



## ENVIRONMENTAL STATEMENT 2017



## CONTENTS

1	INTRODUCTION .....	3
2	POLICY.....	4
3	THE COMPANY .....	5
3.1	GENERAL .....	5
3.2	ACTIVITY DESCRIPTION .....	5
3.3	PLANT CLASSIFICATION .....	6
3.4	PLANT PERMITS .....	7
4	RAW MATERIALS – PRODUCTS .....	8
5	ENVIRONMENTAL MANAGEMENT SYSTEM .....	10
6	SIGNIFICANT ENVIRONMENTAL ASPECTS .....	13
7	ENVIRONMENTAL PERFORMANCE .....	14
7.1	SPECIFIC CONSUMPTION OF MATERIALS .....	14
7.2	WATER-BASED PRINTING INKS & VARNISHES .....	14
7.3	SPECIFIC ENERGY CONSUMPTION .....	16
7.4	WATER .....	18
7.5	USE OF LAND - BIODIVERSITY .....	19
7.6	SOLID AND HAZARDOUS WASTE.....	20
7.7	SPECIFIC FUEL CONSUMPTION.....	22
7.8	CO <sub>2</sub> EMISSIONS.....	23
7.9	NO <sub>x</sub> , SO <sub>2</sub> & PARTICULATE MATTER EMISSIONS .....	26
7.10	OTHER ASPECTS REFERRING TO ENVIRONMENTAL PERFORMANCE – LEGAL PROVISIONS .....	28
8	ENVIRONMENTAL PROGRAMMES .....	32
9	EMPLOYEES' PARTICIPATION .....	35
10	NECESSARY INFORMATION ON REGISTRATION .....	36

## GRAPHS CONTENTS

Chart 1:	Flow chart showing the production process of Plain aluminium products .....	9
Chart 2:	Flow chart showing the production process of coated aluminium (lacquered or coloured) .....	9
Chart 3:	Flow chart for the production process of aluminium/paper products (with or without lacquer or colour coating) .....	9
Chart 4:	Model for Integrated Management System .....	10
Chart 5:	Percentage of water-based paints in 2015 .....	14
Chart 6:	Percentage of water-based paints in 2016 .....	15
Chart 7:	Percentage of water-based paints in 2017 .....	15
Chart 8:	Specific Energy Consumption .....	16
Chart 9:	Specific Electricity Consumption .....	17
Chart 10:	Specific Water Consumption.....	18
Chart 11:	Biodiversity Indicator .....	19
Chart 12:	Solid waste composition.....	20
Chart 13:	Specific fuel consumption.....	22
Chart 14:	Carbon Dioxide Emissions (CO <sub>2</sub> equivalent).....	25
Chart 15:	Specific NO <sub>x</sub> , SO <sub>2</sub> and PM Emissions .....	27

## TABLES CONTENTS

Table1:	Plant Permits.....	7
Table2:	Annual Consumption of Materials (kg) .....	8
Table3:	Annual production of products per category (kg) .....	8
Table4:	Table of Significant Environmental Aspects .....	13
Table5:	Specific consumption of materials.....	14
Table6:	Special manufacturing of non-hazardous waste.....	20
Table7:	Special manufacturing of hazardous waste .....	21
Table8:	Calculation of CO <sub>2</sub> e emissions .....	23
Table9:	Conversion Factors for the calculation of CO <sub>2</sub> e emissions.....	24
Table10:	Calculation of NO <sub>x</sub> , SO <sub>2</sub> and PM emissions from Natural Gas combustion .....	26
Table11:	Calculation of NO <sub>x</sub> , SO <sub>2</sub> and PM emissions from the use of Diesel.....	27
Table12:	Calculation of Total NO <sub>x</sub> , SO <sub>2</sub> and PM Emissions. ....	27
Table13:	List of Applicable Legal Requirements.....	31
Table14:	Environmental Targets and Programmes.....	34
Table15:	Information on the Organization and the Plant .....	37
Table16:	Information on the Body and Environmental Verifier .....	37

## 1 INTRODUCTION

SYMETAL S.A. is a company involved in manufacturing flexible packaging for cigarettes, chocolate & other foodstuff (yoghurt, chewing gum, pharmaceuticals, etc.). The company has developed an Environmental Management System pursuant to the provisions of Regulation (EC) No 1221/2009 (EMAS III) as well as Regulation (EU) 2017/1505 (as of 28.08.2017) regarding the modification of Annexes I, II and III of Regulation (EC) No 1221/2009. The participation in the Eco-Management and Audit Scheme (EMAS) reflects the company's intention to integrate environmental requirements in its business activity, as well as to improve its environmental performance. The initiative for the development and certification of the Environmental Management System is the cornerstone of the commitment to improve environmental performance.



Figure 1: Aerial photograph of the plant

This Environmental Statement is the **eleventh** that is being prepared as part of the EU Eco-Management and Audit Scheme (EMAS) and updates the statement issued in 2016. It includes the following:

- Description of the company, its manufacturing process and its Environmental Policy
- Description of the Environmental Management System and its structure
- Presentation and analysis of the acknowledged significant Environmental Aspects related to company activities
- The System's objective Environmental Objectives and Targets
- Presentation of the company's Environmental Performance and Environmental Indicators

The Environmental Statement mainly aims at fully informing all interested parties. The company intends to issue a new Environmental Statement to be verified by a certified verifier next year or earlier, as long as this is imposed by major changes in its environmental aspects. The company's Environmental Policy will be revised if necessary and will be published on an annual basis.

For any information and further clarification regarding the company's environmental issues, please contact the Environmental Management Department.

Hatzistratidi Gabriella  
Head of Environmental Management  
SYMETAL S.A.

## 2 POLICY

SYMETAL S.A., which specializes in aluminium rolling for foil manufacturing and in manufacturing flexible packaging materials from aluminium foil and/or paper, is committed to fully respect and act responsibly towards the environment and its social partners.

As part of our environmental policy, we are committed:

- **Compliance with the applicable legislation and other compliance obligations**  
To operate in full compliance with the existing national and EU environmental legislation and, when possible, exceed it, as well as with the all special environmental terms of operation, and to conform with the emission limits (for air and water emissions).
- **Environmental Protection**  
To be fully aware of the environmental impacts of the company operations and to develop strategies and targets for the prevention of environmental pollution.
- **Constant Improvement**  
To continuously improve our environmental performance and Environmental Management System, and to constantly reduce the environmental footprint of our activity and to self-assess our environmental performance in accordance with specific criteria.
- **Transparency**  
To operate in a framework of absolute transparency and to take part in an open dialogue on environmental issues with all stakeholders, governmental or not organizations, academic institutions, local communities and society as a whole and with all our stakeholders in general.
- **Training**  
To inform and train our personnel, raising their awareness and actively participate in environmental management issues, by understanding the company goals.

Evidence of our commitment is:

- **The application of the Environmental Management System**, certified according to ISO 14001, which enables us to assess environmental hazards and risks, implement effective programmes for environmental management and environmental pollution prevention, as well as action plans for improving and monitoring environmental aspects.
- **The establishment of Environmental Targets**, which are monitored, assessed and implemented through the Environmental Programs.
- **The operation of the Environment Department**, with specialized personnel to implement the environmental management programs.
- **The installation and operation of the pollution prevention systems**, in order to minimize air and water emissions to the environment.
- **The utilization of properly licenced contractors**, for waste management (collection, transportation, utilization, disposal) with preference to circular economy compatible methods.
- **The development of a recycling program** for paper, plastic, wood, metal packaging, batteries, electrical and electronic equipment, and tyres, through alternative management systems, where possible.
- **The collection and storage of all hazardous and non-hazardous waste** in designated areas fulfilling all environmental prevention measures required.
- **Active engagement** and representation in domestic and international organizations (HERRCO, EAA, EAFA, FPA etc.) on environmental protection and sustainability issues.

This environmental policy is communicated to our company personnel and our partners, and it is available to all interested parties.

All company employees should understand and implement this environmental policy

Konstantinos Kontos  
General Manager  
SYMETAL S.A.

### 3 THE COMPANY

#### 3.1 GENERAL

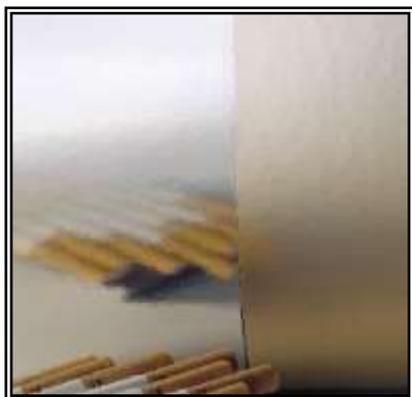
The company **SYMETAL S.A.** was established in 1977 and is a subsidiary of ELVAL S.A. (EL.V.AL: Hellenic Aluminium Industry), which holds a prominent position among the aluminium rolling companies all over the world. SYMETAL S.A. constantly invests on purchasing new machinery and equipment, namely on cutting-edge technology, its primary target being the customer's satisfaction.

Strict quality controls applied to all stages of the manufacturing process are only a part of an exhaustive Quality Management System according to ISO 9001:2015. The competent and experienced administrative personnel is responsible for providing services to its customers, even after sales.

The company meets the major needs of the Greek market but is mainly export oriented, with substantial activities in Europe, Asia as well as third countries. The exported products mainly include materials for the internal packaging of cigarettes and chocolate. Exported products are mainly packaging materials for cigarettes and chocolate inner wrapping.

#### 3.2 ACTIVITY DESCRIPTION

Our company specializes in aluminium foil surface treatment and lamination with paper, holds a leading position in the sector of flexible packaging materials for cigarettes, chocolate, & other foodstuff (yoghurt, chewing gum, pharmaceuticals, etc.).



Aluminium Foil for cigarette inner wrapping



Aluminium Foil for chocolate inner wrapping



Aluminium Foil laminated to paper chewing gum inner wrapping



Thermal sealing aluminium for caps lidding applications

Figure 2: Characteristic products

### 3.3 PLANT CLASSIFICATION

As regards to the existing legal framework and the manufacturing process, the facilities of the aluminium foil converting plant of SYMETAL S.A. in Mandra, Attica, are classified under the following cases:

- According to the provisions of article 4, of Ministerial Decision Y.A. 1958 (GG 21/B/13.01.2012) "Classification of public and private projects and activities in categories and sub-categories pursuant to article 1 paragraph 4 of Law 4014/21.09.2011 (GG A'209/2011)", the existing activity falls under the **2nd Sub-Category of Project Category A', 9th Group (Industrial Facilities)**.
- Pursuant to Annex I, article 8 of Joint Ministerial Decision KYA 36060/1155/E103/2013 (GG 1450/14.06.2013), in compliance with the provisions of Directive 2010/75/EU "*on industrial emissions (integrated pollution prevention and control)*", the existing activity falls under **Category 6.7**: "Surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, with an organic solvent consumption capacity of more than 150 kg per hour or more than 200 tonnes per year".
- According to the Statistical Classification of Economic Activities for the year 2008 (Statistical Classification of Economic Activity Sectors - STAKOD 2008), which is based on NACE Rev. 2 of the European Union, the existing activity of the plant is classified under STAKOD code 24.42 "Aluminium Production".

### 3.4 PLANT PERMITS

The plant operates in approved environmental terms. The plant's Environmental Terms came into force with Decision with Pr. No. ΠΕΧΩ Φ3623/3606/Φ.ΠΕΡ.9/10 by the Directorate for the Environment and Urban Planning of Attica Region and its modification with Decision with Pr. No. F.3623/721/Περίβ.9 of 26/05/2015, due to mechanical modernization, according to which an extension of its validity is granted for ten years after issuing the 2010 Decision. The permits available to the plant are shown in detail on Table 1.

Permit / Certificate	Competent Authority	Pr. No.	Validity
Operation Permit	Directorate for the Development of the Regional Unity of Western Attica	7331/ F14.MAN.3267 – 17.10.2013	Indefinite duration
Modification of the Operation Permit following mechanical and building modernization	Directorate for the Development of the Regional Unity of Western Attica	998 /F14.MAN.3267 – 04.03.2014	Indefinite duration
Modification of the operation permit following building modernization and mechanical layout	Directorate for the Development of the Regional Unity of Western Attica	4992/F.14MAN.3267 – 29.07.2015	Indefinite duration
Modification of the operation permit for the aluminium products manufacturing industry, "ELVAL S.A.", due to a change in its holder's name	Directorate for the Development of the Regional Unity of Western Attica	7862/F.14MAN.3267 – 28.11.2015	Indefinite duration
Modification of the operation permit following a permit for the installation of mechanical modernization	Directorate for the Development of the Regional Unity of Western Attica	9740/F.14MAN.3267 – 01.02.2016	Indefinite duration
Modification of operation permit in terms of its holder	Directorate for the Development of the Regional Unity of Western Attica	7282/F14.MAN.3267– 20.10.2016	Indefinite duration
Decision for the Approval of Environmental Terms	Directorate PEHO, Attica Region	PEHO F3623/3606/F.Per.9/10 – 12.07.2010	10 years (*)
Modification of the Decision with Pr.No. PEHO F3623/3606/Periv.9/12.7.10 for the Approval of Environmental Terms, due to mechanical modernization	Directorate PEHO, Attica Region	PEHO PEHO F3623/721/Per.9 – 26.05.2015	10 years (*)
Permit for the collection and transportation of non-hazardous solid waste	Directorate for the Environment & Urban Planning, Decentralized Administration of Attica	F 488/1610/PERIV-SA/ 20.04.2012 F 488/1776/PERIV-SA/ 03.04.2015	5 years
Fire-Protection Certificate	Fire Service of Elefsina, Regional DPY (Fire Service Administration) of Attica	1238/F.701.4/ – 17.06.2015	8 years

(\*) Extension of this AEPO (Decision for the Approval of Environmental Terms) F3623/3606/F.Per.9/10 – 12.07.2010 for ten years after its issuance together with its modification; its validity is extended for four years, since the company has the Eco-Management and Audit Scheme (EMAS) as an Environmental Management System, pursuant to Law 4014/2011 (article 2).

Table1: Plant Permits

#### 4 RAW MATERIALS – PRODUCTS

The main raw materials used in the plant are aluminium and paper. However, depending on the manufacturing process, other materials are also used; their consumptions for the years 2015, 2016 and 2017 are shown on Table 1.

Reference Year	2015	2016	2017
<b>Raw Materials Consumption</b>	<b>kg</b>	<b>kg</b>	<b>kg</b>
Aluminium foil	8,419,886	7,757,943	8,673,654
Paper	11,739,956	10,996,913	11,402,980
Glue	138,705	147,280	138,698
Paraffin wax	105,237	75,564	77,122
Printing inks & varnishes	140,062	119,883	96,361
Lacquers	316,314	401,678	434,189
Solvents	651,845	821,305	923,460

Table2: Annual Consumption of Materials (kg)

The produced materials manufactured by SYMETAL S.A. can be divided in the following general categories:

1. Aluminium foil plain and/or embossed
2. Coated aluminium foil:
  - a. Lacquered (with slip lacquer coating on one side of the foil and/or a heat sealing lacquer layer on the other side of the foil, with coating weight of 2.5 – 8 gr)
  - b. Printed (with colour coating on one side of the foil – optional the other side of the foil could be coated with heat sealing lacquer)
3. Aluminium foil laminated to paper (using glue or paraffin wax). The products can be:
  - a. Silver coloured – with or without a lacquer coating on the aluminium side.
  - b. Printed – with fully or partial colour printing on the aluminium side and/or on the paper side.
4. Plain paper

The annual quantities produced for the above product categories for the years 2014, 2015 and 2016 are shown on the following table.

Reference Year	2015	2016	2017
<b>Production per product category</b>	<b>kg</b>	<b>kg</b>	<b>kg</b>
Plain aluminium foil	197,605	240,433	215,959
Coated aluminium foil (lacquered)	819,403	1,384,314	1,637,720
Coated aluminium foil (Printed)	46,540	56,249	151,907
Aluminium foil laminated to paper (silver with or without lacquer coating)	13,373,825	12,791,607	13,457,776
Aluminium foil laminated to paper (printed – with full or partial printing)	4,205,893	3,540,539	3,311,201
Plain paper	-	1,954	7,878
<b>Total</b>	<b>18,643,266</b>	<b>18,015,096</b>	<b>18,782,441</b>

Table3: Annual production of products per category (kg)

Depending on the produced material, there are the following methods of production process:

For the production of Plain aluminium foil materials, the aluminium reels are placed in the slitting machines and, by un-winding, cutting and re-winding, smaller reels are created, in dimensions according to customers' requirements (Chart 1). The finished products are stored in the warehouse until they are delivered to the customers.



Chart 1: Flow chart showing the production process of Plain aluminium products

As regards the production of coated aluminium foil products, the aluminium reels are placed in the machines, and, by un-winding, surface treatment (lacquer or colour coating on aluminium foil), and re-winding, mother reels are created. At the following step, mother reels are placed in the slitting machines, where the smaller reels are created, in dimensions according to customers' requirements (Chart 2).

The finished products are stored in the warehouse until they are delivered to the customers.



Chart 2: Flow chart showing the production process of coated aluminium (lacquered or coloured)

For the production of aluminium foil materials laminated to paper, the aluminium and paper reels are placed in the laminating machines, they are un-winded and then laminated using glue or paraffin wax as an adhesive. Continuously on the same machine, the surface treatment (lacquer or colour coating) takes place, either on alu-foil or paper surface. At the end of lamination stage, the mother reels are produced. In the following step, mother reels are placed in the slitting machines, where the smaller reels are created, in dimensions according to customers' requirements (Chart 3).

After their packaging, the finished products stored in the warehouse until they are delivered to the customers.

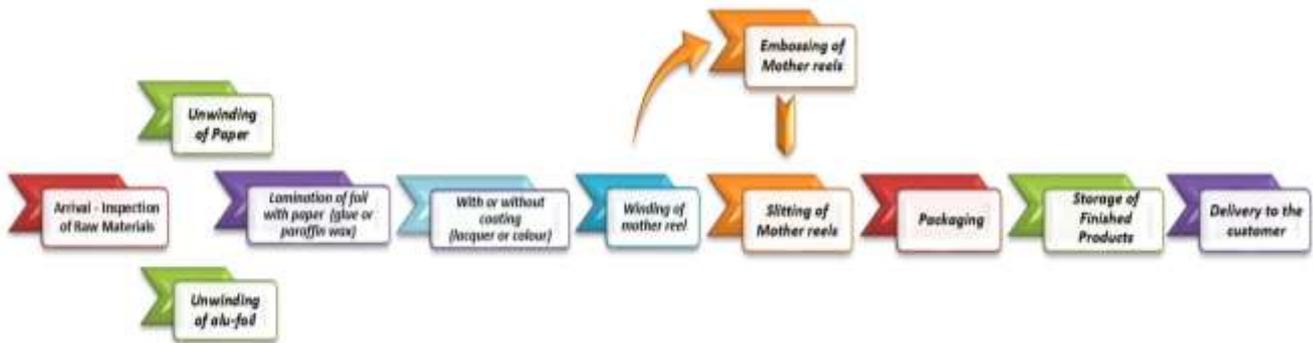


Chart 3: Flow chart for the production process of aluminium/paper products (with or without lacquer or colour coating)

## 5 ENVIRONMENTAL MANAGEMENT SYSTEM

The Company SYMETAL S.A. has established and implement since 2007 an environmental management system, in accordance with the requirements of Regulation (EC) No 761/2001 of the European Parliament and of the Council, and of Regulation (EC) No 196/2006, on the voluntary participation of organisations in a Community eco-management and audit scheme (EMAS), and has been harmonized with the requirements of the new Regulation 1221/2009 (EMAS III), which has entered into force since 11 January 2010, as well as with the modifications of its Annexes I, II and III, as set out in the new Regulation (EE) 2017/1505 (as of 28.08.2017).

This system has been incorporated into the existing Quality Management system, resulting in the creation of an Integrated Management System, which includes:

- Quality Management according to ISO 9001
- Environmental Management according to ISO 14001 / EMAS
- Food Safety Management according to ISO 22000
- Occupational Health and Safety according to OHSAS 18001

The body of the Integrated Management System is the Quality System and based on that all other systems have been adjusted accordingly. The following Chart illustrates the model of the integrated system and the overlaps between the subsystems indicate that there are common areas between them:

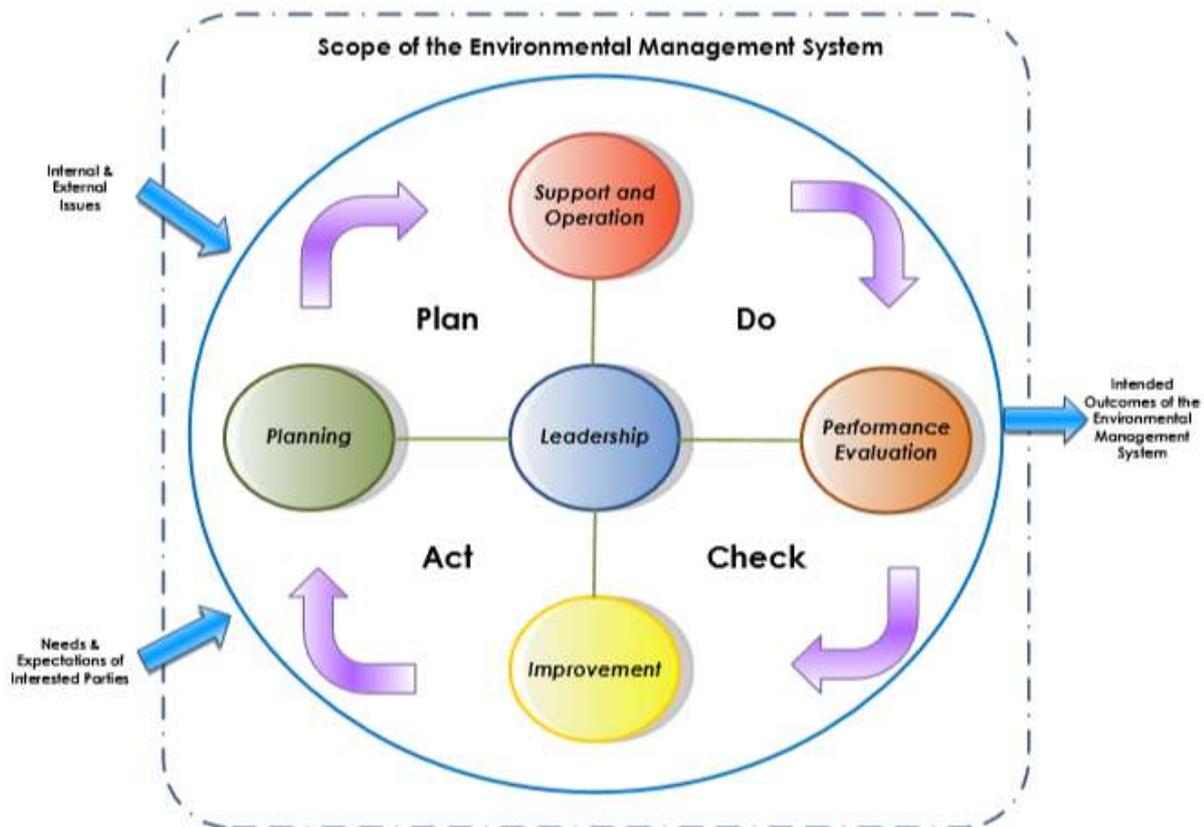


Chart 4: Model for Intigrated Management System

The integrated management system includes common procedures applying to all four of its subsystems, as well as procedures related exclusively to the ISO 14001 / EMAS system, such as:

- Assessment of the significance of the environmental aspect
- Operational Control
- Emergency preparedness and response

As in every modern Management System, the design and installation of the EMS in the company was based on the PDCA model:



**PLAN:** In order to set up the System, there was a detailed identification and assessment of all the Environmental Aspects, in order to determine the significant ones and to define the axes of improvement upon which the System will evolve (see paragraph 6)

**DO:** Implementation of all the necessary actions resulting from the design of the System.

**CHECK:** Continuous check of the Environmental Parameters and EMS data

**ACT:** Instant corrections and implementation of Corrective or Improvement Actions in case of deviations from the requirements and aiming at the **continual improvement** of **Environmental performance**.

SYMETAL S.A. has identified the **external and internal parameters** that refer to its objective and strategy, and affect its ability to achieve the desired results of the management system. These parameters include the conditions affected by or being able to affect the company and its ability to achieve the desired results for the implemented Quality Management and Environmental Management System.

SYMETAL S.A. has acquired a general understanding of the expressed needs and expectations for those internal and external **interested parties**, which have been determined as relevant to the company. This acquired understanding is examined when determining **the needs and expectations** according to which it must or chooses to comply with, namely with its compliance obligations.

In the designing of the environmental management system, SYMETAL S.A., having taken into account all the above, has identified the **risks and opportunities** related to its environmental aspects, compliance obligations and all other issues and requirements that need to be addressed to:

- Ensure that the environmental management system is able to achieve the intended outcomes,
- Prevent or reduce undesired effects, including the potential for external environmental conditions to affect the organization,
- Achieve continual improvement.

## 6 SIGNIFICANT ENVIRONMENTAL ASPECTS

The company's significant Environmental Aspects have resulted after the detailed identification of all the company's associated environmental impacts and their assessment according to the following 4 criteria:

- Existence of a legal or other regulatory requirement (**Legal Framework**),
- **Frequency of appearance** of the Environmental Aspect
- **Cost of management or use** for each Environmental aspect, and
- Significance in terms of the **environmental impact** (the impact may be positive or negative).

When establishing these criteria and their weight factor, the following elements have been considered:

- potential harm or benefit to the environment including biodiversity
- the condition of the environment (such as the fragility of the local, regional or global environment)
- size, number, frequency and reversibility of the aspect or impact
- existence and requirements of relevant environmental legislation
- views of the interested parties, including employees of the Organisation.

The results of the assessment are shown on the following table:

Sector	Significant Environmental Aspect
Gaseous Wastes	VOC (volatile organic compounds) emissions
	Fugitive emissions from Natural Gas burners
Solid waste	Packaging wood
Special treatment waste	oil containers
	Waste electrical and electronic equipment
Hazardous waste	Residues of Solvents
	Absorbent materials, fabrics and wiping clothing
	Waste from lubricant spray packaging
Use of materials and resources	Consumption of packaging materials
	Environmental criteria during product design
	Environmental criteria in the selection of raw materials
Energy use	Electricity consumption
	Natural gas consumption
Energy Emitted	Fires

Table4: Table of Significant Environmental Aspects

In addition to the aforementioned Environmental Aspects that have been characterized as significant, the company also monitors each Environmental Aspect for which there is a respective Environmental Legislation regardless of whether this has been assessed as significant or not.

As far as significant environmental aspects are concerned, it should be mentioned the oldest environmental program related to the management of the VOC's, which included the installation of an afterburner system in order to eliminate VOC emissions (volatile organic compounds) from the plant's exhaust pipes. The afterburner operates when solvents are used in the manufacturing process; its correct performance is confirmed by measurements at the outlet of the plant's exhaust pipe (measurements are taken in the form of average Total Organic Carbon (TOC) value). Measurements are taken on an annual basis and the average Total Organic Carbon (TOC) value was measured at 3.1 mg C/Nm<sup>3</sup> (Megtec) and 7.0 mg C/Nm<sup>3</sup> (DCT) with a limit value of 100 mg C/Nm<sup>3</sup>.

Moreover, measurements regarding noise emissions that have been conducted at the boundaries of the plant within the year, found to be within limits (noise level < 65dB (A), Presidential Decree P.D. 1180/81, GG 293/A/06.10.81).

**7 ENVIRONMENTAL PERFORMANCE**  
**7.1 SPECIFIC CONSUMPTION OF MATERIALS**

The specific consumption of materials is defined as the total consumption of materials in kg/ton of manufactured product, and it is monitored so as to ensure their efficient use.

Reference Year	2015	2016	2017
Produced Materials (tn)	18,643	18,015	18,782
Materials used	(kg of materials used / tn of produced materials)		
Aluminium foil	451.6	430.6	461.8
Paper	629.7	610.4	607.1
Glue	7.4	8.2	7.4
Paraffin wax	5.6	4.2	4.1
Printing inks & varnishes	7.5	6.7	5.1
Lacquers	17.0	22.3	23.1
Solvents	35.0	45.6	49.2
<b>TOTAL:</b>	<b>1,153.8</b>	<b>1,128.0</b>	<b>1,157.8</b>

Table5: Specific consumption of materials

**7.2 WATER-BASED PRINTING INKS & VARNISHES**

In order to manufacture its products, the company uses both water-based inks and solvent-based inks. The company policy is to exhaust its possibilities to use water-based inks at the expense of solvent-based printing inks, whenever this is technically and financially feasible. The following charts show the percentages of water- and solvent-based inks for the years 2015, 2016 and 2017.

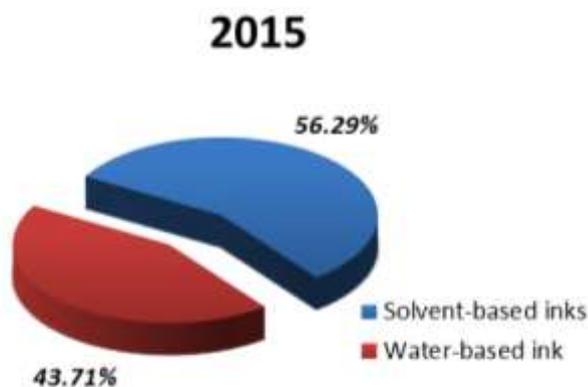


Chart 5: Percentage of water-based paints in 2015

## 2016

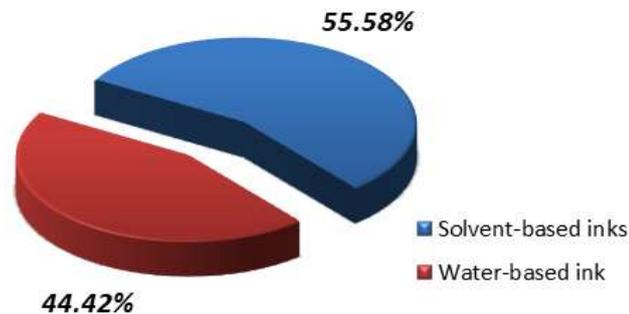


Chart 6: Percentage of water-based paints in 2016

## 2017

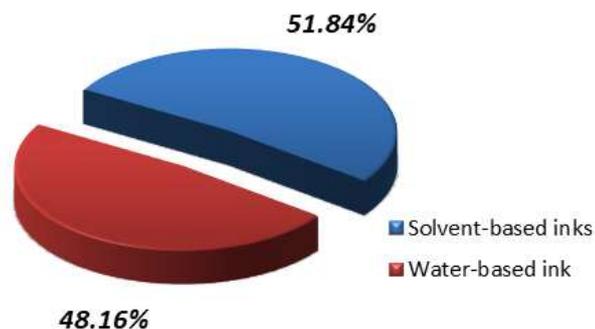


Chart 7: Percentage of water-based paints in 2017

According to the above charts for the years 2015 – 2017, the use of water-based inks constantly increases as part of the total used printing inks, while the use of solvent-based inks is reduced respectively (used in case of special customer requirements).

More specific, the charts for the year 2017 shows a small increase in the percentage of water-based printing inks from 44.42% to 48.16% (increase percentage: ~8.4%).

According to Table 3 (Annual production of products per category), the tonnage for 2017 is higher than the respective figure for 2016 (approximately 4.2%). By focusing on the various product categories, a significant increase in lacquered & printed aluminium is observed, while the category of printed laminated materials shows a decrease of approximately 6%.

Based on the aforementioned data it is concluded that, despite the decrease in the total production of printed materials, an increasing trend in the usage of water-based inks is visible, which is compatible with the company's policy favouring the use of water-based chemicals wherever feasible.

However, in order to reach a definite conclusion on the trends for the percentages of water- and solvent-based printing inks, which will reflect the overall trend in the market, additional data for the following years are required.

### 7.3 SPECIFIC ENERGY CONSUMPTION

Specific energy consumption is defined as the total energy consumption in kWh/kg of produced materials.

Specific energy consumption includes both electricity and natural gas, whereas in previous years it also included LPG (until September 2006, where it was fully substituted by natural gas).

The introduction of Natural Gas technology has led to a significant decrease in specific energy consumption, while in the following years there is a fluctuation in specific consumption, which depends on the distribution of the produced materials per year according to our customers' requirements.

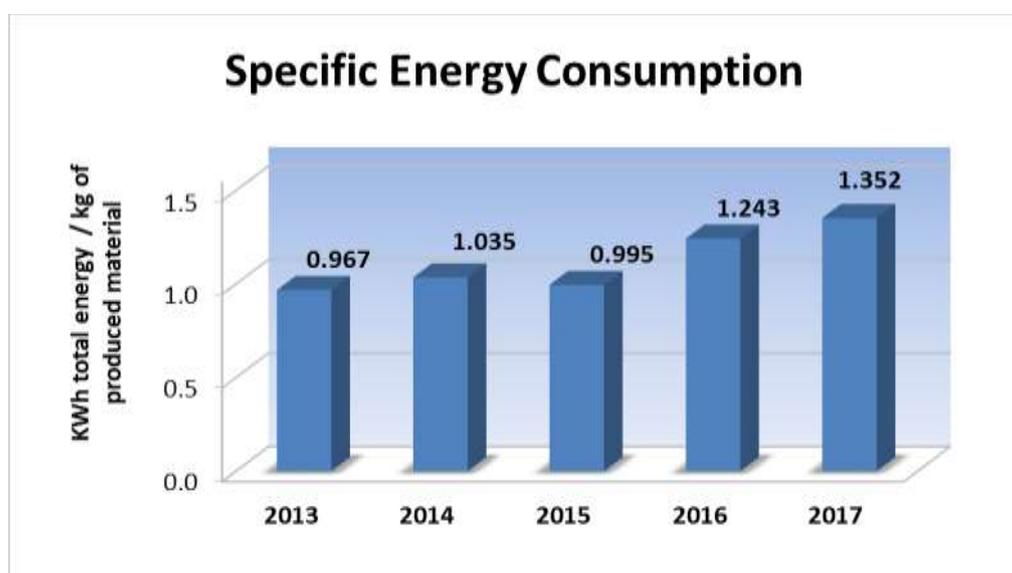


Chart 8: Specific Energy Consumption

The significant increase in Natural Gas consumption for the year 2014 is due to the modification of the manufacturing process for coated aluminium foil materials with thermos-sealing lacquer with a coating weight of 6 – 8 gr, led to the increase in the specific energy consumption indicator. This change in the most energy-consuming production process was introduced in order to ensure the highest possible safety for the produced materials, since they are intended to come into contact with sensitive products (yoghurt, jam, etc.).

In 2015, this indicator decreased due to the particularly high raise in the 2015 tonnage (approximately 25%) compared to the 2014 tonnage, despite the significant increase in absolute energy consumption.

The specific energy consumption indicator for the years 2016 & 2017 is clearly higher compared to 2015 and this increase is mainly due to the Natural Gas consumption.

- As far as Natural Gas is concerned, consumption for the years 2016 - 2017 is clearly higher (by 25% in 2016 and by 15% in 2017), due to the operation of the new machinery with three rows of drying ovens, as well as to the operation of the afterburner which supports the new machinery.
- As far as the specific electricity consumption is concerned (defined as the electricity consumption in kWh/kg of produced material), there is also an increase compared to 2016, but in a smaller percentage than the one for the 2015-2016 period. This is due both to the increase in the tonnage as well as to a modification in the existing laminating machine (by upgrading the motors and electrical panels), resulting in a 30% increase in the machine's energy efficiency (since a lower energy consumption leads to the machine's higher production capacity). This modification was completed by the end of 2015.

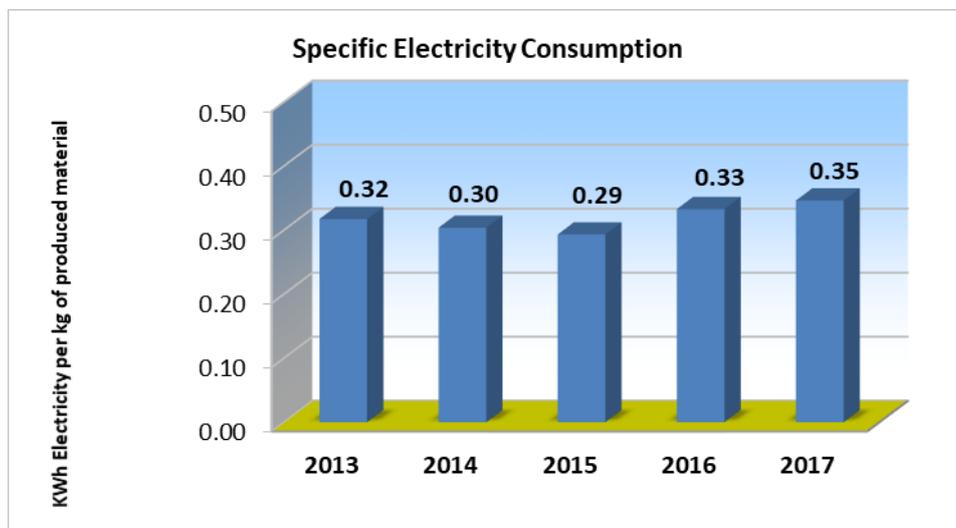


Chart 9: Specific Electricity Consumption

The specific energy consumption concerns the company in terms of both business (limiting energy expenses) and the environment (improving energy efficiency that leads to a decrease in greenhouse gas emissions – see below "CO<sub>2</sub> emissions").

After the new lacquering machine was installed in late 2015, with a larger production capacity than that of the existing lacquering machines, it was expected that the production time for energy-consuming products would be reduced, thus causing a further decrease in the energy consumption percentage per unit of produced material.

This was achieved partly in 2016, since the production of Coated (Lacquered) Aluminium Foil was doubled (Table 3), accompanied however with a reduced demand for laminated products (aluminium and paper) mainly intended for cigarette packaging, that affected the total produced tonnage of the year.

The specific electricity consumption for 2017 is higher but significantly lower than the respective one for the years 2015-2016. This is due to the fact that the operation of the new lacquering machine has not yet reached the foreseen production volumes, mainly due to the production of a significant number of samples, both for new materials and new customers.

## 7.4 WATER

The facility's needs in water are met by the ΕΥΔΑΠ (Athens Water Supply and Sewerage Company) network.

The main water uses are:

- Urban uses (sinks, WCs, potable water, etc.)
- Cleaning of mechanical equipment
- Preparation of mixtures for water-based coatings and adhesives
- Watering greenery areas

Specific water consumption is defined as the total water consumption in m<sup>3</sup> /ton of produced material.

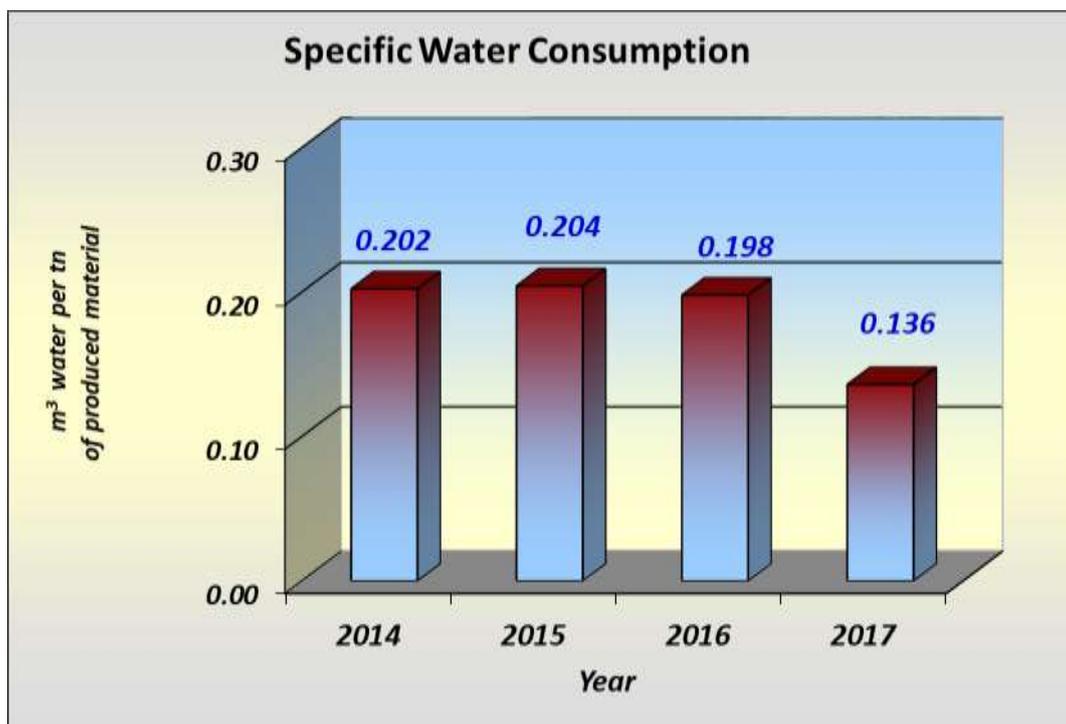


Chart 10: Specific Water Consumption

The specific water consumption indicator for years 2014 – 2015 ranges at the same levels, higher than previous years, as a result of excessive works in the premises, until the installation and operation of the new lacquering machine is completed, alongside accompanying necessary changes. In 2016, the indicator has started to show a decrease and has significantly improved in 2017, as shown on Chart 10.

Moreover, in order to serve the fire extinction network, there are two tanks with a volume of 40 m<sup>3</sup> each (total 80 m<sup>3</sup>), while during 2016 a new water supply source was installed to meet the plant's higher water needs, resulting in lower water pressure.

## 7.5 USE OF LAND - BIODIVERSITY

Biodiversity is mainly defined as the total biological species, ecosystems and civilizations in an area. The high number and diversity of modern forms of life on Earth is the result of hundreds of millions of years of evolution.

Biodiversity is critical for preserving the multiple functions of an ecosystem, such as regulating the atmosphere's chemical composition, food production, raw materials supply, water supply, nutrients recycling.

The main direct causes for biodiversity loss are: changing the use of land and modifying habitats with other uses, pollution, the unsustainable use of natural resources, climate change and the penetration of foreign species.

In general, changes in the use of land cause major changes in biodiversity (diversity reduction or elimination in natural habitats), through degradation, pollution and the introduction of new species. The assessment of environmental aspects has taken into account biodiversity alterations that may be caused by our company activities without particular impacts. However, the use of land is monitored, expressed in m<sup>2</sup> of built area per ton of manufactured product.

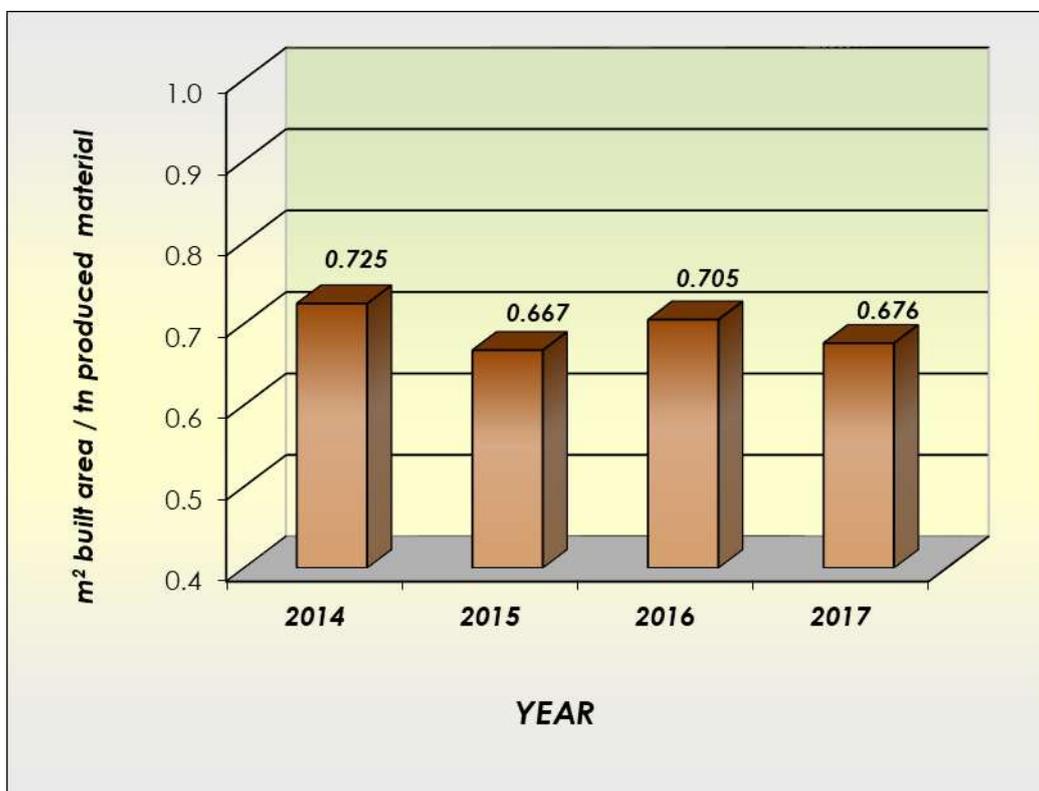


Chart 11: Biodiversity Indicator

The total realizable construction amounts to 14,346.46 m<sup>2</sup>, a lot less than the permissible construction which is calculated as the plot area multiplied by the building density: 23,964 m<sup>2</sup> x 0.9 = 21,567.6 m<sup>2</sup>.

## 7.6 SOLID AND HAZARDOUS WASTE

All waste produced by the plant of SYMETAL S.A. in Mandra, Attica, is temporarily stored until it is disposed. The composition of this waste is shown on the following chart:

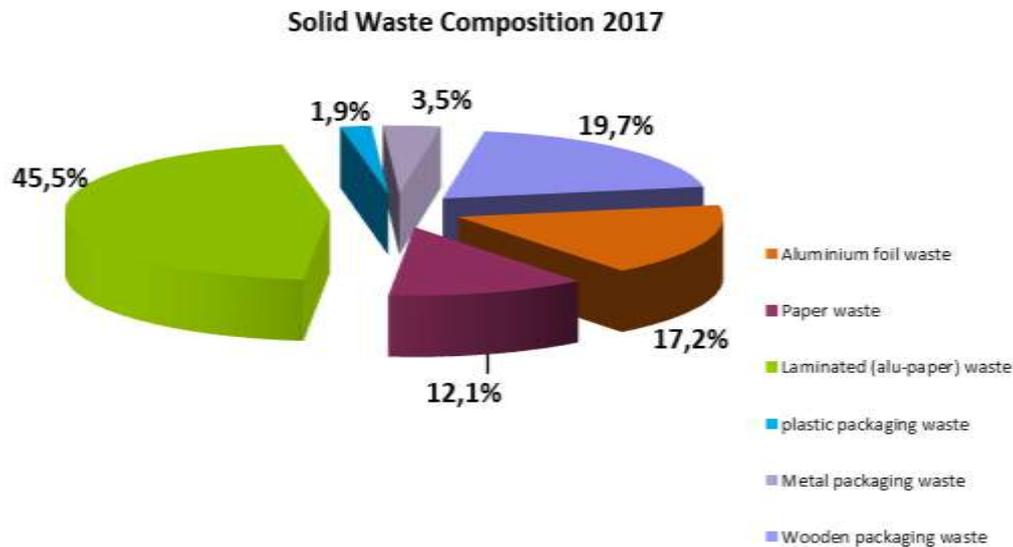


Chart 12: Solid waste composition

The solid waste produced by the plant's operation is scrap from raw materials, products and packaging. Table 4 shows the total annual waste production (expressed in kg of produced waste per ton of produced product) for the categories of non-hazardous solid waste, for the years 2015, 2016 and 2017.

Reference Year	2015	2016	2017
<b>Produced Materials (tn)</b>	<b>18,643</b>	<b>18,015</b>	<b>18,782</b>
<b>Produced waste</b>	<b>(kg of produced waste/ tn of manufactured product)</b>		
Aluminium foil waste	13.26	22.29	18.55
Paper waste	11.97	15.69	15.74
Laminated (alu-paper) waste	68.82	58.89	55.01
Plastic packaging waste	3.61	2.47	0.5
Metal packaging waste	3.64	4.53	15.93
Wooden packaging waste	29.34	25.50	34.50

Table6: Special manufacturing of non-hazardous waste

All the aforementioned waste is disposed to licenced contractors for waste management, mainly for recycling. This waste is not subject to any processing by Symetal, except for compression in order to reduce volume.

The hazardous waste generated during the company's production process is solid and liquid and it is classified in the following categories:

- waste paint and varnish containing organic solvents
- aqueous sludges containing paint or varnish
- polluted packaging
- waste from machine lubricating oils
- absorbent materials and fabrics absorbents, filter materials, wiping cloths,

- used batteries
- Electrical and Electronic Equipment.

The special production for all hazardous waste is shown on the following table:

Reference Year	2015	2016	2017
Produced Materials (tn)	18,643	18,015	18,782
	total kg of produced waste/ tn of manufactured product		
Produced hazardous waste	5.5	5.8	5.8

Table7: Special manufacturing of hazardous waste

The production process and the cleaning of equipment in this plant generate aqueous liquid wastes, which mainly consists of solvents and residues from printing inks and lacquers.

The specific wastes are collected in plastic tanks with a 1 m<sup>3</sup> capacity, and sent for management to VEPAL S.A. in order to recover/regenerate solvents. This liquid waste is transported in cooperation with the licensed (to transport hazardous waste) company, which undertakes the loading of the plastic tanks onto containers and the transportation.

Tyres at their end of their life cycle are handled according to PD No. 109/GG 78/05.03.2004. As the final user of tyres, SYMETAL is obliged to deliver used tyres to the approved alternative management system and has signed a private agreement with ECOELASTIKA (21.09.2017) to that effect.

Electric batteries are managed according to PD No. 115/GG 80/A'/05.03.2004. The batteries are disposed to the company SUNLIGHT RECYCLING Industrial and Commercial S.A., - a renewed contract is available as of 01/07/2016 - which has undertaken the collection, transportation and recycling according to an approved Alternative Management System (AMS) for lead batteries recycling.

The waste electrical and electronic equipment is handled according to PD No. 117/GG 82/05.03.2004. The nature and quantity of waste electrical and electronic equipment are similar to those originating from households (WEEE from private households). These are collected and temporarily stored separately from urban waste, in a special roofed area in the plant, with suitable marking. The WEEE is delivered by ANAMET S.A. and forwarded to BIANATT WEEE RECYCLING, which has a contract with the collective alternative management system for WEEE "APPLIANCES RECYCLING S.A.", to which it communicates the retrieval percentages from the delivered quantities. A relevant statement is issued for each dispatch carried out.

All the waste lamps and light bulbs are disposed to "FOTOKIKLOSI S.A.", based on a respective contract (as of 29/08/2016). They are collected in special waste bins, separately for lamps and light bulbs, provided by "FOTOKIKLOSI S.A.", which also undertakes their delivery and issues a relevant statement.

The waste from machine oils are disposed of based on a contract with the company "CYTOP S.A. ENVIRONMENTAL TECHNOLOGIES & APPLICATIONS COMMERCIAL SOCIETE ANONYME".

In case of works resulting in rubble (construction, demolition and excavation waste - CDEW), these will be handled by an approved alternative management system of these materials, pursuant to the terms of Ministerial Decision 36259/1757/E103, 24.08.10, which is compulsory for contractors undertaking such works.

All hazardous waste, except for those subject to alternative management systems, are disposed to recipients with a legal permit for collection, transportation, utilization, disposal.

## 7.7 SPECIFIC FUEL CONSUMPTION

Specific fuel consumption is defined as the fuel volume (lt) / kg of production material.

Fuel consumption is calculated from the amount on the respective invoices and the conversion of this amount in litres of fuel, taking into account the price of liquid fuel, as published on the Weekly Fuel Prices Review Bulletin by the Ministry of Development and Competitiveness (<http://www.fuelprices.gr/deltia.view>).

As shown on the following chart of specific fuel consumption, the indicator relating to the company trucks increased compared to its value in 2015, due to a significant increase in domestic sales (approximately 20%), while the plant's total manufacturing of finished products slightly decreased.

In 2013, there was a significant decrease in specific fuel consumption for forklifts, since the procurement of two new electrical ones helped meet the higher manufacturing needs, while the diesel-driven ones were mainly used for external works.

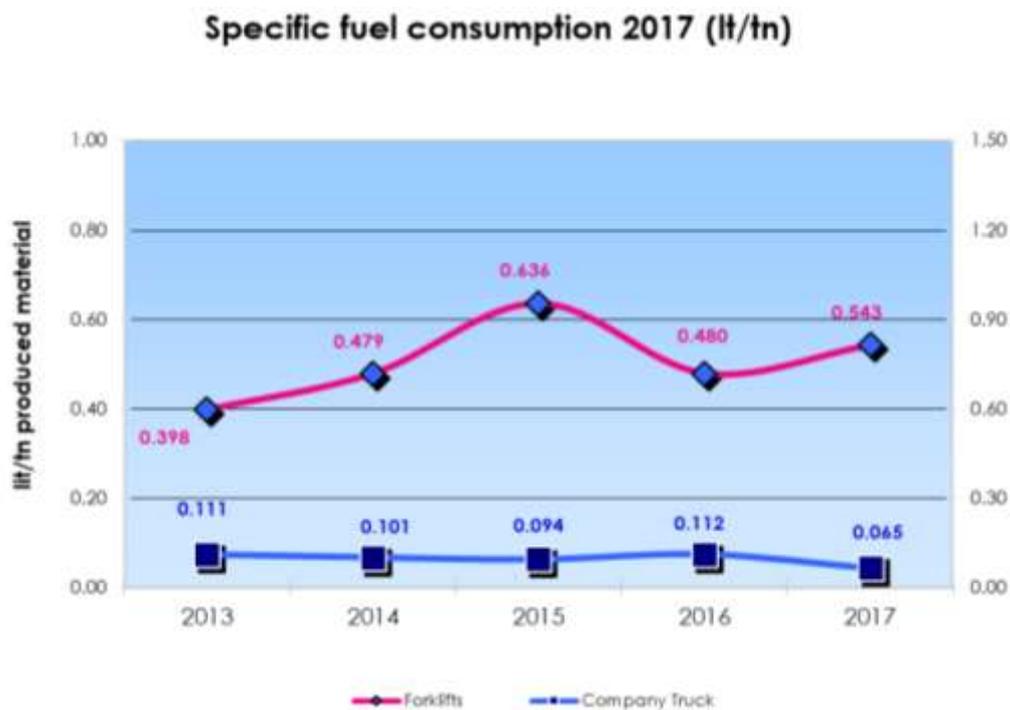


Chart 13: Specific fuel consumption

However, this indicator rises during the years 2014 & 2015, as a result of the diesel-driven forklifts, mainly due to reconstruction works in existing rooms and due to the installation of new machines. In 2016, the indicator drops again and returns to its 2014 levels, while in 2017, diesel-driven forklift consumption increases, but still remains lower than the indicator's peak in 2015.

When there is a high work load in the plant's external areas, diesel-driven forklifts are used more often, resulting in an increase in this indicator.

## 7.8 CO<sub>2</sub> EMISSIONS

The Greenhouse Effect is defined as the warming phenomenon observed in greenhouses (hence its name). During this phenomenon, the glass super-construction or dome emits short waves but absorbs and re-radiates longer waves, thus warming the interior.

The same phenomenon is also observed in nature, when a planet's atmosphere contributes to its warming. In recent years, the term has been connected to global warming, while it is considered that it has been significantly enhanced by man-made activities. CO<sub>2</sub> is the gas contributing most to the greenhouse effect.

The company, although it does not belong to the companies subject to the EU scheme for greenhouse gas emission allowance trading, monitors its CO<sub>2</sub> emissions through consumption.

The following have been identified as the company activities that mainly contribute to the release of greenhouse gases:

- i) Electricity use
- ii) Natural gas use
- iii) Fuel consumption (diesel) from forklift and truck traffic
- iv) Fuel consumption (petrol or diesel) from company leasing car traffic

CO<sub>2</sub> emissions related to each of the aforementioned company activities are calculated by converting the monitored consumptions, using conversion factors.

$$\text{Activity data} \times \text{CO}_2 \text{ e emissions factor} = \text{CO}_2 \text{ e emissions}$$

	Electricity	Natural gas	Diesel	Petrol	Total CO <sub>2</sub> e emissions	Total production	Specific CO <sub>2</sub> e emission
	kwh	kwh	liters	liters	Kg	kg	kg CO <sub>2</sub> e/ kg of product
Year							
2015	5,466,727	13,091,468	13,624	13,363	6,240,356	18,643,266	0.335
2016	5,995,873	16,392,305	26,686	1,990	6,645,801	18,015,096	0.369
2017	6,505,102	18,890,091	32,099	0*	7,419,786	18,782,441	0.395

\*As of 2017, all company cars are diesel-driven.

Table8: Calculation of CO<sub>2</sub> e emissions

In order to calculate CO<sub>2</sub> emissions from electricity consumption, since 2013 and afterwards, the company used the factor referring to Greece and provided by SEAP Guidelines Part II (SEAP: Sustainable Energy Action Plan), which uses either factors from IPPC (2006) or those from the European Reference Life Cycle Database. In our calculations, we had used the LCA (Life Cycle Assessment) factor, expressed in tn CO<sub>2</sub>e/MWhe (where MWhe is the MWh of electricity consumed).

However, for 2017 (also recalculated for the years 2015 & 2016), the factor for Greece, as provided by AIB-Association of Issuing Bodies (<http://www.reliable-disclosure.org/>) in the European Residual Mixes (Results of the calculation of Residual Mixes for purposes of electricity disclosure in Europe), has been used.

The European residual mixes for the years 2009 to 2014 were calculated from the RE-DISS Project Phases I & II (Reliable Disclosure Systems for Europe).

The RE-DISS project aimed at significantly improving the reliability and accuracy of the information provided to electricity consumers in Europe, relating to the origin of the electricity they consume. This information is provided to all consumers through the electricity sources disclosure regime, which is a requirement for all European electricity suppliers.

The RE-DISS Project Phase I, lasted from 15/04/2010 to 14/10/2012 and resulted in a recommendation for the method of application and correct use of origin guarantees, which are the communication tools created by relevant Directives (RES Directive and Cogeneration Directive). This has led to major improvements in the electricity monitoring systems (guarantees of origin and disclosure) in various EU member states.

Since the RE-DISS project was completed in September 2015, AIB offered to assist in the Electricity Disclosure calculations, which are carried out using relevant environmental impact indicators, at least as far as CO<sub>2</sub> emissions are concerned. The AIB calculations were based on the methodology developed by the RE-DISS projects.

The specific factor was used because in Greece, although there is legislation pertinent to Electricity Disclosure, there is no legal provision for the methodology on the energy mixture.

For all other forms of energy, the Defra factors (Defra, UK - Department for Environment, Food and Rural Affairs) are used, which however are expressed in CO<sub>2</sub>e (CO<sub>2</sub> equivalent emissions), namely total CO<sub>2</sub> also including CH<sub>4</sub> and N<sub>2</sub>O, expressed as CO<sub>2</sub> equivalent (CO<sub>2</sub>e). Of course, the calculation was made retrospectively for the previous years as well.

Specifically, the values used for the calculation of CO<sub>2</sub>e emissions (as listed on Table 8) are as follows:

<b>Electricity conversion factor (AIB - Association of Issuing Bodies)</b>			
<b>Figure 4 : CO<sub>2</sub> content in Final Residual Mixes Year-- [gCO<sub>2</sub>(e)/kWh] <a href="https://www.aib-nef.org/facts/european_residual_mix">https://www.aib-nef.org/facts/european_residual_mix</a></b>			
Year	COUNTRY	GWP Direct CO <sub>2</sub> (gCO <sub>2</sub> e/kWh)	GWP Direct CO <sub>2</sub> (kgCO <sub>2</sub> e/kWh)
2015	GREECE	688	0.688
2016	GREECE	593	0.593 *
<i>GWP Direct = Direct onsite Global Warming Potential emissions gCO<sub>2</sub>e/kWh].</i>			
<i>*The 2016 factor will be used for 2017, since the Final Residual Mixes for 2017 have not been issued yet</i>			
<b>DEFRA conversion factors (<a href="https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting#conversion-factors">https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting#conversion-factors</a>)</b>			
Year	Natural Gas conversion factors	Diesel conversion factors	Petrol conversion factors
	kg CO <sub>2</sub> e/ Kwh	kg CO <sub>2</sub> e/liters	kg CO <sub>2</sub> e/liters
2015	0.18445	2.5839	2.1944
2016	0.18400	2.61163	2.19697
2017	0.18416	2.60016	2.19835

Table9: Conversion Factors for the calculation of CO<sub>2</sub>e emissions

The values for Specific CO<sub>2</sub>e emissions on Table 8 are shown on the following chart:

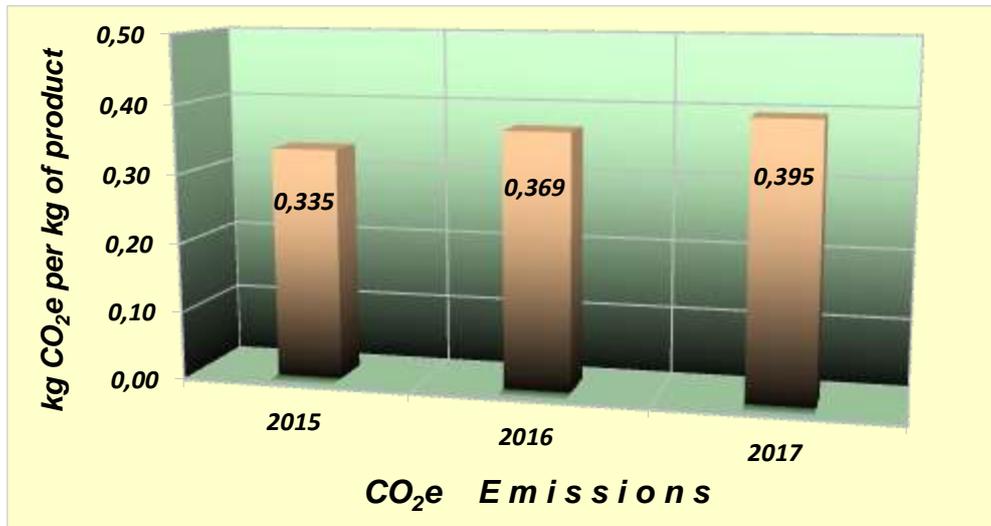


Chart 14: Carbon Dioxide Emissions (CO<sub>2</sub> equivalent)

The increase in the Specific CO<sub>2</sub>e Emission values observed in the years 2016 – 2017 is related on the specific electricity and natural gas consumption, as described in paragraph 7.3 "Specific energy consumption".

The effort to reduce CO<sub>2</sub> emissions is a major factor in decision-making as regards the overall company operation. Within this framework, we apply continuous monitoring and always make an effort to undertake initiatives that lead to a decrease in our emissions and our total carbon footprint wherever feasible.

The specific electricity consumption for 2017 is higher but still significantly lower than the respective one for the years 2015-2016.

Since 2014, SYMETAL participates in the "Carbon Disclosure Project (CDP)" indicator for climate change, by filling in the respective questionnaire (Climate change Questionnaire) and by communicating the necessary information on the CDP platform. CDP is the largest platform for report submission and cooperation on climate change in the world, which focuses on the investors' information needs. Our company has decided to take part in Climate Change in 2018 as well, by filling in the questionnaire using 2017 as the reference year.

## 7.9 NO<sub>x</sub>, SO<sub>2</sub> & PARTICULATE MATTER EMISSIONS

Air pollution is the pollution of the atmosphere, namely the addition of substances (pollutants) to the atmosphere which, under normal conditions, would not exist and are mainly the result of man-made activities. Man-made air pollution is mainly caused by three man-made activities: industry, transportation and households.

Air pollution is a major hygienic, environmental, social and economic problem, because the polluting gases have serious impacts, such as planet overheating, respiratory problems and other health problems.

Air pollution is mainly due to oxides, such as nitrogen, sulphur, carbon and other oxides, as well as soot (unburnt carbon in gaseous mixtures of air). Nitrogen oxides cause photochemical smog, usually in the center of big cities or their outskirts. Sulphur and carbon oxides react with water vapours in the clouds and produce acid rain, which damages forests, while sulphuric acid (a component of acid rain) damages marbles, converting them into plaster. Carbon dioxide, as well as other gases produced by incomplete combustion, such as unburnt hydrocarbons, contribute to the greenhouse effect.

The gaseous emissions to the atmosphere that originate from the operation of the industrial plant, consist of:

- i) Emissions from the use of solvents, for which an environmental programme had previously been implemented involving the installation of an afterburner system in order to eliminate VOC emissions.
- ii) Exhaust gases from the use of hydrocarbons

Exhaust gases are also emitted by the coating application ovens that use natural gas. NO<sub>x</sub>, SO<sub>2</sub> and particulate matter (PM) emissions were calculated using the USEPA (United States Environmental Protection Agency) conversion factors, based on the recorded consumptions of Natural Gas.

**Activity data X Pollutant emissions factor = Pollutant emissions**

<b>Pollutant</b>	<b>Emission factor*</b>			
	<b>kg / 10<sup>6</sup> m<sup>3</sup></b>			
<b>NO<sub>x</sub></b>	<b>1,600</b>	<b>*Source: AP 42, Fifth Edition, Volume I, Chapter 1: External Combustion Sources, 1.4 Natural Gas Combustion, Final Section - Supplement D, July 1998</b>		
<b>SO<sub>2</sub></b>	<b>9.6</b>			
<b>PM (total)</b>	<b>121.6</b>			
<b>Year</b>	<b>Natural gas</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>PM (total)</b>
	<b>Nm<sup>3</sup></b>	<b>kg</b>	<b>Kg</b>	<b>kg</b>
<b>2015</b>	<b>1,121,388</b>	<b>1,794.2</b>	<b>10.8</b>	<b>136.4</b>
<b>2016</b>	<b>1,406,560</b>	<b>2,250.5</b>	<b>13.5</b>	<b>171.0</b>
<b>2017</b>	<b>1,626,997</b>	<b>2,603.2</b>	<b>15.6</b>	<b>197.8</b>

Table10: Calculation of NO<sub>x</sub>, SO<sub>2</sub> and PM emissions from Natural Gas combustion

There are also exhaust gases from the use of diesel fuel. The emissions of the aforementioned pollutants have been calculated using USEPA (United States Environmental Protection Agency) emission factors based on diesel fuel consumption.

Pollutant	Emission factor*			
	kg / lt	*Source: USEPA September 1985. Compilation of Air Pollutant Emission Factors, Volume 2: Mobile Sources, fourth edition, A-42. Section 2.7 Heavy Duty Construction Equipment. United States Environmental Protection Agency, Office of Air and Radiation, Office of Mobile Sources Test and Evaluation Branch Ann Arbor, Michigan, USA.		
NO <sub>x</sub>	3.85 x 10 <sup>-2</sup>			
SO <sub>2</sub>	3.74 x 10 <sup>-2</sup>			
PM <sub>10</sub>	3.51 x 10 <sup>-3</sup>			
Year	Diesel	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>
	Liters	kg	Kg	kg
2015	13,625	524.5	509.6	47.8
2016	26,686	1,027.4	998.1	93.7
2017	32,099	1,235.8	1,200.5	112.7

Table 11: Calculation of NO<sub>x</sub>, SO<sub>2</sub> and PM emissions from the use of Diesel

The calculation of total NO<sub>x</sub>, SO<sub>2</sub> and PM emissions is shown on the following table:

	NO <sub>x</sub>	SO <sub>2</sub>	PM	Total production	Specific NO <sub>x</sub> Emission	Specific SO <sub>2</sub> Emission	Specific PM Emission
	kg	kg	kg	tn	kg NO <sub>x</sub> / tn of product	kg SO <sub>2</sub> / tn of product	kg CO <sub>2</sub> / tn of product
Year							
2015	2,318.8	520.3	184.2	18,643	0.1244	0.0279	0.0099
2016	3,277.9	1,011.6	264.7	18,015	0.1820	0.0562	0.0147
2017	3,839.0	1,216.1	310.5	18,782	0.2044	0.0647	0.0165

Table 12: Calculation of Total NO<sub>x</sub>, SO<sub>2</sub> and PM Emissions.

The values for Specific Pollutant Emissions on Table 12 are shown on the following chart:

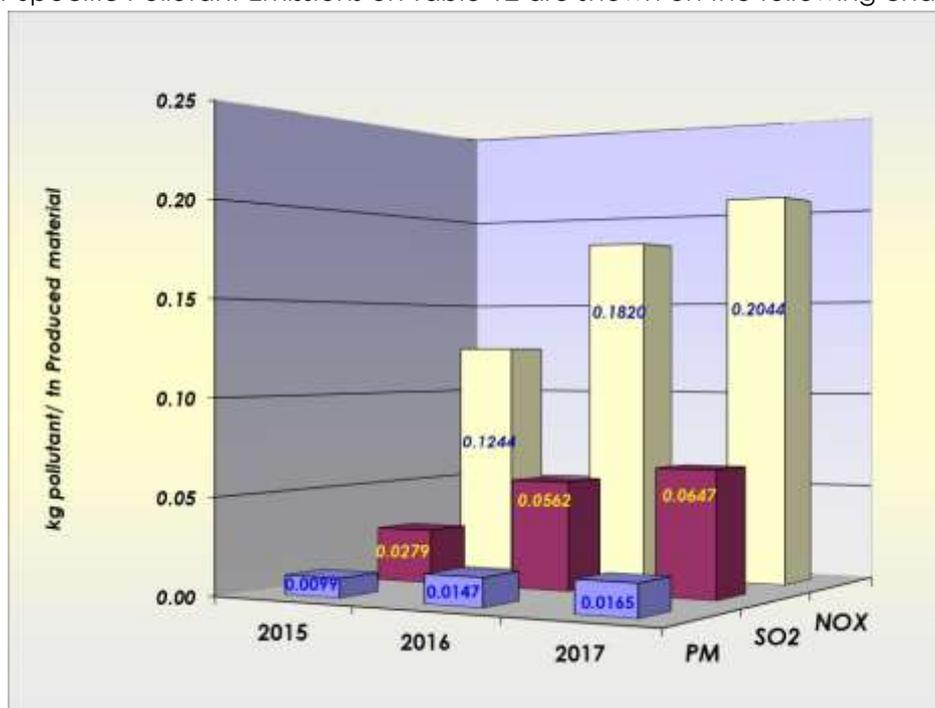


Chart 15: Specific NO<sub>x</sub>, SO<sub>2</sub> and PM Emissions

## 7.10 OTHER ASPECTS REFERRING TO ENVIRONMENTAL PERFORMANCE – LEGAL PROVISIONS

Legislation is constantly monitored according to the documented procedure of the Integrated Management System.

Continuous and timely updating of SYMETAL S.A., in terms of legislative issues, is achieved in cooperation with the consulting company, the Group's Environment Department, as well as updated websites such as, for example: [www.tee.gr](http://www.tee.gr), [www.elinyae.gr](http://www.elinyae.gr) and [www.env.gr](http://www.env.gr) for Greek legislation, and [http://eur-lex.europa.eu/RECH\\_naturel.do](http://eur-lex.europa.eu/RECH_naturel.do) for EU legislation. The results of the annual update are registered on special lists of the Integrated Management System. Table 9 shows the list of applicable legal requirements.

In order to ensure compliance with the relevant legal requirements, an annual audit is carried out - as part of internal audits - where we look for evidence in order to prove compliance with all the legal requirements concerning the company. These also include additional requirements to which the company might have been committed to comply with, through its contracts with customers, bodies and other interested parties.

Besides the general legal provisions concerning the company, such as e.g. Law 1650/1986 on Environmental Protection, Law 2939/2001 on Alternative Management of Packaging and Other Waste, the company complies with a series of specific legal provisions and ensures their application without exception. The following provisions are mentioned indicatively:

- Joint Ministerial Decision KYA 36060/1155/E103/2013 (GG 1450/14.06.2013) "Defining a framework of rules, measures and procedures for the full prevention and control of air pollution from industrial activities, in compliance with the provisions of Directive 2010/75/EU "on industrial emissions (integrated pollution prevention and control)" of the European Parliament and of the Council of 24 November 2010."
- Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Registry and amending Council Directives 91/689/EEC and 96/61/EC.
- Ministerial Decision YA IP 50910/2727/2003 - Measures and terms for solid waste management. – National and Regional Management Planning

The company, as part of its annual obligations, submits the following:

- Waste Report. Our company has been registered under the Electronic Waste Registry (HMA) with plant registry number 8-1 (as of 23/12/2016).
- Compliance form pursuant to the provisions of Joint Ministerial Decision KYA 36060/1155/E.103/14-6-2013 (GG 1450/B/14-6-2012)-in application of Directive 2010/75/EU IPPC (referring to the use of solvents in the plant)
- The European Pollutant Release and Transfer Report E-PRTR – in application of Regulation 166/2006/EC for pollutant release and transfer
- Annual Statement to the Collective Alternative Packaging Management System (HERRCO), of which the company is a member since 31.12.2005 (new contract as of 17.08.2016 due to a change in the company data).
- Report to the National Producers' Registry (NPR), on an annual basis, according to the Alternative Management System of EEAA (Hellenic Recovery Recycling Corporation).

Moreover, the company has been registered under the NATIONAL PRODUCERS' REGISTRY (Ε.Μ.Π.Α.) of EOAN (Hellenic Recycling Agency), as a liable packaging producer (according to the provisions of article 2, paragraph 3 of Law 3854/2010), with Registry No. 3951.

No	Legislation Information	Title
1	Law 1650/86 (GG 160/A)	"On environmental protection".
2	Law 2965/01 (GG 270/A)	"Sustainable development of Attica and other provisions".
3	Law 3010/02 (GG 91/A)	"Harmonization of Law 1650/1986 with Directives 97/11/EU and 96/61/EU, procedure for delimiting and arranging issues concerning water streams and other provisions".
4	Law No. 3325 (GG 68/A/11.03.05)	"Establishment and operation of industrial-handicraft facilities as part of sustainable development and other provisions".
5	Joint Ministerial Decision KYA 15393/2332/02 (GG 1022/B)	"Classification of public and private projects and activities in categories pursuant to article 3 of Law 1650/1986 as replaced by article 1 of Law 3010/2002». – <b>Abolished with Ministerial Decision YA 1958/2012, but its Annex II still remains in force.</b>
6	Joint Ministerial Decision KYA 11014/703/F104/03 (GG 332/B)	"Procedure for the Preliminary Environmental Assessment and Evaluation (PEAE) and Approval of Environmental Terms (AET) pursuant to article 4 of Law 1650/1986 (A'160) as replaced by article 2 of Law 3010/2002".
7	Joint Ministerial Decision KYA 69269/5387/90 (GG 678/B)	"Classification of projects and activities in categories, content of Environmental Impact Study (EIS), definition of the content of special environmental studies (SES) and other relevant provisions, pursuant to Law 1650/1986".
8	Joint Ministerial Decision KYA 25535/3231/02	"Approval of environmental terms by the General Regional Secretary for the projects and activities classified under sub-category 2 of Category A' pursuant to Joint Ministerial Decision No. IP 15393/ 2332/2002 "Classification of public and private projects in categories, etc." (GG 1022/B)".
9	Joint Ministerial Decision KYA 37111/2021/03 (GG 1391/B)	"Defining a method for informing citizens and their representation bodies of the content of the Environmental Impact Study for the projects and activities pursuant to paragraph 2 of article 5 of Law 1650/86".
10	Ministerial Decision YA 36060/1155/E.103/2013 (GG 1450/B/14.6.2013)	"Defining a framework of rules, measures and procedures for the full prevention and control of air pollution from industrial activities, in compliance with the provisions of Directive 2010/75/EU" on industrial emissions (integrated pollution prevention and control)" of the European Parliament and of the Council of 24 November 2010."
11	Presidential Decree PD 1180/81 (GG 293/A)	"On the regulation of issues referring to the establishment and operation of industries, handicraft businesses, all kinds of mechanical installations and warehouses, and to their respective environmental safety in general".
12	Law 2939/01 (GG 179/A)	"Packaging and alternative management of packaging and other products - Establishment of a National Organization for the Alternative Management of Packaging and Other Products (EOEDSAP) and other provisions".
13	Joint Ministerial Decision KYA 50910/2727/03 (GG 1909/B)	"Measures and terms for solid waste management. National and Regional Management Planning".
14	Joint Ministerial Decision KYA 13588/725 (GG 383/B/28.03.06)	"Measures, terms and restrictions for the management of hazardous waste in compliance with the provisions of Council Directive 91/689/EEC of 12 December 1991 "on hazardous waste". Replacement of Joint Ministerial Decision No. 19396/1546/1997 "Measures and terms for solid waste management" (B' 604)".
15	Joint Ministerial Decision KYA 24944/1159 (GG 791/B/30/06/2006)	"Approval of General Technical Specifications for hazardous waste management pursuant to article 5 (par. B) of Joint Ministerial Decision No. 13588/725 "Measures, terms and restrictions for the management of hazardous waste, etc." (B'383) and in compliance with the provisions of article 7 (par.1) of Council Directive 91/156/EEC of 18 March 1991".
16	Presidential Decree PD 82/04 (GG 64/A)	"Replacement of Joint Ministerial Decision KYA 98012/2001/96 (Defining measures and terms for the management of used mineral oils - GG 40 B). Measures, terms and programme for the alternative management of waste lubricating oils".
17	Presidential Decree PD 109/04 (GG 75/A)	"Measures and terms for the alternative management of used vehicle tyres. Programme for their alternative management".
18	Presidential Decree PD 115/04 (GG 80/A)	"Replacement of Joint Ministerial Decisions KYA 73537//1438/95 (Management of electric batteries containing certain hazardous substances - GG 781/B) and KYA 19817/2000 (Modification of KYA 73537//1438/95, etc. - GG 963 B). Measures, terms and programme for the alternative management of used electric batteries".
19	Presidential Decree PD 116/04 (GG 81/A)	"Measures and terms for the alternative management of vehicles at the end of their life cycle, their used spare parts and the deactivated catalytic converters, in compliance with the provisions of Directive 2000/53/EC".

No	Legislation Information	Title
20	Ministerial Decision YA IP 23615/651/E.103/2014 (GG 1184/B/09/05/2014)	"Defining rules, terms and conditions for the alternative management of waste electrical and electronic equipment (WEEE), in compliance with the provisions of Directive 2012/19/EC of the European Parliament and of the Council of 4 July 2012 "on waste electrical and electronic equipment (WEEE)" and other provisions".
21	Presidential Decree PD 148/2009 (GG 190/A)	"Environmental liability with regard to the prevention and remedying of environmental damage – Harmonization with Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004, as currently applicable".
22	Regulation (EC) No 1013/2006	"REGULATION (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste".
23	Regulation (EC) No 166/2006	"Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Registry and amending Council Directives 91/689/EEC and 96/61/EC".
24	CIRCULAR 101111/17.02.2009	"Obligation to Submit Reports in application of Regulation 166/2006/EC for pollutant release and transfer".
25	DIRECTIVE 2010/75/EU	«Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (recast)
26	Regulation (EC) No 1221/2009	"Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC".
27	Law 3854/2010 (GG 94A/23.06.2010)	"Modifying legislation on the alternative management of packaging and other products and the National Organization for the Alternative Management of Packaging and Other Products (EOEDSAP) and other provisions."
28	Law 3982/2011 (GG 143/A/17/06/2011)	"Simplifying the licensing of technical professional and processing activities and business parks and other provisions".
29	CIRCULAR 129043/4345/08.07.2011	"Applying legislation for non-hazardous solid waste management".
30	Law 4014/2011 (GG A'209/21.09.2011)	"Environmental licensing for projects and activities, regulation of unauthorized buildings in relation to the creation of an environmental balance and other provisions subject to the Ministry of the Environment".
31	Joint Ministerial Decision KYA 1958/13.01.2012	"Classification of public and private projects and activities in categories and sub-categories pursuant to Article 1 paragraph 4 of Law 4014/21.09.2011 (GG A'209/2011)".
32	Law 4042/2012 (GG 24A/13.02.2012)	"Penal protection of the environment – Harmonization with Directive 2008/99/EC – Framework for waste production and management – Harmonization with Directive 2008/98/EC – Regulation of issues subject to the Ministry of Environment, Energy and Climate Change".
33	Ministerial Decision YA 20741/ 08.05.2012	"Modification of Decision 1958/13–1–2012 by the Minister of Environment, Energy and Climate Change "Classification of public and private projects and activities in categories and sub-categories pursuant to article 1 paragraph 4 of Law 4014/21.09.2011 (A' 209)" (B' 21)".
34	GG 2434/B/2014	"Organization, training and informing of companies-facilities personnel on issues of fire-protection".
35	No. D16c/381/5/44/C	"Approval of the Special Regulation for the Operation of the Sewer System (EKLDA) of EYDAP (Athens Water Supply and Sewerage Company) S.A.".
36	Ministerial Decision YA 48963 / 05.10.2012	"Specifications for the content of the Decisions for the Approval of Environmental Terms (DAET) for the projects and activities in Category A' of Decision No. 1958/13–1–2012 by the Minister of Environment, Energy and Climate Change (B' 21), as applicable, pursuant to article 2 par. 7 of Law 4014/2011 (A' 209)".
37	Regulation (EC) No 1357/2014	"COMMISSION Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives".
38	Ministerial Decision YA oik. 181504/2016 (GG 2454/B/9.8.2016)	"Compilation, content and management system of the National Producers' Registry (NPR) - Definition of procedure for the producers' registration, as part of the alternative management of packaging and other products, pursuant to articles 7 and 17 of Law 2939/2001 (A 179), as applicable".
39	Ministerial Decision YA Oik. 43942/4026/2016 (GG 2992B/19.09.2016)	"Organization and operation of the Electronic Waste Registry (HMA), pursuant to the provisions of article 42 of Law 4042/2012 (A' 24), as applicable".
40	Joint Ministerial Decision KYA Oik.178679/2017 (GG 2337/B/10-7-2017)	"Systems for Energy Auditors' qualifications identification and certification. Registry of Energy Auditors and Energy Audits File".

No	Legislation Information	Title
41	Regulation (EC) No 1221/2009	"Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)".
42	Law 4496/2017	"Modification of Law 2939/2001 for the alternative management of packaging and other products, adaptation to Directive 2015/720/EU, regulation of issues subject to the Hellenic Recycling Agency, and other provisions".

Table13: List of Applicable Legal Requirements

**8 ENVIRONMENTAL PROGRAMMES**

The environmental objectives and targets already set (as listed in the environmental statement of 2017 using 2016 as a reference year) are shown on the following table:

<b>Environmental Objective</b>	Reducing the burden of land with solid waste
<b>Environmental Target</b>	The average percentage of wastage for the last three years does not exceed 9%. Time frame: DECEMBER 2017
<b>Environmental Programme</b>	Optimizing the manufacturing process to achieve reduction. Organizing relevant seminars for operators and foremen. Compliance with relevant work orders.
<b>Results</b>	In order to calculate wastage, aluminium and paper consumptions are used (main raw materials), as well as those of other materials - adhesives, lacquers, printing inks (solids). The percentage of wastage for the three-year periods 2014-2015-2016 and 2015-2016-2017 amounted to 9.79% and 8.76% < 9%, respectively. Therefore, the target has been achieved. The reduction in the generated wastage is due to the systematic monitoring of the wastage percentages in each machine separately, and the attempt to minimize it in all the locations of the manufacturing process, wherever feasible, but without this affecting the quality of the produced material; this started in 2015, with continuous training and monitoring. Given that in the last two years there has been a significant reduction in the wastage percentage, we believe that the target for 2018 should be set.
<b>New Target</b>	The reduction in the wastage percentage during production (paper, aluminium & aluminium/paper waste) by 1% compared to the average of the last three-year period. Time frame: DECEMBER 2018
<b>Environmental Objective</b>	Optimal Management of solid waste
<b>Environmental Target</b>	Recycling or reusing 100% of waste pallets and wooden crates Time frame: DECEMBER 2017
<b>Environmental Programme</b>	Forwarding waste pallets to industries manufacturing MDF or reusing them wherever feasible.
<b>Results</b>	The company cooperates with authorized wood recycling companies to which it forwards the total waste pallets & wooden crates, as shown on Table 6. This table shows the production of wood waste (with data originating from the deliveries of wood waste to the subcontractors).
<b>New Target</b>	The target is still active for the next year
<b>Environmental Objective</b>	Optimal Management of solid waste
<b>Environmental Target</b>	100% recycling of waste paper in the offices Time frame: DECEMBER 2017
<b>Environmental Programme</b>	Collecting and forwarding office paper, together with the manufacturing scrap paper, to a paper recycling company.
<b>Results &amp; New Target</b>	The target is implemented and still active for the new year
<b>Environmental Objective</b>	<ul style="list-style-type: none"> <li>◦ Improvement of air quality</li> <li>◦ Improvement of resources management</li> </ul>
<b>Environmental Target</b>	The reduction in forklift exhaust gases by 3% compared to 2016 Time frame: DECEMBER 2017

<b>Environmental Programme</b>	Restricting the use of diesel-driven forklifts as follows: Exclusive use of electric forklifts in internal spaces unless, for safety reasons, (lifting/transportation capacity) the use of diesel-driven forklifts is imposed.
<b>Results</b>	Specific fuel consumption of forklifts for 2016 amounts to 0.480 and the respective one for 2017 amounts to 0.543 (as shown on Chart 13: Specific fuel consumption); thus, this target has not been achieved. When there is a high work load in the plant's external areas, diesel-driven forklifts are used more often, resulting in an increase in this indicator, since there have been a lot of rearrangements in the plant areas in last years. This indicator is not directly related to productivity and we cannot foresee its progress. For this reason, the programme for the reduction of forklift exhaust gases cannot be continued, since it is affected by many factors that cannot be foreseen. Forklift consumption will continue to be monitored as an indicator but will no longer exist as a programme.
<b>Environmental Objective</b>	Electricity saving
<b>Environmental Target</b>	LED lamps in manufacturing areas. Replacing fluorescent lamps (which contain Hg) with LED lamps in manufacturing rooms (bell lamps). Gradual replacement of all lamps with LED lamps by the end of 2017. <p style="text-align: right;">Time frame: DECEMBER 2017</p>
<b>Environmental Programme</b>	LED lamps have a low consumption (triple life cycle and non-toxic). Based on a study on the attenuation of the high replacement cost of existing lamps, it is concluded that while LED lamps cost twice as much as the existing lamps, the saving percentage in electricity consumption is approximately 60%. Initially, an 80% saving percentage had been calculated, but this was reduced to 60%, due to the use of larger lamps for higher lighting efficiency.
<b>Results</b>	In 2013, there was a procurement and installation of lamps for the manufacturing area A, with satisfactory results (satisfactory brightness for the needs of the manufacturing process). In 2014, the lamps in half of area D were replaced (where the new machine has been installed), while in the warehouse I there are only LED lamps. In 2015, the project proceeded to the storage, loading and packaging areas (area F), in combination with the installation of new lamps in area D, in addition to the existing ones, which has now been put to a new use (from storage area to manufacturing area). In 2016, the replacement of LED lamps in the offices was completed (change from 72Watt to a 36Watt LED panel), the gradual change to LED bell lamps in manufacturing areas proceeded (change from 250Watt to 100Watt), as well as to LED cellular lamps in packaging & storage areas (change from 250Watt to 50Watt). The lamps used in the rooms differ based on the room height and the expected quality resulting from lighting measurements (80watt in rooms A & B, 100watt in areas C, D, F, I and the corridors, 50watt in two-storey areas H, Z). The project was completed in 2017.
<b>Environmental Objective</b>	Energy Saving (Natural Gas)
<b>Environmental Target</b>	Energy Saving from Natural Gas by 10-15% The target set is the reduction of specific natural gas consumption (natural gas consumption in kwh/kg of produced materials) by 10% and remains in force, since the project is expected to be completed in 2018. <p style="text-align: right;">Time frame: DECEMBER 2018</p>
<b>Environmental Programme</b>	Installation of LEL (Lower Explosive Limit) system This programme mainly applies to safety, since the system detects the solvent percentage in the machine ventilation network and triggers a first alarm if this percentage exceeds 20% and a second alarm at 40%. At this point, the machine stops automatically. This facilitates the use of recycled air, but without risking the creation of an explosive atmosphere.



<b>Results</b>	<p>This system was installed in 2015 as a pilot project in one machine, as planned, but a problem was detected in the sensors during its operation. Then, it was decided to check the LEL system in the newest lacquering machine (where it is integrated) in 2016, but there was a problem. Although it was initially believed that the problem was due to the sensors and they were modified by the machine technicians, it was finally proven that the solvent percentage was not correct, since there was no option to isolate the system when no solvents were used in the machine; the problem was finally solved in cooperation with machine's technicians. However, in the pilot project machine, the problem was indeed due to the sensors; thus, the initially installed catalytic sensors will be replaced by infrared sensors.</p> <p>The project will be completed in 2018.</p> <p>The application of a similar system in the remaining machines (for energy saving/optimization) is scheduled in the following year (2019).</p> <p style="text-align: right;">Time frame: DECEMBER 2018</p>
<b>Environmental Objective</b>	<p>Energy Saving and compliance with new legislation</p>
<b>Environmental Target</b>	<p>Carrying out an Energy Audit in order to identify energy reduction opportunities and improve energy related performance and energy efficiency of equipment and facilities</p>
<b>Environmental Programme</b>	<p>Company certification according to the ISO 50001 standard (Energy Management).</p> <p style="text-align: right;">Time frame: JULY 2019</p>

Table 14: Environmental Targets and Programmes

## 9 EMPLOYEES' PARTICIPATION

The employees' active participation in the implementation of the Environmental Management System is a prerequisite. The following programmes are in progress aiming at raising awareness and personnel motivation:

- Batteries recycling: In cooperation with the approved Collective Management System for Portable / Electrical Columns and Batteries "AFIS", special transparent bins have been installed, where employees dispose not only the waste batteries they use in the company, but also the batteries collected from their household. In this way, they propagate environment-friendly practices to their personal life.
- Paper reuse–recycling in the offices: Efforts are made to minimize the paper waste resulting from meeting office needs. Initially, the paper quantities are reduced (e.g. double-sided printing) and then the paper quantities are collected and forwarded for recycling, together with paper waste from manufacturing.
- Packaging Recycling: By request, a special "blue" bin has been installed inside the plant areas, for packaging recycling, by the Mandra Municipality which participates in the Collective Alternative Packaging Management System applied by EEAA (Hellenic Recovery Recycling Corporation). This enhances even more the efforts to raise the employees' awareness on the environment, but also to save resources and energy from recycling the employees' waste.
- Ink recycling from office printers: The company participated in HP's environmental programme for consumables (HP Planet Partners); it has installed collection boxes for printer heads (Inject & LaserJet) in the plant's offices, which, after filling, they are delivered from the company's facilities and replaced by new collection boxes.
- Issuing and distributing to all employees "Symetal's world" magazine, with information for all personnel, on the company's progress, the activities in which it participates, as well as news relevant to personnel (new recruitments, etc.). The magazine includes articles on the Environment, as well as Health & Safety.

## 10 NECESSARY INFORMATION ON REGISTRATION

1. ORGANIZATION	
Name	SYMETAL S.A.
Address	2 – 4 Messogion Ave.,
City	Athens
Postal Code	115 27
Country	Greece
Contact Person	Hatzistratidi Gabriella
Telephone	+ 30 210 555 6833 - 4
Fax	+ 30 210 555 1077
E-mail address	<a href="mailto:ghatzi@symetal.vionet.gr">ghatzi@symetal.vionet.gr</a>
Website	<a href="http://www.symetal.gr">www.symetal.gr</a>
Public access to the environmental statement:	
a. printed form	Access to all information on the organization's environmental performance is provided by sending the annual Environmental Statement to all interested parties following a request (either by hard copy or electronically as a pdf file).
b. electronic form	
Registration number	EL000090
Registration date	31/12/2009
Date of the following Environmental Statement	23/05/2019
Date of the following updated Environmental Statement	23/05/2019
Request for a deviation pursuant to Article 7	NO
NACE Activity Code	24.42
Number of Employees	178
Turnover	59,034,388 €
2. ACTIVITY LOCATION	
Name	SYMETAL S.A.
Address	25th km of Athens-Corinth National Road
City	Mandra, Attica
Postal Code	196 00
Country	Greece
Contact Person	Hatzistratidi Gabriella
Telephone	+ 30 210 555 6833 - 4
Fax	+ 30 210 555 1077
E-mail address	<a href="mailto:ghatzi@symetal.vionet.gr">ghatzi@symetal.vionet.gr</a>
Website	<a href="http://www.symetal.gr">www.symetal.gr</a>

Public access to the environmental statement:	
a. printed form	Access to all information on the organization's environmental performance is provided by sending the annual Environmental Statement to all interested parties following a request (either by hard copy or electronically as a pdf file).
b. electronic form	
Registration number	EL000090
Registration date	31/12/2009
Date of the following Environmental Statement	23/05/2019
Date of the following updated Environmental Statement	23/05/2019
Request for a deviation pursuant to Article 7	NO
NACE Activity Code	24.42
Number of Employees	178
Turnover	59,034,388 €

Table 15: Information on the Organization and the Plant

3. ENVIRONMENTAL VERIFIER	
Environmental Verifier's Name	Bureau Veritas Hellas S.A.
Address	23 Aitolikou str.,
City	Piraeus
Postal Code	185 45
Country	Greece
Telephone	+ 30 210 406 3000
Fax	+ 30 210 406 3118
E-mail address	<a href="http://www.bureauveritas.gr">www.bureauveritas.gr</a>
Registration Number for the accreditation or licensing	EL – V – 0007
Scope of accreditation or licensing (NACE codes)	24.42
Scope of accreditation	24.42
Accreditation or licensing body	NQIS (National Quality Infrastructure System) / ESYD (National Accreditation System)
Piraeus	
Signature of the organization's representative	

Table 16: Information on the Body and Environmental Verifier