Befesa Aluminio, S.L.

Les Franqueses del Vallés plant

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This document constitutes the environmental declaration of Befesa Aluminio, S.L.- Les Franqueses plant corresponding to the year 2017. It has been made considering the requirements established by the regulations (CE) Nº 1221/2009 and (CE) Nº 1505/2017 of the European Commission, concerning the voluntary participation of organizations in a community environmental management and audit system (EMAS).

Contents

1. EMAS registration

1.1 Regulation (EC) nº 1221/2009 and nº 1505/2017

Regulation no. 1221/2009 on the EMAS (Eco-Management and Audit Scheme) is a system by which organizations can voluntarily adhere to a community management system and environmental audits. In 2017, Regulation no. 1505/2017 is published and enters into force, which partially modifies (Annex I, II and III) the aforementioned Regulation.

These regulations have three fundamental commitments:

- Internal control of the environmental impacts of the process and registration under the basic assumption of compliance with the environmental legislation applicable.
- Continuous reduction in impacts, defining and publishing the objectives and actions to achieve them, as well as the control and results through continuous environmental audits.
- Commitment to full transparency regarding society and other sectors.

1.2 Environmental declaration

It is the essential element of the system, since it involves making the company's environmental data available to society:

- Consumption of raw materials, water, electricity, fuel, emissions, effluents,

waste, etc.

- The company's environmental policy, ensuring compliance with the applicable regulations and, at the same time, the commitment to continuous improvement based on quantifiable objectives and the prevention of pollution.
- Validation of the system audit, as well as compliance with the regulations, all through an authorized verifier.

In short, to inform society about our activity, provide key data and ensure environmental compliance of our company.

1.3 Befesa Aluminio, S.L. as a member of the system

Voluntarily Befesa Aluminio, S.L. with NACE code 2453 (light metal casting) has decided to join the system, to make its environmental commitment clear to society in the development of its daily activity. This is defined as:

"Solid and liquid aluminium alloys production. Aluminium waste treatments. Trading of by-products of aluminium and other non-ferric metals".

2. The company's activities, products and services

The company Befesa Aluminio, SL, has 4 work centers of recognized international prestige, located in the towns of Erandio (Bizkaia), Les Franqueses del Vallés (Barcelona), Bernburg (Germany) and Valladolid, with the first three centers being referenced refineries of aluminum and the fourth a salt slag recovery. All of them are within the sector of the so-called eco-industry, because they are dedicated to recycling, recovering and valorizing of all types of waste from the aluminum industry. The total recycled process, allows the recovery of the free metal of all the materials that it processes, as well as the oxide that inevitably accompanies them, providing an important alternative to the aluminum of primary type and the high consumption of energy that demand its obtaining and assuming consequently an inexhaustible source of obtaining metals in front of the mining extraction, consequently prolonging the rate of depletion of the planet's natural resources.

The activities developed by Befesa Aluminio, S.L. constitute an important and fundamental link in the life cycle of aluminium. The activities carried out in primary aluminium production plants, aluminium processing and finishing plants, or aluminium smelters in general, would be totally unfeasible without the presence of industries such as Befesa Aluminio, SL, in charge of the treatment, recovery and recycling of waste that they generate by converting mentioned waste into assimilable raw materials. Befesa Aluminio, S.L., since its beginnings, has focused its activities on the production of aluminium alloys under any type of specification for the injection molding of parts for the automotive, household appliances and construction sectors.

The overall calculation of its activities has placed Befesa Aluminio S.L. as the main company in its activity in Spain and one of the largest in Europe. The link that Befesa Aluminio, S.L. has maintained and maintains with groups and companies of worldwide recognition and the use of the acquired knowledge, has contributed to Befesa Aluminio, S.L. be an aluminium recycling industry with suppliers and customers all over the world such as manufacturers of the automotive sector and foundries supplying these.

3. Environmental management system

Our environmental management system consists of the following elements:

- Environmental policy: formally describes the guidelines and objectives of Befesa Aluminio, S.L. in its relation to the environment.
- Environmental management program, which includes the necessary activities to be carried out to achieve the objectives.
- Documentation of the environmental management system, which mainly consists of:

  - Context of the organization: describes the external and internal issues that are relevant for the company and that affect its ability to achieve the expected results of its environmental management system.
  - Scope of the organization: determines the limits and applicability of the environmental management system.
  - Procedures: describe the development of the activities carried out by the company.

- Internal environmental audits, such as management tools to evaluate the development and effectiveness of the implemented environmental management system and identify opportunities for improvement.

- Annual Management review of the system to evaluate the implementation and effectiveness and establish new objectives for continuous improvement.
- Evaluation of direct and indirect environmental aspects throughout the life cycle of the manufactured product.
- Registration of the legislation and identification and evaluation of the applicable legal requirements.

In addition, it has three main objectives:

- The commitment to comply with the legal requirements and others that apply to this facility.
- Carry out our recycling activity in a manner that respects the environment, paying special attention to those activities and products that could entail risks for the environment.
- Continuous improvement from the environmental point of view.

These bases come from the guidelines established by our management policy.

Quality, safety, environment and energy policy

Values

We promote the Quality of our products and processes, the defense of the Environment, the Safety and Health of our direct and indirect workers and the Sustainable Development of our environment.

Policy

Befesa Aluminio, S.L. aspires to become a world leader in the aluminium sector in the areas of Quality, Prevention, Environment and Energy Efficient Management, convinced that it is the only path towards its productive excellence.

Principles

The General Manager of the company and all the Processes Responsible must be the first example of compromise, image and zero tolerance and we assume the final responsibility in the Quality, Health, Safety, Environment and Energy Management of the company.

We consider our human resources the main and key factor of our economical business so we train them and give them action availability in the Quality, Health, Safety, Environment and Energy Management. of the company.

We assume all employees' involvement as the main question for the company´s success, pushing the dialog and continuous and active participation.

To keep Health and Safety of our employees and the preservation of our Environment is part of the diary work of each of our employees.

We do never put ahead Production of Economic benefit to Health and Safety.

We assume as objective of the company the principle of “Zero accidents”.

We consider that all accidents are avoidable and that all accidents and incidents must be communicated and investigated as a way to the continuous improvement.

We assume the compromise of getting all the necessary human and technical resources to ensure the continuous protection of our Environment and the development of a safety and free accidents place of work.

We ensure the fulfilment of all the applicable legislation as well as all the external and internal stablished standards and requirements,

We develop a Quality, Health, Safety, Environment and Energy integrated management system which is periodically revised and audited according to well-known international standards.

Erandio, November 2016

In accordance with the requirements imposed by the internationally recognized ISO 14001: 2015 standard, the Managing director of Befesa Aluminio, S.L. has appointed the following person to ensure the implementation and maintenance of the established environmental management system:

- **Oskar de Diego Rodríguez, Environmental Manager,** as a delegate of the management to establish, implement and maintain the environmental management system up to date and at the same time guarantee compliance with all applicable environmental requirements.

It must be mentioned the integrated management that is currently being carried out of the quality, prevention, environment and energy systems with the aim of progressing jointly in the four fields, simplifying efforts, but maintaining the rigor and seriousness characteristic of the four individualized concepts that does not compromise the well-being of our future generations.

4. Befesa Aluminio, S.L.- Les Franqueses del Vallés plant

The company Befesa Aluminio, S.L.-plant of Les Franqueses del Vallés-, is located in Les Franqueses del Vallès (Barcelona) since 1985. The formats in which it presents its final products are:

• Aluminum ingots and their alloys of 7 - 10 kg of weight for molding.

A detailed plan of the installations of the Les Franqueses del Vallés plant and the organizational chart of Befesa Aluminio, S.L. is shown:

Illustration 1: Layout of the facilities at the Les Franqueses del Vallés plant.

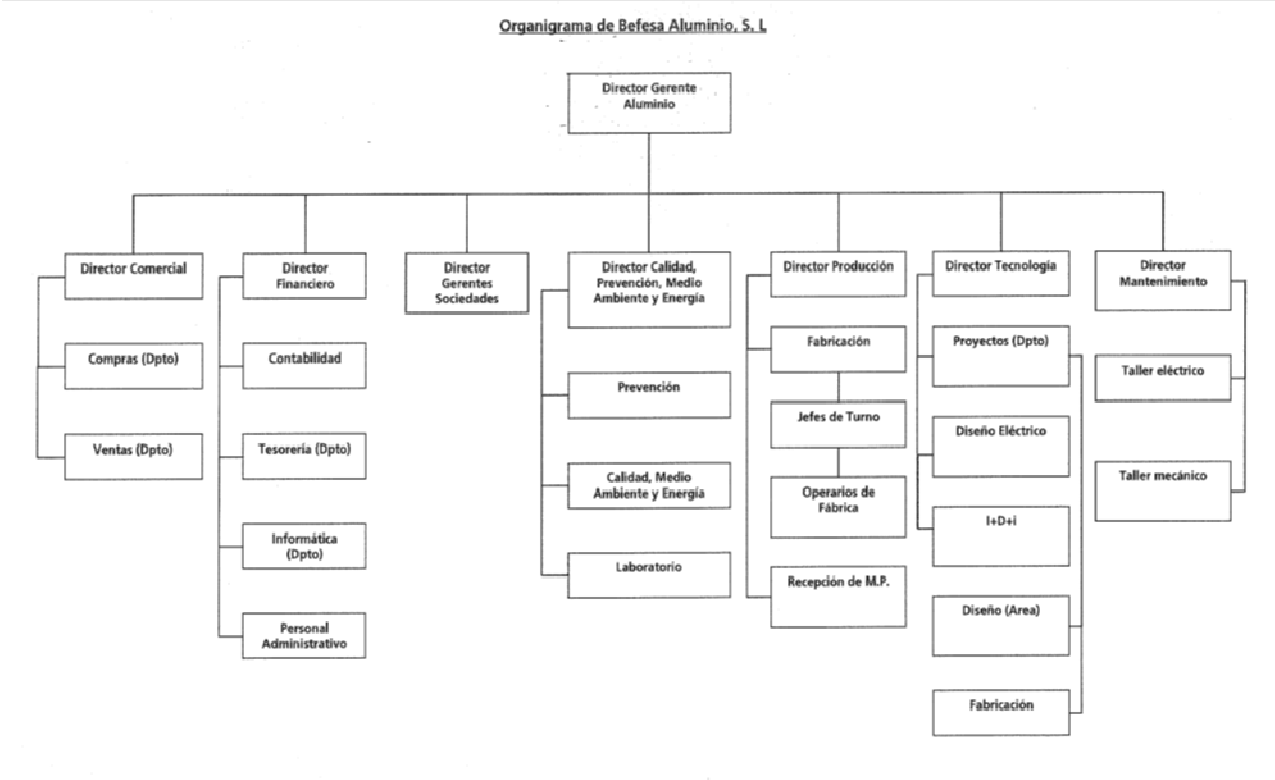


Illustration 2: Organization chart of Les Franqueses del Vallés plant.

The recycling and recovery process developed at the Les Franqueses del Vallés plant consists of two main processes: one of initial melting of the materials in rotary furnaces and another of refining the final product in holding type furnaces. Both processes are associated with two facilities considered as BAT (Best Available Technique) in the "Reference Document for the Best Available Techniques of Non-ferrous metallurgy" prepared at the request of the European Commission.

The production process begins with a correct selection of raw materials among which we highlight the cuts, cables, crankcase, pots, cans, lithography, chips, foams and in general, all types of scrap and waste from the aluminium sector. These raw materials, once selected and in the case of the chips, treated by the two chip dryers, are melted in the appropriate proportion for the approximate obtaining of the specification requested by the end customer, using for this purpose rotary type furnaces. own designed to which is added certain amounts of salt as a flux and protector of the molten aluminium. The fusion of these materials well understood, is not only to bring to the liquid state the raw material, but also to dissolve the metal elements in suspension and promote some cleaning reactions of the material, the latter being what differentiates a rotary type furnace from other types of furnaces. Verifying that the temperature of the furnace is adequate, that the material is melted and that the quality of the flux that is supernatant is that foreseen, the furnace is emptied in two stages, firstly removing the metal and ending with the melted molten salt or salt slag.

The gases produced during this fusion process are evacuated through

purification systems, consisting of cooling systems and bag filters, where the solid particles are retained and where the neutralization treatment of the acidic combustion gases is carried out at the same time. generated, by the controlled addition of calcium hydroxide.

For its part, the salt slag obtained as a result of the use of salt during the described fusion process, is completely recycled and recovered, giving rise in turn to an aluminium oxide (paval) that has various applications in the sector of cement industries, definitively closing the circle of recovery of the aluminium waste described.

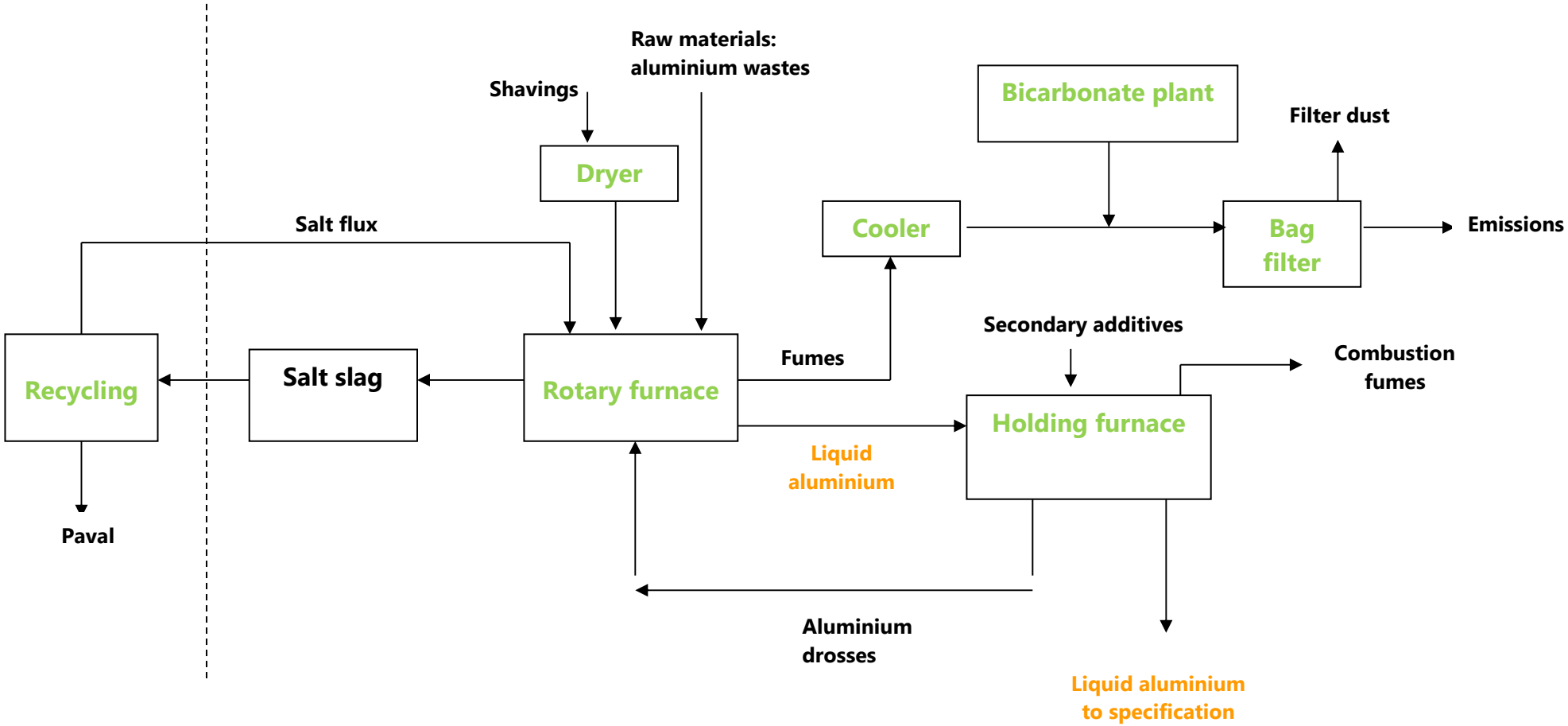


Illustration 3: Flow diagram of the process for obtaining aluminium in liquid form.

Once they have been melted in the rotary furnaces, the raw materials go on to phase two in reverberatory furnaces, where they are adjusted to the exact target specifications by adding secondary additives such as Si, Cu or Mg. Furnaces of this type are particularly suited to this last phase of production, since they provide metal that is at rest and the quality parameters of which can be adjusted under controlled heat conditions.

Once the slag has been skimmed off and the temperature adjusted, the metal is ready for pouring. The molten metal is sent to the pouring wheel for pouring into ingots. The pouring wheel comprises a chain of ingot molds that guarantee the reliable, rapid production of ingots with high surface quality. The ingots are cooled, tipped out and conveyed to a machine that stacks them fully automatically in tiers, using a powerful computer that can form packages of different shapes to meet the requirements of each customer.

The water used during the cooling process is recirculated via three cooling systems fitted with parallel filters. The water used to bleed the filter systems during cleaning is treated to the same standard as run-off water and evacuated to the municipal main sewer via a single discharge point, which meets all the constraints imposed by the relevant integrated environmental authorization.

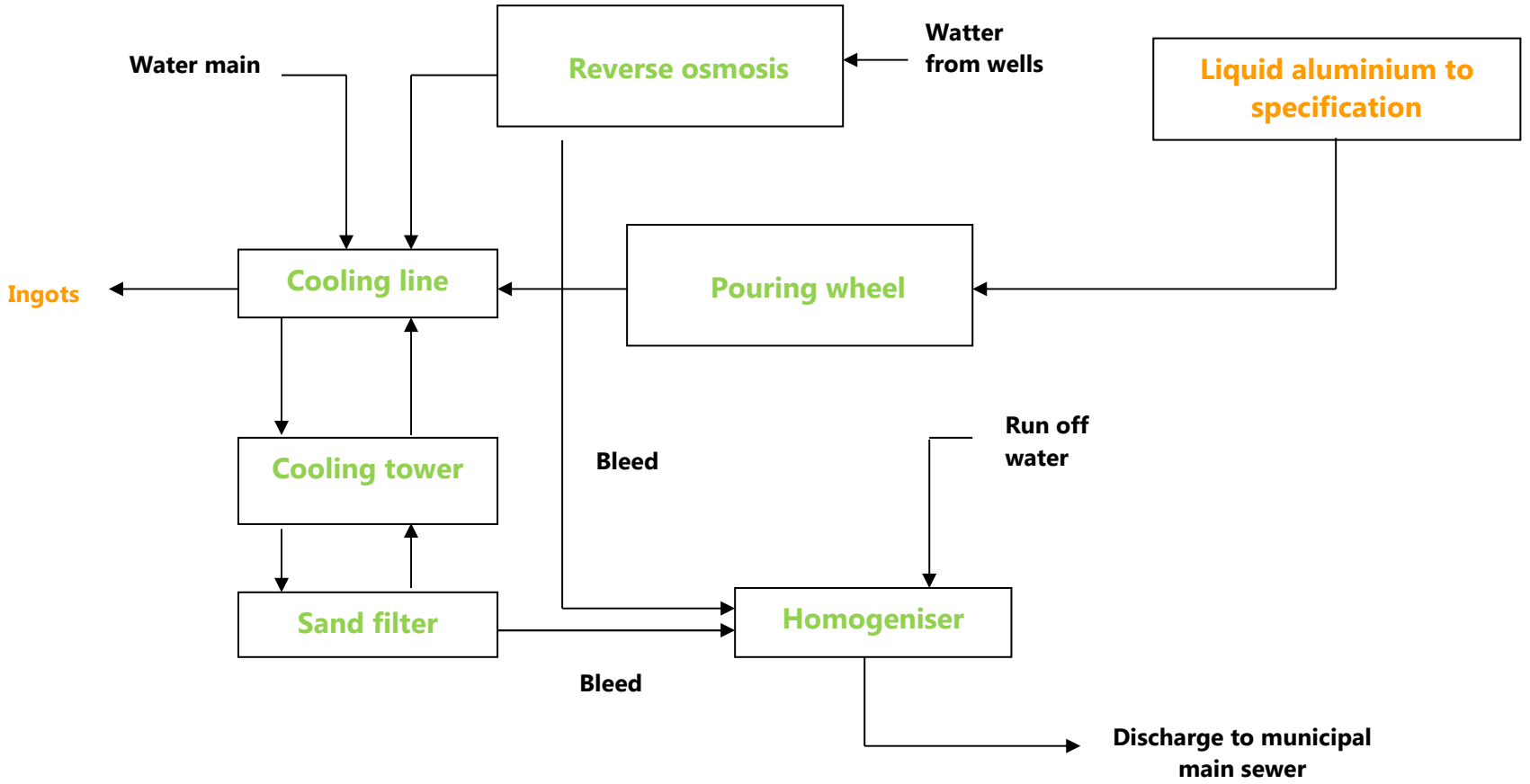


Illustration 4: Flow diagram of the ingot and liquid aluminium manufacturing process.

The global production calculation has placed the total average production of the Les Franqueses del Vallés plant in 63,713 t of finished product in recent years (2015-2017) (See page 34), with approximately 20% of its market being smelters in national market and 80% foreign customers.

All the products supplied by the company go through a previous control of final quality and are perfectly identified in such a way that it is possible to maintain the total traceability in relation to the manufacturing process, raw materials used and controls carried out. All this is managed through our quality management system with ISO 9001 certification.

In addition, in accordance with its activities aimed at the conservation of natural resources and the protection of the environment, we consider it necessary to carry out our activity with the least possible local environmental impact. Aware of this need, we decided to implement in 2003 an environmental management system ISO 14001, subsequently verified according to the European regulation EMAS in 2005 with the registration number ES-CAT-000203.

5. Representative environmental aspects of the company

The most representative environmental aspects of the plant are the following:

A) Emissions into the atmosphere

The plant currently has nine smokestacks associated with the facilities that are part of the production process, which correspond to the focus of the dryer of chips nº 1 + collector environment dryers, to the combustion focus of the rotary furnace nº 1, to the combustion focus of the Tilting furnace nº 2, to the focus of the rotary furnace charging area, to the combustion focus of the tilting furnace nº3, to the combustion smokestack of the laboratory furnace, to the combustion smokestack of the rotary furnace nº 2, to the smokestack of the dryer nº 2 and to the smokestack of the load area of the holding furnaces.

Periodically an officially approved laboratory (OCA) performs sampling of the emissions produced in these described smokestacks, analyzing later the compounds that in each case mark the integrated environmental authorization.

In order to ensure the proper functioning of the purification systems associated with the outbreaks, internal procedures have been developed, which are part of the integrated environmental management system, in which the continuous and periodic controls that must be carried out are defined to detect any anomaly, as well as the establishment of appropriate corrective actions.

B) Waste production

The company has the corresponding integrated environmental authorization (BA20120011) and its substantial change (B1CS160297) which, in turn, contains the authorization of the producer of hazardous and inert waste with the producer code P-03570.1.

- **Hazardous wastes**

The most significant hazardous wastes are the following:

- Salt slag: As a result of the use of common salt as a flux to prevent the unwanted oxidation of liquid aluminium inside the furnaces in contact with the atmosphere. The mentioned salt slag is totally recycled in what constitutes a fully integrated process of aluminium waste treatment within the Befesa Group, giving as a source a new salt capable of being used in new production processes and an inert waste, rich in aluminium oxide called Paval, which has countless applications in the world of cement.

- Filter dust: As a consequence of the treatment of the combustion gases through the purification systems present in the factory, and of the loads and movements of material in the furnaces and in the drying rooms. They are stored under cover, in big-bags, until their final shipment to an authorized agent.

- Filter bags: As constituents of the flue gas cleaning systems. Damaged or damaged bags are replaced and sent to authorized manager.

- Used oils: Coming from the maintenance operations of the facilities and machinery, they are stored in duly identified and dated warehouses waiting for their shipment to an authorized manager.

- Contaminated empty plastic containers: Containers that have contained chemicals, solvents, oils, etc. They are stored in a perfectly identified warehouse for shipment to an authorized manager.

- Absorbents, rags and contaminated clothes: Coming from maintenance operations, they are stored in properly identified and dated drums until their final shipment to an authorized manager.

The company has the corresponding acceptance documents from each of the authorized managers with whom it manages the aforementioned hazardous waste.

- **Inert wastes**

The industrial inert waste produced in the plant is basically that coming from the repairs, reforms or improvements that comply with the aforementioned definition. Said waste and its management are the following:

- Metallic wastes (iron scrap): they are disposed in a drawer provided for this purpose. When it is at full capacity, a company dedicated to the removal and management of this type of material is notified.
- Refractory bricks, rubble, wood, plastic and rubber: Waste refractory bricks come from maintenance work on the linings of the rotary furnaces and the holding furnaces. Rubble, wood, plastic and rubber waste come from civil work done at the company. These types of waste are selectively storage and sent to an authorized waste manager.
- General wastes no selectively collected: these go to landfill.

C) Depletion of natural resources

Taking into account aspects related to the management of natural resources in plant, the company has within its integrated management system a method of identification, monitoring and control of the resources used.

These resources correspond to the consumption of natural gas, used in the operation of furnaces and dryers, consumption of electrical energy, consumption of water for sanitary use and for cooling of ingots, to diesel (mobile machinery and shavings dryers), to oxygen (furnaces) and nitrogen (used in holding furnaces for the homogenization and degassing of liquid metal).

6. Significant environmental aspects of Les Franqueses del Vallés plant

As a basis for the definition of environmental objectives, direct and indirect environmental aspects are evaluated on an annual basis. To do this, criteria such as probability and severity are applied, obtaining the individual degree of significance of each of them. This allows to determine the future work areas on which to centralize efforts, in order to minimize the company's global environmental impact.

Following the criteria of severity and probability previously referenced, and after applying the rest of the criteria applied by the company in the internal evaluation process of all its environmental impacts, the impacts defined as significant for the year 2017 are summarized below:

- Confined emission of CO, NO_x, COT and PST as a consequence of the routine operation of fusion of materials in rotary, holding, laboratory and drying furnaces.

- Confined emission of HCl as a consequence of the routine operation of fusion of materials in rotary type furnaces.

- Confined emission of PCCD / F as a consequence of the routine operation of fusion of materials in rotary type furnaces.

For all the impacts classified as significant, Befesa Aluminio, S.L. it establishes a strict and periodic control of the same, associating at the same time strategic objectives

and environmental indicators of control and improvement, which allow it to guarantee the present and future environmental performance of the company.

Befesa Aluminio, S.L. also monitors and evaluates indirect environmental aspects, including those aspects for which it does not have full capacity to act. As main indirect environmental aspects in the year 2017, we highlight the following:

- Generation of used oils and batteries by subcontracted transport companies.
- Generation of emissions and ammonia odor associated with potentially wet raw materials.
- Radioactivity associated with the raw materials received.
- GHG emissions associated with services and supplies.

7. Outline of environmental targets and goals 2017

Every year, a series of environmental objectives are established, which are included in the annual environmental plan, where the goals associated with each of them are defined, as well as the corresponding allocation of human and material resources. The environmental objectives defined for the year 2017 are described below, making a brief summary of the degree of final implementation:

Aspect	Target	Target value	Result
CO_2 emissions	To reduce 2 % for GHG emissions.	-2 %	-4.42 %
CO, NO_x, PST y COT emissions	To reduce 2 % for CO, NO_x, PST y CO emissions.	-2 %	-39.02 %
HCl and PCCD/F emissions	To reduce 2 % for HCl and PCCD/F	-2 %	HCl +710 %
		-2 %	PCCD/F -71.43 %
Natural gas consumption	To reduce 2 % consumption associated to production processes	-2 %	-5.46 %
Natural gas consumption	To reduce 2 % consumption associated to shavings dryers	-2 %	+8.85 %
Electricity consumption	To reduce 2 % consumption associated to production processes	-2 %	-3.24 %
Gasoil consumption	To reduce 2 % consumption associated to production processes	-2 %	-21.50 %
Water consumption	To reduce 2 % consumption associated to production processes	-2 %	-15.73 %
Nitrogen consumption	To reduce 2 % consumption associated to production processes	-2 %	+22.73 %
Oxygen consumption	To reduce 2 % consumption associated to production processes	-2 %	-4.76 %
Slat flux consumption	To reduce 2% consumption associated to production processes	-2 %	+2.88 %
Salt slag generation	To reduce 2 % generation associated to production processes	-2 %	+0.83 %
Filter dust generation	To reduce 2 % generation	-2 %	-19.59 %
Filter bags generation	To reduce 2 % generation	-2 %	-42.99 %

- **To reduce 2 % for GHG emissions associated to secondary aluminium production.**

At the beginning of 2017, a joint objective of minimizing GHG emissions was defined for the centers that make up Befesa Aluminio, S.L. This objective was associated with emission sources corresponding to the two types of scope that are included in the company's inventory and which refer to direct emissions (scope 1) and indirect emissions (scope 2). After computing the emissions of these sources throughout the year 2017, it has been observed that Befesa Aluminio, S.L. has met the objective of minimization proposed, presenting a percentage of relative improvement of 4.42% (0.2789 teq CO2 / t in 2017 versus 0.2918 teq CO2 / t in 2016), mainly due to the actions aimed at improving the energy efficiency proposed for 2017, together with the temporary evolution of the variables with a direct effect on the mentioned energy efficiency.

- **To reduce 2 % for CO, NO_x, PST y COT total emission.**

The initial objective of reducing total confined emissions has been achieved. In 2016 the result was 1.64 kg CO + COT + NOx + PST / t product manufactured, while in 2017 it was 1.00 kg CO + COT + NOx + PST / t. This decrease is exactly 39.02%. The reason for this improvement in emissions is directly related to the latest results obtained in the emissions from the different sources of the plant at the end of 2016 and during 2017, with the concentrations of the pollutants being lower than the previous ones. Good maintenance of the condition of the filter bags and the purifying systems have contributed to a significant reduction in emissions.

- **To reduce 2 % for HCl and PCCD/F emission.**

The initial goal of reducing HCl and PCCD / F emissions has been achieved halfway. In 2016, the HCl result was 0.0087 kg HCl / t manufactured product, while in 2017 it was 0.0705 kg HCl / t. This increase is exactly 710%. This figure is due to the exceeding of the limits established in November 2016, which makes the indicator rise dramatically. Regarding the PCCD / F emissions, the objective has been met, 0.0007 Kg PCCD / F / t product manufactured in 2016 by the 0.0002 Kg PCCD / F / t in 2017, which represents a very significant improvement (71.43%). This improvement is due to the optimization of the active carbon dosing system in the filter of the fixed rotary furnace.

- **To achieve a 2 % decrease in total natural gas consumption associated with the plant's production processes.**

The relative consumption of natural gas associated with the productive processes has decreased significantly in 2017 (0.949 MWh / t manufactured product), with respect to the values reached in 2016 (1,004 MWh / t produced product). This reduction of 5.46% manages to reach the 2% target set comfortably and its evolution is considered more than positive.

- **To achieve a 2 % drop in natural gas consumption associated to shavings dryers.**

On the other hand, the consumption associated with the process of treatment of

shavings in 2017 has been 0.406 MWh / t chip treated, being in 2016 of 0.373 MWh / t chip treated. Therefore, an increase of 8.85% has been obtained, not achieving the target set at the beginning of the year. This increase is associated with the quality of the processed materials, specifically the chip, with higher humidity than the previous year.

- **To achieve a 2 % drop in electricity consumption associated with the plant's production processes.**

The relative electricity consumption during the year 2017 has decreased with respect to the values reported in 2016, mainly due to the operational improvement actions that have been carried out in the installations as a whole. The specific consumption of the year 2017 reaches values of 0.0896 MWh / t, which represents a decrease of 3.24% with respect to the consumption of the year 2016 (0.0926 MWh / t).

- **To achieve a 2 % drop in the amount of gasoil used in the plant´s production processes.**

The proposed objective of reducing diesel consumption directly associated with mobile machinery and the manufactured product has been achieved, decreasing by 21.50%. The relative value of 2017 has decreased compared to 2016, 0.073 GJ / t product manufactured in 2017, by 0.093 GJ / t product manufactured in the previous year. The goal has been achieved comfortably.

- **To achieve a 2 % drop in the amount of water used in the plant's production processes.**

The relative consumption of water during the year 2017 drops to 0.6529 m3 / t manufactured product, which represents a total reduction of 15.73% with respect to the values of the year 2016 (0.7748 m3 / t manufactured product). Therefore, the goal has been achieved. During this year the production of bigger ingots and bundles has increased, thus decreasing the casting time and, in turn, the consumption. Efforts have also been focused on improving the cooling circuit, cleaning up possible losses or leaks of water.

- **To achieve a 2 % drop in the amount of nitrogen used in the plant's production processes.**

The relative consumption of nitrogen in the year 2017 was 0.027 t / t manufactured product compared to the 0.022 t / t product manufactured in 2016. It means that the relative consumption increases with respect to the previous year by 22.73%, not achieving the initially marked goal of 2% reduction. This fact is attributed directly to the increase of the time when alloying during the process.

- **To achieve a 1 % drop in the amount of oxygen used in the plant's production processes.**

The relative oxygen consumption decreases from 0.126 t / t produced product of the year 2016, to 0.120 t / t product manufactured in the year 2017, which represents a decrease of 4.76%. The initially established objective has been achieved mainly due to the fact that, due to circumstances of the scrap market, the same mix of materials is never maintained, being different during 2017 than in 2016, and this

has caused a change in the melting process, whose fact more significant has been a higher metallic yield of the materials with respect to the previous year.

- **To achieve a 2 % drop in the amount of salt slag produced in the course of the plant's production processes.**

The objective of reducing the generation of salt slag has not been achieved, mainly due to the nature of the raw materials used in obtaining the final product and the quality of the fluxing salt used in the production processes. The relative value in the year 2017 was 0.611 t / t produced product, compared to the value of 0.606 t / t product manufactured in 2016, which represents an increase of 0.83%, enough to not achieve the objective.

- **To achieve a 2 % drop in the amount of flux used in the plant's production processes.**

The relative consumption of flux salt has increased in this year 2017 (0.322 t / t) a total of 2.88%, with respect to the values of the year 2016 (0.313 t / t). The objective has not therefore been achieved, mainly as a result of the type of materials used and the quality of the fluxing salt, with a lower percentage of potash in its composition.

- **To decrease the amount of filter dust produced by 2 %.**

The relative amount of filter dust generated during the year 2017 has reached values of 0.0156 t / t product manufactured, which represents a decrease of 19.59% with respect to the values of the year 2016 (0.0194 t / t manufactured product). This

objective has been achieved due to the nature of the raw materials used, being this year less dusty.

- **To achieve a 2 % drop in filter bags generation**

The generation of filter bags in 2017 was 0.02724 kg / t manufactured product, by 0.04778 kg / t product manufactured in 2016, which represents a reduction of 42.99%, thus fulfilling the marked objective for 2017 that was 2%. The nature of the raw materials, less pulverulent, have a direct effect on this reduction.

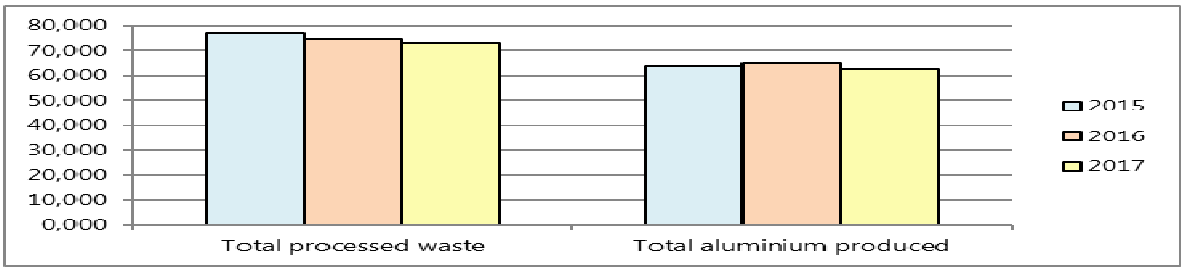
8. Environmental performance of the company

The following sections reflect the environmental performance of the company:

8.1 Aluminium waste recycling for aluminium recovery

All materials received except for the so-called fluxes (NaCl and KCl) and alloying, are considered waste according to national and European regulations currently in force. These materials come mainly from other primary and secondary aluminium smelters and from aluminium scrap collectors that have their origin in the market of parts machining, scrapping of vehicles and household appliances and product cuts. The main function and motivation throughout our production process is the total recovery of the mentioned secondary waste as a direct alternative to primary aluminium obtained from the transformation of natural resources.

The total quantities of waste processed in the last 3 years, as well as that of secondary aluminium obtained as a consequence of the recycling operation carried out, are detailed below.



	Total processed waste	Total aluminium produced
2015	77,219	63,845
2016	74,237	64,877
2017	73,050	62,416

Graphic 1: Comparison of waste treated and aluminium produced (t) in the last 3 years.

8.2 Energy consumption

The absolute (MWh) and relative consumption (amount per ton of product manufactured) of the main energy resources used in the production process corresponding to the last 3 years are shown below. Throughout 2017 there has been a total direct consumption of renewable electric energy amounting to 32.1%, corresponding to the renewable part of the total electricity consumed.

- **Natural gas**

The natural gas is used in the melting and refining processes of the rotary and holding type furnaces and in the process of drying the turnings. The supply of natural gas is done directly through the network.

Natural gas	2015	2016	2017
Consumption (MWh)	83,915.3	82,801.0	78,258.0
Production (t)	63,845	64,877	62,416
Relative consumption (MWh/ t)	1.31	1.28	1.25

The relative consumption of natural gas has decreased substantially in 2017 (1.25 MWh / t produced product), with respect to the values reached in 2016 (1.28 MWh / t manufactured product). This reduction refers to the total natural gas consumption of the plant. Indicate that during 2017 there has been monitoring of natural gas consumed associated only with the production process, obtaining a value of 0.949 MWh / t manufactured product (2016 year: 1,004 MWh / t), and on the other hand the consumption associated with the treatment process of turnings, being the value obtained in 2017 of 0.406 MWh / t turning treated (year 2016: 0.373 MWh / t). At

this moment, the objectives of both indicators are attributed separately, and this reduction in consumption must be attributed to the melting process. In contrast, in the drying process there has been an increase in consumption.

- **Electricity**

The company has two transformers located in buildings nº 5 and nº 1. These two transformers have an electrical power of 630 and 1,000 kV. In terms of lighting, the use of fluorescent lights predominates in offices and mercury lamps in production areas and outdoor areas. It must be said that maintenance is progressively replacing those of mercury vapor with those of LEDs.

Electricity	2015	2016	2017
Consumption (MWh)	5,869.8	6,002.1	5,590.5
Production (t)	63,845	64,877	62,416
Relative consumption (MWh/ t)	0.092	0.093	0.090

The consumption of electricity per ton of product manufactured has decreased considerably in 2017, due to the success of management in the production processes and the drying of turnings. For subsequent years, an attempt will be made to assess the indicator considering, separately, the consumption directly related to production and consumption related to the treatment of turnings.

8.3 Secondary materials consumption

The absolute (t) and relative consumption (quantity per t of manufactured product)

of the main secondary materials used in the productive process corresponding to the last 3 years are shown below.

- **Salt flux**

The fluxing salt is mainly a mixture of NaCl and KCl, which is added to the inside of the rotary type furnaces, together with the rest of the main raw materials. The mission of the flux salt is to protect the molten aluminium from possible unwanted oxidations, while being a recipient of the impurities that can potentially accompany the raw materials used. The use of the flux salt generates a hazardous waste called salt slag, which is completely recycled within Befesa, giving rise in turn to an aluminium oxide that has various applications in the cement industry sector.

Salt flux	2015	2016	2017
Consumption (t)	19,090	20,331	20,063
Production (t)	63,845	64,877	62,416
Relative consumption (t/ t)	0.30	0.31	0.32

The relative consumption of fluxing salt has increased slightly in 2017 with respect to the values reported in 2016, mainly due to the nature of the raw materials used to obtain the final product and the quality of the used flux salt in the productive processes, with a slightly higher humidity and, in turn, with a lower potash content.

- **Oxygen and Nitrogen**

In the facilities there are two external oxygen tanks and one nitrogen tank that are the property of the supplier in both cases. Oxygen and nitrogen are used to perform the oxy-gas mixture in the rotary furnaces and for the degassing of the holdings respectively.

Oxygen	2015	2016	2017
Consumption (t)	8,409	8,173	7,508
Production (t)	63,845	64,877	62,416
Relative consumption (t/ t)	0.132	0.126	0.120

The specific oxygen consumption has decreased with respect to the data reported in 2016. The same material mix has not been maintained as in the previous one and this has caused a change in the fusion process, whose most significant fact has been a greater metallic performance of materials compared to the previous year.

Nitrogen	2015	2016	2017
Consumption (t)	1,479	1,434	1,708
Production (t)	63,845	64,877	62,416
Relative consumption (t/ t)	0.023	0.022	0.027

The specific consumption of nitrogen has increased notably with respect to the year 2016. The improvement actions carried out in 2017 in the melting processes have not been effective, probably due to the increase of the homogenization times of the aluminum inside the holding furnaces after adding the alloying materials.

- **Gasoil**

Gasoil is used in small quantities in Befesa Aluminio, S.L. to wet turnings received before drying operations and mainly as fuel for mobile machinery (front loaders and forklift trucks). Gasoil consumption changes depending on the percentage of humidity of the raw material before drying.

Gasoil	2015	2016	2017
Consumption (GJ)	5,890	5,893	4,567
Production (t)	63,845	64,877	62,416
Relative consumption (GJ/ t)	0.092	0.091	0.073

As can be seen in the table, the specific consumption of diesel in 2017 has decreased significantly compared to 2016. The reported data corresponds only to the consumption of diesel associated with the consumption belonging to the mobile machinery, without taking into account the employee for drying the turnings.

8.4 Water consumption

The plant of Les Franqueses del Vallés is supplied with water from two sources, municipal supply and supply of three duly legalized wells. The main uses to which the water is destined are the following:

- Cooling water: Evaporated water in the cooling systems, auto-cleaning operations of sand filters used to regulate the quality of the water, reverse

osmosis to reduce the conductivity of fresh water and water for industrial boilers.

- Domestic water: Toilets and changing rooms.
- General cleaning: Cleaning under pressure.
- Irrigation and fire-fighting systems.

Water coming from wells is used mainly for cooling the molten metal poured in the aluminium ingot manufacturing line. It is recycled through an enclosed circuit where it is cooled in three independent cooling towers to ready it for reuse. Almost 100 % of this water is recirculated (the exception being that used for back-washing the sand filters parallel to the cooling towers). The water consumption figures in the table below thus reflect the amount of water that evaporates during the process described. It is calculated that 90 % of the water used in cooling processes evaporates. Water coming from municipal main network includes the water consumed at offices, the workshop, laboratory and the changing rooms.

The company has a general water meter, meters for each well and a number of subsidiary meters distributed around the plant that indicate the total amount of incoming water and how much is used by each separate facility or process.

Water	**2015**	**2016**	**2017**
Consumption (m^3)	50,898	50,269	40,752
Production (t)	63,845	64,877	62,416
Relative consumption (m^3/ t)	0.80	0.77	0.65

The relative consumption of water during the year 2017 has been significantly lower than the previous year. During this year, the production of larger weight and larger packaging ingots has increased and the operation of the reverse osmosis plant has been optimized, thus reducing water consumption.

8.5 Waste management

The tendencies for the main waste produced and managed over the past three years are shown in the following table:

Waste managed	2015	2016	2017
Salt slag produced (t)	41,552	39,292	38,122
Ratio of salt slag to end product (t/ t)	0.65	0.61	0.611
Filter dust produced (t)	1,357	1,257	973
Ratio of filter dust to end product (t/ t)	0.021	0.019	0.016
Aluminium dross produced (t) (*)	2,600	2,650	2,550
Ratio of aluminium dross to end product (t/ t) (*)	0.041	0.041	0.041
Filter bags produced (t)	3.110	3,100	1,700
Ratio of filter bags to end product (t/ t)	4.87×10^{-5}	4.78×10^{-5}	2.72×10^{-5}

(*) estimated figure.

The specific amounts of filter dust generated are reduced, due to the optimization in bag filters and the less pulverulent nature of the raw materials used during 2017.

Regarding salt slags, we can say that there is a slight increase compared to values of the previous year, as a consequence of the nature of the raw materials used and the quality of the flux.

Regarding the filter bags, their generation has been reduced by almost half compared to the previous year.

8.6 Impact on the biodiversity

The total surface of our facilities is 20,275 m2, of which 13,307 m2 are built. However, there is no impact on biodiversity, since the land is not included or close enough to have an environmental impact on any protected area. Taking into account that the occupied surface has not changed in the last 3 years, the relative occupation of land per ton of manufactured product is the one represented below:

Land area	2015	2016	2017
Relative land area (m^2/ t)	0.21	0.21	0.21

8.7 Emission of pollutants into the atmosphere

8.7.1 Greenhouse gases (GHGs)

Since 2008 Befesa Aluminio, S.L. has implemented an inventory of global GHG emissions for the three centers that make up the aluminium business line (Erandio, Les Franqueses del Vallés and Bernburg plants). In it, both direct and indirect emissions are calculated, following the methodology indicated in the ISO 14064 standard. An independent verification report of said inventory is available.

Direct emissions are defined as those associated with those sources that are under the control of society, such as emissions from the combustion process in furnaces, emissions from machinery or vehicles, emissions from process equipment and fugitive emissions from equipment and facilities.

The direct and indirect emissions of the last two years are shown in the following table:

GHG emissions	**2015**	**2016**	**2017**
Annual total for direct emissions (t CO_2 eq)	32,447.9	48,199.4	45,777.9
Relative annual total for direct emissions (t CO_2 eq/ t)	0.2615	0.2645	0.2486
Annual total for indirect emissions (t CO_2 eq)	2,851.5	4,972.8	5,577.7
Relative annual total for indirect emissions (t CO_2 eq/ t)	0.023	0.027	0.030

(*) Data corresponding to the 3 Befesa Aluminio, SL centers.

8.7.2 Emissions of other pollutants into atmosphere

The total emissions of NOx and particulates, as well as the total emissions, of HCl and PCCD / F, corresponding to the last 3 years in absolute and specific values per ton of product manufactured, are shown in the following table:

Emissions of other pollutants	2015	2016	2017
NO_x emissions (t)	20.90	25.07	32.49
NO_x relative emissions (kg/ t)	0.33	0.39	0.52
Solid particles emissions (t)	15.36	15.11	11.76
Solid particles relative emissions (kg/ t)	0.24	0.23	0.19
HCl emissions (t)	1,952.211	568.539	4,399.255
HCl relative emissions (kg/ t)	0.0304	0.0087	0.0705
PCCD/F emissions (ng)	42.099	38.38	15.37
PCCD/F relative emissions (ng/ t)	0.0007	0.0007	0.0002

In none of the smokestacks CH_4, HFC, PFC or SF_6 is emitted.

8.8 Environmental performance regarding legal provisions

8.8.1 Emission smokestacks

The following tables show the last measured values, in all the smokestacks present in the installations, of the parameters limited in the integrated

environmental authorization, as well as their comparison with the maximum permitted limit values. The integrated environmental authorization stipulates that these controls are carried out on a biennial basis, the last ones having been carried out during the year 2016.

- **Combustion fumes from rotary furnaces nº 1 and nº 2**

  The rotary type furnaces use natural gas and oxygen as fuel for the operations of fusion of the materials and adjustment of the process temperatures. The treatment systems are constituted in a first step by a cooling system in charge of reducing the temperature of the gases coming from the combustion process. In a second step, the cooled combustion gases are conducted through a bag filter where, in addition to being retained the solid particles in suspension, the neutralization treatment of the acid gases is carried out by controlled addition of calcium hydroxide and carbon activated for the neutralization of PCCD / F.

Smokestack identification	Number of registration	Limits as per integrated environmental authorization 2012	Values for the last measurements 2016
Rotary nº 1	11,027	Solid particles: 50mg/Nm^3	2.32
		NO_x: 450 mg/Nm^3	52.66
		COT: 100 mg/Nm^3	3.47
		HCl: 30 mg/Nm^3	6.23 (26.09.17 report)
		*Dioxins and Furans: 0.5 ng/ EQT-I/Nm3	0.02379

Rotary nº 2	18,497	Solid particles: 50	1.85
		NO_x: 450	43
		COT: 100	10.33
		*HCl: 30 mg/Nm^3	3.80 (26.09.17 report)
		*Dioxins and Furans: 0.5 ng/ EQT-I/Nm3	0.0378 (26.09.17 report)

- **Combustion fumes from tilting holding furnaces**

The tilting holding type furnaces also use a mixture of natural gas and oxygen as fuel. The combustion gases produced in the combustion chambers of the tilting furnaces are eliminated directly into the atmosphere because only clean raw materials with a high metallic percentage are melt inside. This makes totally unnecessary the previous cooling, as well as the elimination of particles through bag filters.

Smokestack identification	**Number of registration**	**Limits as per integrated environmental authorization 2012 (mg/ Nm^3)**	**Values for the last measurements 2017**
Tilting holding nº 2	4,509	Solid particles: 50	15.08
		CO: 100	6.23
		NO_x: 450	15.77
Tilting holding nº 3	17,253	Solid particles: 50	30.17
		CO: 100	2.77
		NO_x: 450	13.4

- **Holding furnace loading pit area and dryers**

Given the nature of the emissions produced in the loading pit areas of the holding type ovens, the filter system comprises merely a bag filter to eliminate any solid particles in suspension. There is no need for preliminary cooling of fumes.

Smokestack identification	Number of registration	Limits as per integrated environmental authorization 2012 (mg/ Nm^3)	Values for the last measurements 2016
Holding furnace loading pit area	11,019	Solid particles: 50	6.95
Dryer smokestack	17,275	Solid particles: 50	4.4

* **Focus not currently active, unified with dryer focus nº1.**

- **Laboratory furnaces**

The installation of laboratory furnaces consists of 3 crucible furnaces of reduced size, which are used in the characterization of the raw materials received. The associated purification system is constituted by a bag filter in which the solid particles are retained.

Hotspot identification	Number of registration	Limits as per integrated environmental authorization 2012 (mg/ Nm^3)	Values for the last measurements 2017
Laboratory furnaces	17,274	Solid particles: 50	1.99
		CO: 100	3.22
		NO_x: 450	< 4.11

- **Turnings dryers**

  The turning drying system is compound by two dryers (nº 1 and nº 2). Dryers use a blend of natural gas and oxygen to dry materials and adjust process temperatures. The first part of the treatment systems comprises a cooler which brings down the temperature of the fumes from the drying process. In the second part, the cooled fumes are sent through a bag filter where solid particles are retained.

Hotspot identification	Number of registration	Limits as per integrated environmental authorization 2012 (mg/ Nm^3)	Values for the last measurements 2017
Dryer nº 1	5,374	Solid particles: 50	2.71
		NO_x: 450	2.90
		COT: 100	22.7
Dryer nº 2	29,351	Solid particles: 50	0.84
		NO_x: 450	4.33
		COT: 100	54.63

8.8.2 Emissions discharge into the sewer

The water outlets from the plant are grouped by water type as follows:

- Industrial water

This is water from the semi-enclosed cooling circuits (occasional back-wash bleeds to clean cooling tower filter) and run-off water collected in the plant.

- Domestic water

This is from the sanitary facilities in the offices and changing rooms.

The company has a single point of discharge of more sanitary industrial water, which discharges directly into the municipal sewer. The global calculation of the discharge waters during the year 2017 reaches the value of 9,515 m3.

Befesa Aluminio, S.L. has an authorization to discharge, granted by the Consorcio del rio Besos on 30th of October 2006 and validated on 15th of September 2007. This authorization has to be renewed every year (next 30th September 2016). In this authorization, some limits are defined:

- Conductivity < 8,000 uS/ cm
- Soluble salts < 9,500 uS/ cm
- Chlorides < 2,500 mg/ L

A continuous control of the conductivity of the water of the cooling circuit is carried out, thus ensuring the characteristics of the water discharged in the periodic purges of the circuit. In addition, a monthly water analysis of the circuit for the microbiological control of Legionella is carried out.

The following table shows the values obtained in the last three control analyses of wastewater discharges.

Parámetros	Limits	Average values of discharge		
		2015	2016	2017*
Conductivity at 20ºC	8,000 uS/ cm	3,950	664	664
Chlorides	2,500 mg/ L Cl	-	-	-
Solid particles	750 mg/ L	17	55	55
No decanted DQO	1,500 mg/ L O_2	< 50	89	89
Decanted DQO	1,500 mg/ L O_2	< 50	-	-
Inhibiting materials	50 Equitox/ m^3	< 2.0	< 2.0	< 2.0
Total phosphorus	50 mg/ L P	0.52	4.46	4.46
Ammonia	-	10	< 5	< 5
Aluminium	20 mg/ L	-	< 0.5	< 0.5

***Values of the 2016 analytics.**

All the data reported in the table have been provided by the Consortium of Besos and, as can be seen, none of the parameters analyzed exceeds the limit values

established by it. During 2017, the Consorcio del Besos did not consider it opportune to collect a sample of the discharge, so analytical is not available. Throughout 2018 it will be analyzed again to control its evolution.

8.8.3 Other environmental performance indicators

The factory makes a periodic control of its external noise as a consequence of its activity. In this sense, it is necessary to point out the fact that the company is located in an industrial area with other manufacturing companies and warehouses in the vicinity and, due to the proximity of the main traffic road, the noise that is appreciated in the outside go unnoticed among the level of background noise. Likewise, the activity is at a considerable distance from the nearest town, Les Franqueses del Vallès.

The current legislation related to external noise is order 176/2009 annex A. The company has made different changes in its activity after measurement in 2007, with the stop of its aluminium drosses mill and the decrease of some other heavy machinery. Because of that reason, new measurements have been made to check out again the real noise emissions. These measurements have been made in May 2011 and limits have not been exceeded.

9. Environmental targets 2018

In order to comply with the commitment of continuous improvement in environmental action in accordance with what is established in the environmental policy and in terms of the environmental aspects identified as significant, environmental objectives are defined for the 2018 period, which are the following:

- To reduce by 2% the emissions of greenhouse gases associated with the production of secondary aluminium.

- To reduce by 3% the total consumption of natural gas used in the activity associated with the productive processes of the company.

- To reduce by 2% the electricity consumption used during the activity associated with the productive processes of the company.

- To reduce by 3% the consumption of flux used during the activity associated with the productive processes of the company.

- To reduce by 3% the generation of salt slag generated during the activity associated with the productive processes of the company.

10. Applicable environmental legislation

Befesa Aluminio, S.L. is part of sectoral associations that, on a monthly basis, identify, supply and update legal texts. With this information, the new requirements or their modifications are extracted and the own legislative database is updated, with the particular requirements applicable to the company. Also, Befesa Aluminio, S.L. performs a continuous verification of compliance with its legal requirements, confirming the nonexistence of any breach of environmental and / or industrial safety.

Below is a list of the most relevant applicable environmental legislation:

- Integrated environmental authorization BA2030044 awarded on 1st December 2004 by the Catalan Government Environment Office for the activity of non-ferric metals recovery with capacity > 20 t/day of aluminium. The authorization BA2060085 awarded on 22th September 2008, including a non-substantial change and the punctual modification of the annex of integrated environment authorization BA2030044 awarded on 29th April 2008.

- Renewal of the environmental authorization, with number BA20120011 and date of December 11, 2012, as well as the non-substantial changes authorized with B1CNS130394 and B1CNS140191 files. After the favorable resolution of incorporation of the activated carbon dispenser in the focus number 2 (B1CNS140191 and date of July 21, 2014), and the satisfactory results of the PCCD / F emissions in it, the resolution has also been granted with number B1CNS130394 and date of March 10, 2015, of expansion of waste treatment capacity.

- Resolution of substantial change number B1CS160297 dated October 10, 2017, approving the increase in production capacity.

- Currently the company is in process with the Administration, where a non-substantial change of the current Environmental Authorization has been requested. The change consists in the replacement of two furnaces in the next two years.

- Legislation of water discharge (Articles 24, 26, 29, 38 and 49) to award discharge authorization.

- RD 252/2066 of 3rd March in which objectives for the recycling and valorization established in law 11/1997 of 24th April for containers and containers wastes are revised.

- Law 22/2011 of wastes and contaminated floors, in relation to producers and recovery factories of wastes.

- Industrial Safety Legislation (fighting systems, oil installations, high voltage, pressure vessels, etc.).

- Legionella control associated to cooling systems for the production of solid aluminium alloys.

- European Agreement for the international road transport of dangerous goods. The organization has a security adviser, who issues the annual report to the corresponding Department.

11. Cooperation with environmental organizations

Befesa Aluminio, S.L. belongs and actively participates in the following associations related to the environment:

- ACLIMA (Basque Environment Industry Cluster Association). The company has signed up to the Commitment to Sustainable Development (1999) and the Declaration of Bizkaia on the Right to the Environment (1999).

- ASERAL (Spanish Aluminium Recovery Association).

- Confemetal (Spanish Confederation of Metal Industry Organizations). The company is an active member of the Environment Committee of this organization.

- EEA (Organization of the European Aluminium Recycling Industry).

- ASEGRE (Spanish Association of Special Waste Managers): This association brings together hazardous waste managers based in Spain.

- Technical Committee of AENOR.

Befesa Aluminio, S.L. participates regularly in R + D + I program with different research centers and other European companies mainly aimed at improving the recycling, evaluation and full use of the waste of the aluminium industry.

12. Participation

Befesa Aluminio, S.L. enhances the participation of all its workers in the determination of key environmental processes. In order to do so, it facilitates ways of communicating problems and suggestions for improvement, while at the same time employing the Company Committee established for participation and direct communication with all the members of the company.

13. Availability

This environmental declaration is accessible via the corporate website (www.befesa.es).

14. Next environmental declaration

This environmental statement is intended to inform employees, authorities, customers, suppliers, media and neighbors about our management policy and also to propose a constructive dialogue.

It is a public document validated by Bureau Veritas Iberia, S.L., environmental verifier accredited by ENAC with the number ES-V-0003 and domiciled in the street Valportillo first 22-24 mahogany building- 28108- Alcobendas (Madrid).

The environmental statement that is now presented is valid for 12 months, with the

following declaration validated in July 2019.

If you want to know more details about Befesa Aluminio, S.L. and its products, see our page www.befesa.es. If you would like additional information in the future, please do not hesitate to contact Mr. Manel Arco Alcaraz at:

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Glossary:

kg: kilogram.

Si: silicon.

Cu: cooper.

Mg: magnesium.

mm: millimeters.

t: ton.

t CO_2 eq: CO_2 equivalent tons.

MWh: megawatt per hour.

m^3: cubic meter.

HCl: hydrochloric acid.

HF: hydrofluoric acid.

NO_x: nitrogen oxides.

SO_2: sulphur dioxide.

SST: solids in suspension.

NH_3: ammonia.

Zn: zinc.

Fe: iron.

g: gram.

NaCl: sodium chloride.

KCl: potassium chloride.

cm^2: square centimeter.

h: hour.

kW: kilowatt.

V: volt.

R&D: research and development.

m^2: square meter.

GHG: greenhouse gases.

mg/ Nm^3: milligram per normal cubic meter.

Pb: lead.

Cr: chromium.

Mn: manganese.

Ni: nickel.

As: arsenic.

Cd: cadmium.

Hg: mercury.