we are always committed to improving our business processes in a way that meets customers' expectations to avoid recurring complaints and to developing services to meet these expectations.

In Ak-Kim, Directorate of Sales & Marketing and Management Systems Division are responsible for receiving oral and/or written complaints through related channels and informing the related parties that the complaint is being assessed by Ak-Kim. All complaints and other feedback are kept in records. According to the customer complaint evaluation process, once the complaint is received, the customer should be informed within 24 hours that the complaint is in process. Monthly written customer complaint reports are shared with the management and related departments. On the other hand, complaints and response times are evaluated at monthly quality meetings and potential problems are identified to take actions.

Ak-Kim has not experienced any violation of customer confidentiality or loss of customer data, nor has it received any complaints regarding this issue.

## **Employee Satisfaction and Engagement**

In order to identify employee satisfaction levels and, where necessary, to devise action plans to improve satisfaction, Ak-Kim holds "Employee Satisfaction Surveys". Given by an independent consultancy firm, the survey covers employee satisfaction, loyalty and enthusiasm as well as meaning of the work done, working conditions/environment/occupational health and safety, information flow, communication and cooperation, personal/professional/career development, performance management, employment conditions and job security, remuneration, manager, recognition and appreciation, company management, company reputation and awareness. The results of the survey are delivered to Ak-Kim by the consultancy firm.

These results are announced to employees and feedback received as a result of meetings with employees is used to make an action plan. Participation rate to the survey was 75% in 2014 and company reputation and awareness, working conditions/environment/occupational health and safety, and meaning of the work done were identified as the top three areas that Ak-Kim performed the best. As of 2015 end, average age of Ak-Kim employees is 36.3; average seniority which indicates employee engagement is 8.5 years.

### **Great Place to Work**

Employee survey "Great Place to Work", a method for hearing the "Voice of Employees" throughout Akkök Holding was started to be used in 2015 as a tool of our "Participative Management" approach.

"Great Place to Work" predicates a trusted work environment where our employees can reliably be engaged and get attached to, be proud of their workplace and the job they perform and work in perfect harmony and cooperation with their colleagues.

Our employee survey "Great Place to Work" has been the approach we preferred, both for matching with our Group's spiritual texture and for supporting our Business Ethics Principles which we see as one of the cornerstones of our corporate culture. Providing us with opportunities which would carry our company forward, this survey is an independent and contemporary management tool, focusing on "Reliability", "Respect", "Justice", "Pride", "Team Spirit" dimensions of our current business life and taking the picture of our actual status in these areas.

"Great Place to Work" was implemented at R&D Department as a pilot scheme in 2015 and is planned to be run with all our employees in 2016.

### **Idea Workshop**

Moreover, the "Idea Workshop" covering all creative ideas and opinions of employees on issues such as facilitating/accelerating work performance, increasing capacity, improving efficiency (savings and cost reduction), reducing environmental impact, increasing customer satisfaction, and contributing to the vision, mission and values of the company has started in 2015 to evaluate the suggestions generated. Out of 73 suggestions received, 22 were put into practice, achieving a hit rate of 30%.

### **Working Standards and Human Rights**

Recruiting professionals based upon criteria such as knowledge, talents, competence and experience, Ak-Kim focuses on bringing the creativity of human resources to the forefront by using a human-centered management system. The company offers employees a working environment that is in compliance with the international standards of occupational health and safety.

Always valuing its employees and respecting employee rights, Ak-Kim signs a contract with new employees, which is drawn in line with valid laws and which includes mutual responsibilities of parties, namely the company and the employee. In addition, the Personnel Regulations Guide that is given to all new employees includes information on working conditions, benefits, and rights of employees starting from the first day at work until resignation. Personnel Regulations Guide is updated in accordance with legal regulations and developing needs.

Ak-Kim bestows rights to its employees beyond the limits required by the laws and international standards. We closely monitor legal regulations and inform our employees on changes in laws-practices concerning them. Ak-Kim adopts the fundamental principle of creating a working environment that encourages cooperation, requires mutual respect, avoids harassment and non-professional behaviors, and offers equal opportunities to employees. Each employee is responsible against associates and the company to prevent such behaviors and incidents.

Employees are notified of significant operational changes that might affect them by taking legal notification and notice periods into consideration prior to implementation. At Akkök Holding, operational decisions are implemented in accordance with the Personnel Directives prepared on the basis of the Labor Code and related regulations. The reasonable notice stated by the laws is performed within the manner and time given in the Personnel Directives. Significant changes such as salary change, workplace change, secondment, substitution, additional duty, temporary business relationships are declared in writing by the Human Resources Department and employees accept the receipt of these notifications.

Responsibilities and job descriptions of new employees are clearly defined. In case of changes in duties and responsibilities, the employee is notified in writing and approval is obtained. All practices such as changing roles and rotations are implemented by the Directorate of Human Resources and Management Systems. There is no forced-labor practice at Ak-Kim and there are no related risks.

Article 51 Paragraph C of the Constitution provides all employees with the right to establish trade unions. At Ak-Kim, there is full compliance with related laws and regulations. Employees are fully involved in company practices and process and their opinions and suggestions are taken into consideration.



In addition to monthly wages, Ak-Kim offers benefits such as free transportation, lunch, four bonuses per year, private health insurance, advance payments for health, housing and education, and social aids (marriage, children, birth/death, fuel, food and clothing aids) as well as vehicles and mobile phones for senior executives in order to improve employee loyalty and productivity. Limited time (temporary) employees also benefit from the wages, meals, shuttle bus and workplace healthcare unit services but are not qualified for benefits paid in cash and personal health insurance provided to full time employees.

## **Equal Opportunities**

Ak-Kim does not make any discrimination between candidates based on their language, race, gender, political view, belief, religion, or sect and provide them equal opportunities in exercising the recruitment, career planning, training, development etc. processes.

At recruitment and hiring stage, we try to engage with candidates possessing the education, knowledge, talents, competence, and experience required by the relevant job, compatible for our corporate culture and values and capable of carrying us to the future.

We use contemporary assessment methods supporting objective decision making in recruitment and hiring process and act in line with "*Right Person for the Right Job*" principle. Human resource planning is made by taking Ak-Kim's strategic plans and medium and long-term targets into consideration.

All Ak-Kim employees benefit from all rights granted by the Labor Code 4857 and are given annual leaves. In addition, employees have private health insurance. Recruitment and placement process is performed by the Directorate of Human Resources and Management Systems. Candidates below the age of 18 are not invited for interviews. Ak-Kim's contractors are required to avoid child labor as well. It is an indispensable ethical value for Ak-Kim to work with suppliers and subcontractors that refrain from violating human rights such as forced or child labor.

All vacancies are announced within the company and as a company policy, competent candidates recommended by employees are included in the recruitment process. Ak-Kim prefers candidates residing within the vicinity of the company's location for filling the open job positions.

Ak-Kim applies the Hay Group Wage Management System in order to maintain competitive wage levels of employees, to give the same wages for identical positions in the market, and to be fair in wages. The company pays attention to making payments on time and avoiding any unrecorded payments. None of the employees throughout the company is paid below the minimum wage.

Minimum wage for 2015 was 1,273 TRY (gross). In accordance with Ak-Kim's remuneration policy, the starting rate for new employees at Ak-Kim is approximately 37.6% higher than the minimum wage. Wages do not vary depending on the gender of the employee.

**Akkök Young Talent Pool**

Each year in March, candidates newly graduated from the target universities mutually identified by Akkök Holding Companies or candidates with 0-3 years of work experience are selected from those applying to the Group's job posts on Kariyer.net portal.

We offer intern positions to university students during summer time and to high school students during winter time. Ak-Kim serves various industry groups due to its large product portfolio, including textile, metal, food, cleaning, water treatment, pulp & paper, pharmaceutical and construction industries, which is a great opportunity for these students to gain experience on many different fields. Students are given the chance to be interns in departments they selected during their applications and can find many processes from production to quality control, engineering and sales under the same roof. Thus, they can personally observe the working environment and the tasks performed in the fields where they would like to have their career development. This opportunity offered in drawing their career lines is a great advantage for them. Interns are mainly selected among students from departments of target universities including particularly Chemical Engineering and Chemistry as well as Mechanical, Electrical, Electronic, Industrial, Environmental Engineering departments; and also from Economic and Administrative Sciences department although this happens less frequent.

**Career Planning and Talent Management**

With Career Planning and Talent Management, Ak-Kim aims at determining the need for human resources capable of carrying the company to the future, determining at early stages the potential Group/Company employees which could meet these needs and providing them with the required professional know-how, skills and development opportunities. To this end, integral and systematic implementations at Group level coordinated by Akkök Holding are in place, such as Assessment Center, Leadership Potential Inventory, Personality Inventory, 360 Degree Evaluation etc. Personal Development Plans are created for the relevant employees at the end of the above mentioned implementations and realization of these plans is monitored.

Career Planning and Talent Management process helps us effectively provide back-ups for critical positions in Companies/Group and ensure a sustainable performance.

## **Performance Management System**

With the aim of improving efficiency and achieving continuous development, Ak-Kim applies a Performance Management System that effectively and objectively evaluates individual and team targets in a way that is integrated with department, directorate and company goals. Performance Management System was cascaded throughout the company in 2013 and employee performance is evaluated in terms of:

- ✓ Operational Level – Production Tonnage and Efficiency Target
- ✓ Other Positions – Company Targets or Individual Targets

Results achieved through annual evaluation of individual targets and quarterly evaluation of sales and team targets with the Performance Management System form inputs for variable income system, bonus system, training and development, and career planning and talent management processes.

There were 114 employees with individual target cards in 2014. This is 84.4% of the employees included in Performance Management System. There were 119 employees with individual target cards in 2015. This is 87.3% of the employees included in Performance Management System. Ak-Kim attaches importance to rotation and promotion/assignment to various functions and employees are given priority in new positions/vacancies.

In the reporting period, promotions and job rotations of 41 employees were carried out.

## **Trainings**

Ak-Kim aims to invest in people and encourage personal improvement by adopting practices based upon continuous development in line with corporate strategies and targets. While preparing the annual training plan, training needs of employees are identified and these trainings are given throughout the year in accordance to the plan.

Professional and personal development of our employees is important for us. Our directorates determine the training needs each year to create a training plan according to which we ensure technical and skills development of our employees.

During preparation of this training plan we mainly focus on the requests received from employees and we believe that this, together with our "Right Person for the Right Job" approach, provides motivation and ensures job satisfaction.

### **2014 Trainings**

Optimum Balance Model Training, initiated in 2013 for Company Managers, was continued during 2014 and 2015 also. The objectives of this training are to enable the employees to comprehend their own job identities and the work environment they are in, to change their own habits, and to understand other peers and colleagues they meet throughout their business lives.

Optimum Balance Model Training Stage 2 was given to Directors and Department Managers and Optimum Balance Model Training Stage 1 to Unit Managers in 2014. Optimum Balance Model Training was also continued in 2015 for employees working in Specialist position.

All managers were given Generation Blend in Business Life Training in 2014 to raise awareness about generation Y. Sailing and paintball events were organized in 2014 to enhance "Team Work, Communication and Cooperation".

In addition, a sustainability survey was held and employee evaluations on potential economic, social and environmental impact that are/should be managed within the framework of sustainability management process were received. While employee feedback was received, awareness in employees on material sustainability issues in the industry was also created.

## 2015 Trainings

Business Conduct Principles Training including Human Rights Module was given to senior managers and directors in 2014 and to all employees throughout the company in 2015. Total amount of Business Conduct Training (employee\*hours) provided in 2015 was 1,616 and total number of participating employees was 152.

Some of the career and personal development trainings provided to employees in 2015 are as follows:

- Change Management
- Effective People Management
- Initiative and Innovation
- Leadership in the Speed of Trust
- Leader's Place in HR Processes
- Problem Solution Techniques
- Strategic Management
- Leadership & Coaching for High Performance Teams

Additionally, we support career and personal developments of our employees attending college for Master's and/or PhD degree by giving them paid leave for 1 day per week during their academic terms.

Training Investments			
By Type of Training	Unit	2014	2015
Technical trainings	Hour	6,513	8,573
Personal development trainings	Hour	1,582	3,091

## **Employee Communication**

Aiming to create open and transparent communication with all stakeholders, Ak-Kim launched the Open Door Policy in 1999 to ensure that employees can easily reach their managers about every issue. Ak-Kim transformed this policy into a corporate social responsibility project and opened its facilities to official institutions and organizations as well as students -from primary school to college- that would like to visit the company and get information. Numerous visitors were accepted to Ak-Kim facilities during 2014 and 2015 within the scope of our Open Door Policy.

Furthermore, we have organized "Dialog with General Manager" meetings where working conditions are discussed by employees with high level of transparency and also various other events. In addition to the foregoing, a cocktail has started to be arranged every 6 months since the beginning of 2015 for new hires with the participation of General Manager and the new hires' managers.

Events gathering management and employees together and contributing to their amalgamation are organized by Ak-Kim Social Activities Club (ASEK). Such events include travels and trips, theater, meal organizations with the purpose of enhancing intradepartmental communication, picnics and New Year party and dinner for the retired organized each year for our retired employees.

Celebrating employees' birthdays with small memorial gifts each year, Ak-Kim gave employees little LÖSEV magnets in 2014 and thus donated the amounts to LÖSEV, the Foundation for Children with Leukemia. In 2015 the gift took the form of donation to TEV in the names of employees, contributing to education of successful and talented young people in need of financial support.

Ak-Kim Portal containing information on employee birthdays, weddings, having newborns, new employees, resigns, announcements, useful links, etc. not only allows employees to have easy access to information, but also contributes to a higher level of internal communication within the company. Ak-Kim updated the Portal with new Technologies in 2015.

## **Ak-Kim Employee Rewards**

**Seniority Plate:** Employees having served for 5 years and multiples of 5 years (5, 10, 15 etc. years) are rewarded with a seniority plate to show appreciation for their long service and work in Ak-Kim.

**Retirement Plate:** Employees leaving Ak-Kim by retirement after serving the company for long years are awarded with a retirement plate to show appreciation for their long service and work.

**Idea Workshop Award:** Idea workshop system covering all creative opinions of employees on issues such as facilitating/accelerating work performance, increasing capacity, improving efficiency (savings and cost reduction), reducing environmental impact, increasing customer satisfaction, and contributing to the vision, mission and values of the company is put in effect in December 2014.

**Invention Award:** This is for rewarding employees developing ideas for a product and/or method with specific technical features for solution of a specific technological problem.

**Success Award:** This is for rewarding employees contributing to Ebitda, increasing customer and/or employee satisfaction, raising company reputation, contributing to organizational values, ethical values and corporate culture and contributing to successes creating difference at a level worth of rewarding.

**Instant Rewarding:** This is for rewarding and appreciation of any behavior, practice, task completed, activity, suggestion (not entered in Suggestion System) etc. setting an example for other employees and not covered in other employee rewarding categories.

**Model OHS Employee:** Each month, employees meeting the selection criteria in line with the opinion of workplace physician and approval of OHS Board are rewarded.

**Model OHS Team:** We started implementing "Model OHS Team" in October 2014.

The criteria for selection of Model OHS Team are:

- Model OHS Team is selected quarterly in case there is a group meeting the selection criteria. This Team is selected by OHS Board in consideration of the following criteria:
- Team continuously and strictly follows the group's OHS rules within the site they are responsible for and sets an example to other employees and groups with their work,
- Team ensures other employees working at the site in their responsibility area continuously and strictly observe the OHS rules, no team member receives any warnings and/or have an occupational accident within the year,
- Team members contribute to reporting of unsafe situations, conditions and acts,
- Team makes improvements to create a safe working environment at the site in their responsibility area,
- Team observes the hygiene rules and ensures that the common areas within the site in their responsibility area are kept clean and in good order.

The group, meeting the selection criteria within the site for which they are responsible, are selected quarterly by Occupational Health & Safety Board.

## Occupational Health and Safety

Possessing the OHSAS 18001 Occupational Health and Safety Management System certificate since April 2009 and paying close attention to employee health, Ak-Kim identifies and evaluates risks and takes precautions to minimize their effects in order to prevent injuries and health problems during all kinds of operations in our workplaces. We continuously monitor and improve occupational health and safety management and performance.

Setting, implementing and checking targets to improve its OHS performance, Ak-Kim currently employs (all full-time employees) 1 Class A Occupational Safety Specialist, 1 Class B Occupational Safety Specialist, 3 Occupational Safety Field Operators and 1 half-time workplace physician and 1 full-time nurse.

Procedures related to occupational health and safety, projects to increase awareness of employees, trainings, drills, practices, controls, documentation of OHS Management System, achieving continuity, and conformity with OHS legislation and institutions that we are a member of are being implemented in the company for approximately 20 years. With the aim of improving employee interest in OHS, employees setting example in terms of OHS are rewarded monthly. Within the scope of this practice, 24 employees were rewarded with certificates of appreciation and gold coins as exemplary personnel in 2014 and 2015. Workplace Health and Safety Unit was established in 2010 and this unit reports directly to the Health Safety Environment (HSE) Department.

In 2014 & 2015, Ak-Kim held 26 emergency drills, mainly on fire, gas leak, and evacuation. In addition, "near-miss incidents" identified by employees are reported to the Occupational Health and Safety unit and corrective and preventive actions are taken periodically. Among our projects for 2016 are establishment of Behavior Oriented Occupational Safety System and expanding the OHS habit to all Ak-Kim employees.

Pursuant to Ak-Kim's Occupational Health & Safety (OHS) Policy, OHS practices are not only limited to the company's own operations and employees; suppliers' audits with an agenda including OHS issues are conducted and OHS trainings are provided not only to company employees but also to contractors' employees as well.

Occupational Health and Safety		All Employees	
Occupational Health and Safety Trainings	Unit	2014	2015
Total hours of OHS trainings	Hour	4,546	6,684
OHS Training Hours	Hour/employee	11	14



## **Emergency Management**

Emergency means collapse, breakdown, explosion, cleavage, split, fire and chemical leakage that may cause loss of life and property and that may result from natural disasters (earthquake, flood, storm, etc.), actions such as sabotage and attack, system and/or human errors, or any incident outside Ak-Kim.

Emergency actions are taken to return to normal operations by troubleshooting in case of collapse, breakdown, cleavage, split, explosion, storm, abnormal climate change, fire and chemical leakage. These actions may include emergency alarm-evacuation, firefighting, fighting dangerous gas leakages, combating flood, controlling chemical spills and leakages, measures taken before and after earthquakes, rescue and technical repair activities, first aid, social services, etc.

Emergencies such as failing to achieve waste water treatment regulations, unexpected spills, unexpected burdens, etc. are stated in operation instructions for waste water treatment facilities of Ak-Kim. "Instructions for Notification of Incidents at Ak-Kim Yalova Factories" is implemented in case of sabotage, bomb threats, social uprisings, etc.

Ak-Kim General Manager is also the Emergency Director of the company. He is responsible for managing the emergency. In his absence, Production Director shall be responsible. In the absence of Production Director, Human Resources and Management Systems Director and management Systems Director manage the emergency. Emergency Director assigned for Çerkezköy Plant is the Plant Manager and Financial Affairs Director for the Head Office.

A protocol was signed with Kocaeli Metropolitan Municipality Fire Station Training Center (KOBİTEM) in line with the 2015 training plan to train and improve employees for interventions and actions to take during emergencies. Employees involved in production had the priority to be sent to a 16-hour training conducted at KOBİTEM facilities.

Also in 2015, a Crisis Committee was established for providing timely and proper information to all our stakeholders during a potential crisis or emergency. Senior managers included in this body chaired by General Manager received Crisis Communication Training during the reporting time. Also, Ak-Kim Crisis Management and Communication Procedure were prepared within this context.

**APPENDIX**  
**Performance Indicators Tables**

<b>Employees</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
<b>Total</b>	<b>People</b>	<b>492</b>	<b>516</b>
Professional level - Female	People	92	99
Professional level – Male	People	113	128
Operational level - Female	People	7	7
Operational level - Male	People	280	282
<b>By Gender</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Female	People	98	106
	Percentage	20%	21%
Male	People	394	410
	Percentage	80%	79%
<b>By Age</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
30 and below	People	117	143
	Percentage	24%	28%
30 - 50	People	334	339
	Percentage	68%	66%
50 and over	People	41	34
	Percentage	8%	7%
<b>By Location</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Istanbul	People	48	48
	Percentage	10%	9%
Yalova	People	420	444
	Percentage	85%	86%
Çerkezköy	People	24	24
	Percentage	5%	5%
<b>Other Groups</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Expat	People	1	1
	Percentage	0%	0%
Disabled	People	12	12
	Percentage	12%	11%
<b>By Management Category</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Senior Management	People	9	9
	Percentage	2%	2%
Mid-level Management	People	52	59
	Percentage	11%	11%
Non-executive Professional Level	People	77	89
	Percentage	16%	17%

Operational Level	People	354	359
	Percentage	72%	70%
<b>Female Employees in Management</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>
Senior Management	Percentage	2%	2%
Mid-level Management	Percentage	16%	15%
Non-executive Professional Level	Percentage	37%	42%
Operational Level	Percentage	45%	42%

Employee Turnover Rate			
By Gender	Unit	2014	2015
Female	New Employee - Person	8	18
Male		30	53
By Age	Unit	2014	2015
30 and below	New Employee - Person	24	42
30 - 50		13	28
50 and over		1	1
By Location	Unit	2014	2015
Istanbul	New Employee - Person	8	10
Yalova		29	61
Çerkezköy		1	0

Occupational Health and Safety		All Employees		Female Employees	
Occupational Health and Safety Trainings	Unit	2014	2015	2014	2015
Total OHS trainings	Hour	4.546	6.685	905	1.373
People given OHS trainings	Person	492	516	98	106
Hours of OHS trainings	Hour/Person	10,6	13,78	9,2	12,95
Accidents	Unit	2014	2015	2014	2015
All injuries except first aid level	Per year	4	5	0	0
Accidents involving death	Per year	0	0	0	
Accidents requiring medical report *	Per year	0	2	0	0
Accident frequency**	Rate	3,75	4,6	0	0
Accident severity	Rate	7,49	55,22	0	0

Lost days	Unit	2014	2015	2014	2015
Lost days due to workplace accidents	Day/Year	8	62	0	0
Frequency of occupational diseases	Day/Year	0	0	0	0
Absenteeism / due to health issues	Day/Year	1.070	1.707	462	746

Employees on Maternal Leave (2014)	Total	Female	Male
Employees who earned the right for maternal leave	3	3	0
Employees who had maternal leave	3	3	0
Employees who returned after maternal leave	3	3	0
Employees who returned after maternal leave and worked for at least 12 months afterwards	3	3	0

Employees on Maternal Leave (2015)	Total	Female	Male
Employees who earned the right for maternal leave	9	9	0
Employees who had maternal leave	9	9	0
Employees who returned after maternal leave	9	9	0
Employees who returned after maternal leave and worked for at least 12 months afterwards	9	9	0

Training Investments in Employees			
Full-time Employees	Unit	2014	2015
Total training hours	Hours	8.095	11663,7
Total number of trainees	People	492	516
Senior and Mid-Level Executive – Female	Average hours	22,7	20,3
Senior and Mid-Level Executive – Male	Average hours	19,0	25,9
Non-executive Professional Level - Female	Average hours	10,1	39,3
Non-executive Professional Level – Male	Average hours	5,3	33,3
Operational Level – Female	Average hours	1,44	9,3
Operational Level – Male	Average hours	2,21	5

Training Investments in Employees			
By type of Training	Unit	2014	2015
Technical trainings	Hour	6.513	8.573
Personal development trainings	Hour	1.582	3.091

Direct Energy Consumption Based Upon Primary Energy Source				
Non-Renewable Direct Energy Sources – Purchased	Unit	2014	2015	
Natural Gas	Sm3	9.262.154	10.663.432	
	GJ	354.369	407.982	
Diesel	ton	121.298	135.815	
	GJ	2.733	3.061	
Gasoline	ton	19.440	16.735	
	GJ	438	377	
Total Direct Energy Consumption	GJ	357.541	411.420	
Indirect Energy Consumption Based Upon Primary Energy Source				
Energy Purchased from Non-Renewable Energy Sources and Consumed	Unit	2014	2015	
Electricity	kWh	151.003.430	143.469.203	
	GJ	543.608	516.485	
Steam	ton	548.232	551.862	
Total Water Consumption				
Source: Dam Water	Unit	2014	2015	
Water	1,000 m³/yıl	785	554	
Total Waste Water Discharge				
Where: Marmara Sea	Unit	2014	2015	
Waste Water Discharge	1,000 m³/yıl	231	247,5	
Direct and Indirect Greenhouse Gas Emissions				
	Unit	2014	2015	
Direct CO2 Emissions	1,000 t CO₂	4,127	No results yet	
Indirect CO2 Emissions	1,000 t CO₂	0		
Other CO2 Emissions	1,000 t CO₂	0		
Total CO2 Emissions	1,000 t CO₂	4,127		
Major Air Emissions				
By Type	Unit	2014	2015	
Total (CO, SO2, NO, NO2, Chlorine , Powder, VOC, TVOC, etc.)	1,000 t	12,9486 kg/hr	Not measured yet	



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