

2010

**ANNUAL
REPORT**



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Ángel Fernández Homar
Managing Director of TIRME, S.A.

When, in 1990, the Government of the Balearic Islands passed the first waste plan and later, in the year 1992, when the Council of Mallorca placed its trust in TIRME to develop this plan, very probably nobody could have predicted that by the year 2010 we would have established the current urban waste management system in Mallorca.

The road this far has not been easy and there can be doubt that we have reached our destination thanks to the efforts of many people who have had faith in the project. I am absolutely convinced that the final result was the one that adapted best to what we have been calling sustainable development. The waste management system established permanently in Mallorca in 2010, which is symbolized with the concept of “zero dumping” is, without a doubt, an environmentally-advanced, socially-accepted and economically-viable project. For an island such as Mallorca, which makes its living from tourism and therefore from its landscape and territory, having a model of waste management based on zero dumping is by no means a whim; it is almost obligatory.

No more than 14 years ago, all the urban waste generated in Mallorca went to dumps, many of them uncontrolled and with no measures whatsoever to prevent their potential contaminating effects. Today, in the 21st century, the century of the environment, the Environmental Technologies Park of Mallorca is a world leader in terms of waste management. This great project, which should be a source of pride for all Mallorcans, was made possible thanks to the collaboration and contribution of all the public authorities. Firstly the Council of Mallorca as the body responsible for the service, although the contribution made by the Government of the Balearic Islands and the municipal councils of the island has been no less important, as without their collaboration the project would have been unviable.

And finally, I should like to transmit my sincerest gratitude to all the employees of TIRME, those who worked with us in the past and those who are with us now; thank you for contributing with your effort, and devoting your time to a project which, without the help of all of you, would not have been possible.



TIRME is a leading company with over ten years of experience in the field of waste management. From its very beginning, and given the public dimension and social perception of the treatment installations, the company's ambition has been to become a referent on a local, national and international level and occupy a top position in the sector. To achieve this, the company has a dynamic, living project and great potential for innovation, which has allowed it to renew itself day after day, adapting to the changing reality and the appearance of technological advances.

The strong growth the company has undergone since its creation, with the permanent incorporation of new personnel into its workforce and the opening-up towards new entrepreneurial initiatives, has been possible thanks to a solid base and the formulation and diffusion of general guidelines and goals which guide the actions of the organisation at all times, orientating it towards an increasingly responsible management of its activities and processes, including its economic, social and environmental aspects. The commitments and goals the company works for are expressed in the formulation of the mission, vision and policy, which are set out below.

Mission

To establish a policy and a sustainable strategy for the management of urban and similar waste that guarantees increased quality of life for the citizens of Mallorca, through optimum environmental treatment of waste in terms of efficiency and costs, obtaining good economic results.

Vision

- To serve as a model for action on a local, national and international level in the application of the '6 Rs' policy (4+2): Reduce, Reutilise, Recycle, Recover + Re-educate and Reinsert socially.
- To be the referent in the field of waste management, searching for alliances on a local level that enable us to offer and publicise a service that is more suitable for our society.
- To extend the scope of the Mission (new markets, products, services) related to environmental management.
- To introduce the concept of environmental eco-efficiency, where waste products are resources, changing the concept of single-use, i.e. of using and throwing away, for that of multiple-use, i.e. throwing away and using.
- To enhance Mallorca's image of quality and boost our tourism markets, which constitute one of the main driving forces behind the island economy, through the defence of the environment, based on responsible waste management.
- To be recognised as a referent in the introduction of Corporate Social Responsibility through its dual focus, improvement of the conditions of workers (internal responsibility) and of society in general (external responsibility).

Integrated management policy

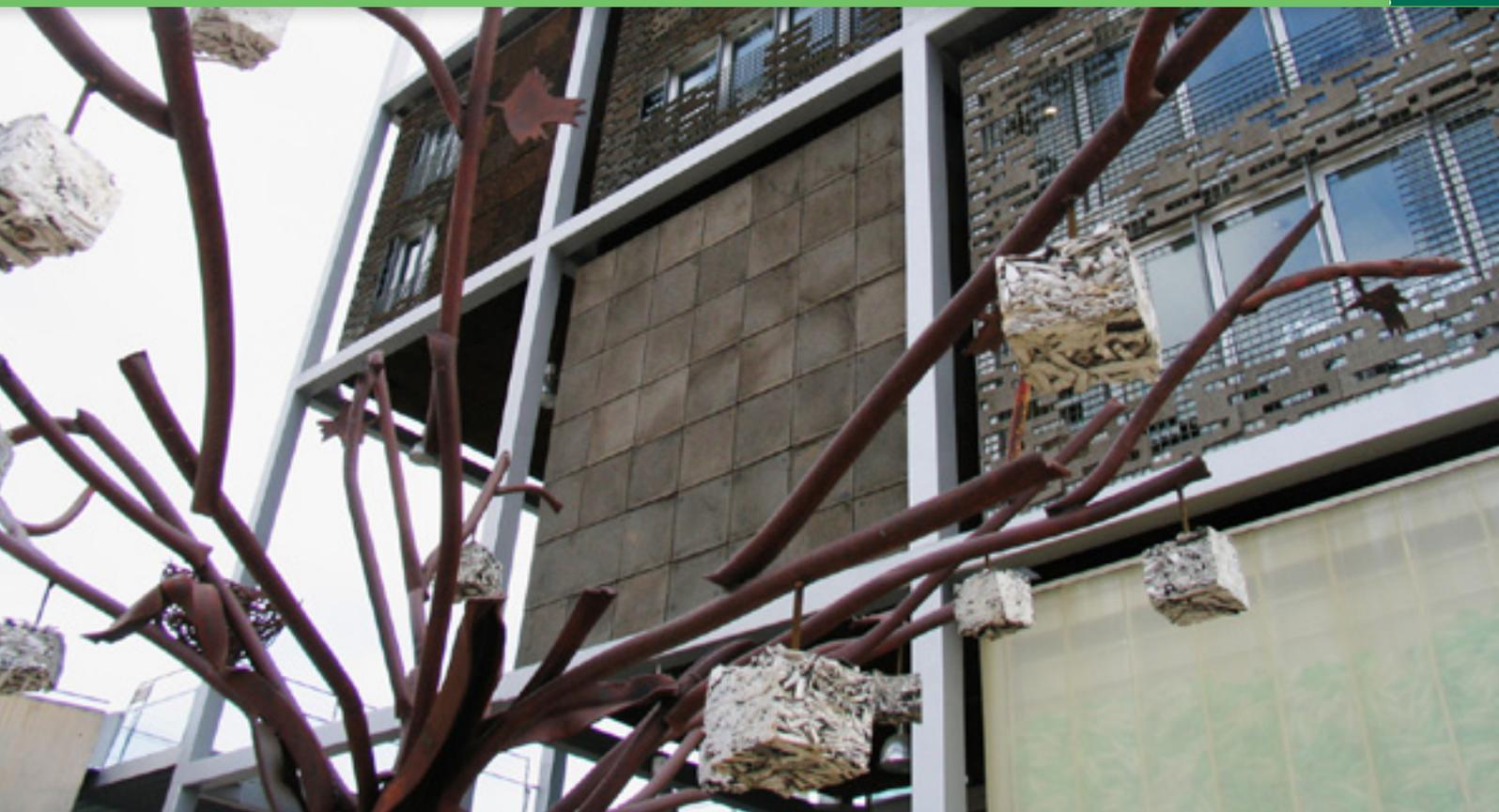
TIRME assumes the commitment of incorporating the principles of quality, environmental protection, prevention of occupational hazards and social and work-family conciliation considerations into its management and the development of its processes, products and services, aspiring to be recognised both internally and externally as a responsible company that includes these principles in its activities and decisions.

TIRME recognises that these principles are indispensable to guarantee the competitiveness, success and leadership of the company, also contributing to its growth, progress and the promotion of its workers.

This is why, following a process of evolution, TIRME takes on the following commitments:

- To develop and maintain an integrated management system that enables it to achieve continuous improvement of the quality, environmental protection, prevention of occupational hazards and conciliation of work with family life.
- To try to achieve the maximum satisfaction and adaptation to the needs of its clients, committing itself to generating positive social and economic results for all the groups of interest (Island Council and town councils of Mallorca, Board of Directors, human team, suppliers and the community in general)
- To comply with the legislation, regulations and norms that apply to the company and other requisites the company subscribes to, fundamentally those related to its environmental, social and labour risk aspects.
- To identify and assess the environmental aspects of the activities and products and, with the aim of preventing negative impacts, to control the processes, establishing suitable methods, resources and criteria for operation and the evaluation of environmental behaviour.
- To incorporate the principle of prevention of contamination into the activities of design, execution and evaluation of projects and processes:
 - Establishing environmental requisites in the design of new projects and selecting the best technology available for the management of the environmental services provided.
 - Monitoring the efficiency of the options constructed and installed.
 - Improving the management of the environmental services.
- To identify and assess any company activities that may entail a risk to the health of the workers, establishing a prevention plan based on avoiding risks and fighting them at source and on the control of those that cannot be avoided, minimising their consequences and always giving priority to collective protection measures above individual ones.
- To provide the necessary training and preparation, through safe methods and practices, to enable workers to be able to perform their jobs correctly, providing them with optimum professional development and also with the resources necessary for engaging in their activities.
- To motivate and raise awareness in the personnel regarding the importance of their commitment to the development of the principles reflected in the policy, applying internal and training communication mechanisms.
- To assign the human and material resources consistent with the objectives set out.
- To respect the privacy, freedom of opinion, of association and collective negotiation of its employees, working for equal opportunities and non-discrimination due to gender, religion, nationality, age, disability or sexual orientation, also rejecting forced labour and child labour.
- To guarantee stability in employment, a fair wage and to offer measures that facilitate the conciliation of work with family life and socio-cultural activities that contribute to personal development.
- To incorporate the principle of continuous improvement in all of the company's areas of management, by establishing programmes that develop the principles in the Policy.

The Management of TIRME trusts that all the teams and the people in them understand the transcendence of this Policy, assuming the values of our corporate culture and integrating it into their style of work as a habitual pattern of behaviour.



In other editions of this annual report we have explained that the main strategic objective for the three-year period 2007 - 2010 was the adaptation of the production processes and infrastructures to the modification of the concession contract with the Council of Mallorca, signed in the year 2007. Consequently, in this three-year period the objectives centred on putting the two new incineration lines and the solar drying plant into operation, as well as a whole series of improvements on the recycling installations.

Whereas 2007 – 2010 was the period for finalisation of the project, and once the objectives set were attained, **the period from 2010 to 2014 must become that of consolidation of the project.** This consolidation should be based on the following strategic goals:

- Improving the image of the company. The aim of this strategic goal is to project an external image of a company in line with the goals attained and which is symbolized by the model of zero waste dumping. This philosophy, which it is possible to introduce in other parts of the world, must be the clear reference of the company both on the island and off it. We must continue to be leaders in the sector and work to be valued in our closest surroundings. In this way Mallorca will have an important asset for its sustainable development and to make the tourism-environment binomial more compatible.
- Promoting the fidelity of our personnel. It would have been impossible to attain the zero dumping goal without

the effort of all the people who make up the organisation, the main asset of our company which we must nurture and develop with the adequate human resources policies in order to fulfil the objectives set out in terms of motivation, training, work-life balance, talent management, ...

- Restricting rates. All sustainable projects have to be economically viable. If the model were to end up with an excessively high cost, then it would be a failure. Which is why we must pay particular attention to making proposals to the Council of Mallorca to ensure that costs do not rise to an excessively high rate and thus make the project unsustainable. The benefits of this non-increase will doubtless have repercussions in terms of improving the organisation's image. Making the necessary efforts in this regard will help ensure that the economic repercussions of all the improvements in the service are lower for citizens, at this time of recession.
- Improving economic results. We will be able to achieve all the previous goals if the company is viable and economically solvent. Continuing with the model of continuous improvement established in our organisation, we must achieve an increased level of efficiency, making better use of resources, reducing costs and searching for new ways of obtaining income, all without detriment to the attainment of the quality and environment criteria set out within the organisation.



- 2.1. Reception of waste in transfer stations**
- 2.2. Selection of light packaging**
- 2.3. Composting of the organic fraction of municipal waste and sewage sludge**
- 2.4. Methanation plant**
- 2.5. Solar EDAR-sludge drying plant**
- 2.6. Incineration of waste with energy recovery**
- 2.7. Rejected Material Depot Zone 2 (Santa Margarita)**

2. Operating activities

2.1. Reception of waste in transfer stations

Waste transfer stations are installations where waste is compacted by fractions in order to be transferred to treatment plants on high-capacity lorries, thus reducing the traffic of waste collection vehicles circulating along the roads of Mallorca and, therefore, the risks associated to high-tonnage transport. In this way environmental pollution is also reduced, by improving fuel consumption per unit of weight transported, which makes for a reduction in the emission of greenhouse gases.

This is shown in the graph below, where one can see that the entry of lorries into the different Transfer Stations over 2010 occurred 58,542 times. After the waste was compacted lorries left the transfer stations for the treatment plant 12,625 times.



At present all the transfer stations, Alcudia (North), Binisalem (Centre), Manacor (East), Campos (South) and Calvià (West) are functioning at full capacity, after completion of the

adaption of all of them to the separate collection of glass, paper/cardboard and packages.

This year 231,531 tonnes of urban solid waste were received in the different Transfer Stations, as opposed to the 240,631 recorded in 2009, making for a decrease of 4%.

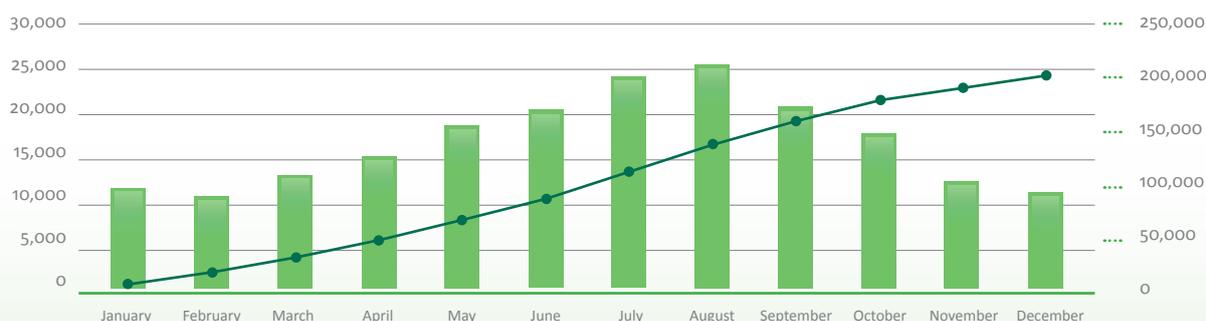
The breakdown into fractions of the tonnes managed is as follows:

- **GLASS**
13,634 tonnes, compared to 13,893 in the year 2009 (decrease of 2%).
- **PAPER AND CARDBOARD**
11,430 tonnes, compared to 12,078 in the year 2009 (decrease of 5%).
- **PACKAGING**
3,727 tonnes, compared to 3,645 in the year 2009 (increase of 2%).
- **URBAN WASTE FOR INCINERATION**
202,741 tonnes, compared to 211,163 in the year 2009 (decrease of 4%).

In the year 2010 an annual inspection of all the Transfer Stations was carried out, coinciding with the low season for the entry of refuse.

An new glass treatment plant was brought into service on the island of Mallorca, so the Transfer Stations transport this fraction to said plant.

Detail of monthly urban solid waste intake, transfer stations (T)





2.2. Selection of light packaging

The packaging from the separate collection system (yellow container) and singular generators authorised by the Council of Mallorca is sorted manually and/or mechanically, and classified into: HDPE (detergent bottles, large water containers), LDPE (Film: supermarket bags), PET (fizzy drink or water bottles), mixed plastic MIX (mixture of different plastics, polystyrene), drinks cartons (bricks), aluminium, steel and rejects. They are later handed over to the recycling managers authorised by Ecoembalajes.

During the year 2010, a technical improvement has been introduced in the Packaging Selection Plant: the installation of ballistic separators in two fractions of the bottom of the Trommel and an alveolar valve film aspiration system. Separation

of rounded and flat objects prior to optical separation, improving the effectiveness of the automatism. The investment made amounted to 417,670 €. The capacity for treatment has been increased in terms of timetable and quality of the selected material. This has enabled us to adjust the productive timetable to the seasonal nature of the intake.

The municipalities around the island are still committed to the introduction of door to door selective refuse collection. The installation of new areas of contribution, the separation at source in hotel chains and the increase in the contributions from the smaller islands, were the main reasons for the increase in intake compared to 2009 from 11,518,340 kg, to 12,530,800 Kg in 2010, making for an increase of 8.79%. Although the tendency is to rise, this percentage was lower than that of previous years. The drop in the percentage of inappropriate intake for processing continues to rise.



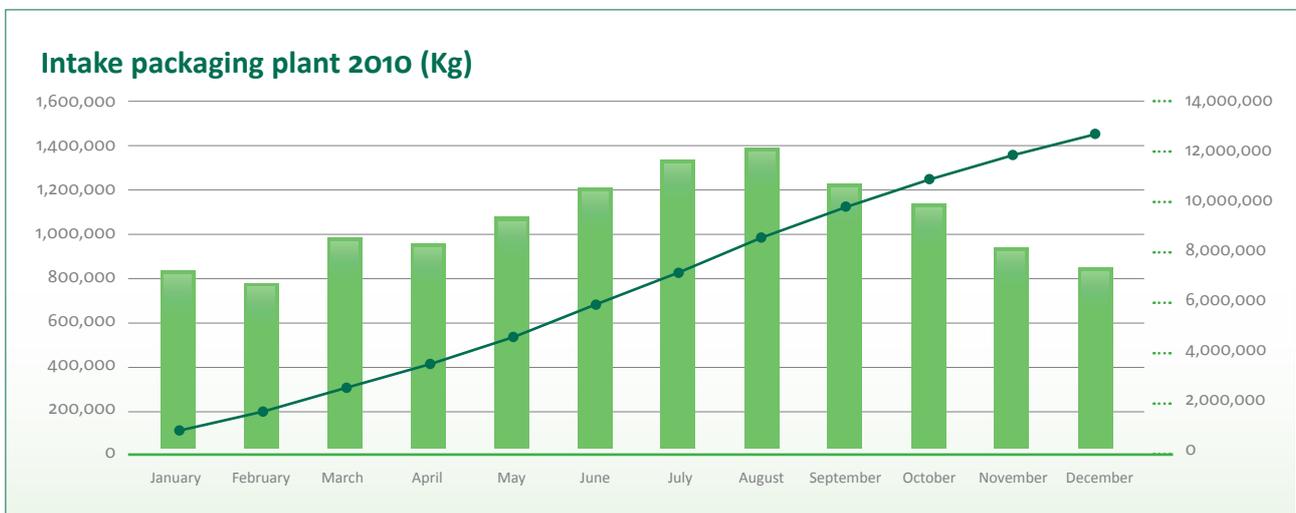
The objectives laid down for the year were:

- To maintain the quality of the selected fractions, and continue to comply with the requisites demanded in the Technical Specifications for Recovered Material (ETMR as per Spanish initials).
- To improve the process parameters: performance, effectiveness and rejection.
- To improve the treatment timetable capacity.
- To optimize stocks.
- To adjust the process of characterisation to the flow of intake tonnes.
- To optimize the cost of labour per tonne treated.
- To optimize the consumption of gasoil, energy and water.

The production data from the Light Packaging Selection Plant during the year 2010 were:

- Intake material: 12,530,800 Kg (annual increase of 8.79%).
- Commercialisation of the different fractions to recyclers: 5,940,540 Kg.
- Rejects inappropriate for processing: 4,885,600 kg.
- Rejects due to failure to comply: 1,140 kg.

Over this year we should highlight the stock of untreated material accumulated at the end of the year. The main reasons for accumulation were the fact that it was impossible to carry out treatment during the periods of programmed stops and improvements to the installation.



2. Operating activities

2.3. Composting of the organic fraction of municipal waste and sewage sludge

The composting of the organic fraction (FORM, as per its Spanish initials, and water purification plant [EDAR] sludge) mixed with structuring material (pruning waste, sawdust, ...) is a process of natural fermentation with the presence of oxygen which takes place at high temperatures (around 60-70 degrees), by which the germs, parasites and weeds are destroyed and a final product called "compost" is obtained, which can be used as organic fertilizer for soil.

This process takes place in different composting plants located in various places on the island of Mallorca.

2.3.1 Composting plants of Ariany, Felanitx and Sa Pobla

In the plants in Ariany, Felanitx and Sa Pobla the sludge from the IBASAN sewage plants and from nearby municipalities is treated.

The aim is to adjust the intake of sludge to be treated in these facilities to the nominal design tonnes. In 2010 a total of 24,627 tonnes of sludge and 11,035 tonnes of structuring material were treated. The breakdown by plants is as follows:

PRODUCTION DATA 2010

INSTALLATION	Sludge intake (T)	Structural material intake (T)	Compost production (T)
Ariany plant	17,982	6,389	5,328
Felanitx plant	3,716	2,554	1,693
Sa Pobla plant	2,929	2,092	1,453

The Ariany composting plant has a much larger surface area than the other installations.

During the year 2010, the routine maintenance activities have been carried out that are applied systematically to the equipment and installations, as well as the programmed annual maintenance stops.

2.3.2 Marratxí (Zone 1) and Calvià (Zone 3) composting plants

During the year 2010, the Calvià and Marratxí composting plants worked as envisaged, attaining the objectives that had

been set out: treatment of the total refuse intake, obtaining a quality product and reduction of rejects to the minimum possible. The initiation of FORM pre-selection, before bimethanation is patently clear in the treatment data.

The restructuring of the workforce, adapting it to the new turner, and the need to adjust intake to the demands of the process, has produced the desired result. In the end the structure is as follows: two split support shifts for the continuous shift, morning/afternoon shifts from Monday to Friday. Personnel not assigned to these shifts have been relocated in other plants/departments.

COMPOSTING PRODUCTION DATA Z-1 (MARRATXÍ) -2010:

INSTALLATION: COMPOSTING Z-1	2009	2010
FORM intake (T)	6,096	0
EDAR sludge intake (T)	7,301	2,198
Methanation digest intake (T)	6,872	11,481
Structural material intake (T)	9,951	6,309
Total treated (T)	30,220	19,988
Rejects (T)	4,159	469
Compost Production (T)	11,455	8,070

A high season timetable has been agreed upon for the Calvià composting plant with Calvià 2000, a municipal urban solid waste collection company. The agreement is adapted to seasonal needs and from May to October reception is extended to Saturdays and public holidays. During 2010 the quality of the FORM increased, translating into a smaller number of tonnes of intake, but consequently less rejects, thus improving performance considerably.

COMPOSTING PRODUCTION DATA Z-3 (CALVIÀ) - 2010:

INSTALLATION: COMPOSTING Z-3	2009	2010
FORM intake (T)	2,536	1,834
EDAR sludge intake (T)	-	-
Structural material intake (T)	5,463	3,889
Total treated (T)	7,999	5,723
Rejects (T)	2,116	323
Compost Production (T)	128	442

2.4. Methanation plant

The transformation organic material undergoes in the presence of humidity and in atmospheres without oxygen makes this material degrade and gives rise to the production of gases, for the most part methane (which is used as a fuel to generate electrical energy). The resulting (digestive) material is aimed at composting plants. And the sewage water that has not been re-used is sent to a treatment unit for subsequent usage.

Over the year 2010 the Methanation plant has received sewage sludge and organic fraction from separate waste collection. The assignation of EDARs that habitually unload in the peripheral sludge plants explains the increase in the intake.

The increase in intake of FORM and the good operational results obtained when the pre-selection of FORM was put into service, over the final months of 2009, were the reasons why we decided to continue to treat FORM in this installation, reserving the treatment capacity in the composting drums for situations involving stops and / or when biomethanation capacity point is reached. The production of biogas, and consequently energy generation, has undergone a notable increase.

Numerous interventions have been made on the installation over 2010, with the aim of improving and adapting them to the treatment of the type of FORM that reaches us. Focalized collecting has been installed on belts and equipment to prevent odour emissions and direct them to the biofilter. The circuit for exploitation of heat from exhaust gases from the biogas engine has been completed and put into service. Amongst other improvements carried out, we should highlight the division into sectors of the discharge pit to prevent emissions, installation of access gangways to all equipment and necessary points, installation of lifelines and hoisting tackle, installation of automatic

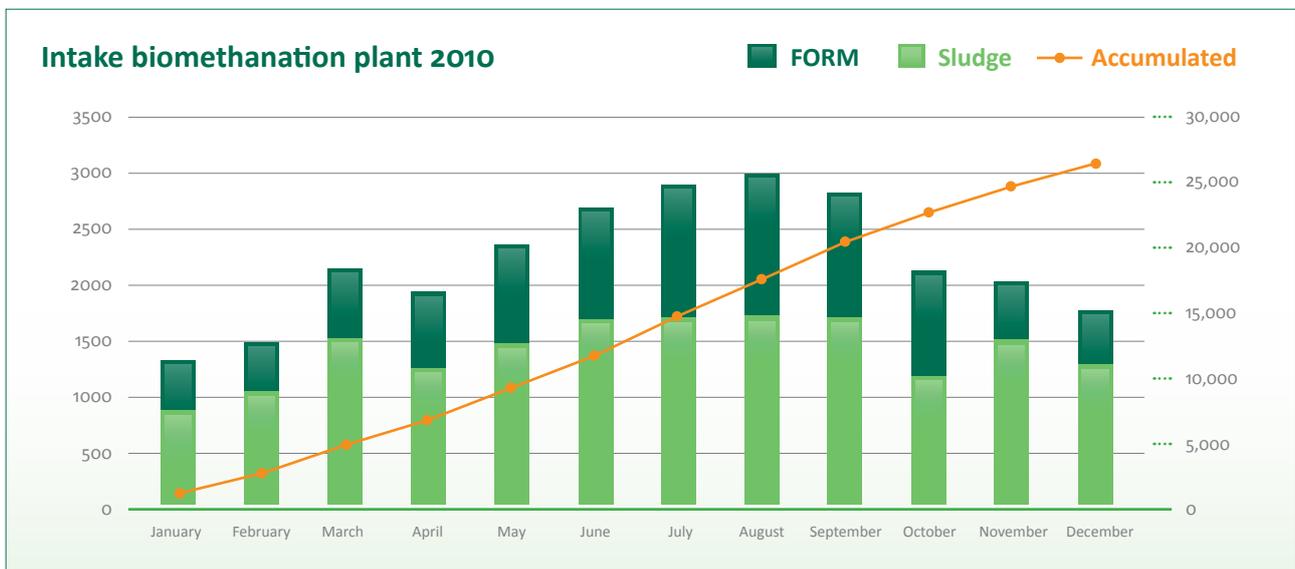
compactors and reject containers, installation of cameras for visualisation of the process, automation of access doors, and in some duplicated cases, improvements in the leachates network, etc., all of which were carried out with the aim of improving the conditions of work and performance of the installation.

A study was carried out and a contract drawn up for the introduction of a processing line to improve the performance of the co-digestion of wastes to prevent risks during the process and protect equipment. Introduction of this system is planned for 2011. This improvement includes: the increase in the diameter of pulper discharge pipes, improvements to the sand trap for the extraction of inappropriate materials, intermediate tank of 190 m3 volume to dose the feed to the digest, a new gasometer to increase biogas storage capacity, installation of a basket for elimination of inappropriate substances from the centrifuge drain, extension of electricals and inspection necessary for introducing the new equipment, as well as all the valves, apparatus and purpose-made equipment as needed.

The production data of the Methanation plant for the year 2010 were as follows:

METHANATION PRODUCTION DATA:

INSTALLATION: METHANATION	2009	2010
FORM intake (T)	699	9,561
EDAR sludge intake (T)	13,181	16,922
Total treated (T)	13,880	26,483
Digest generation (T)	7,908	14,513
Rejects (T)	118	3,945





2.5. Solar EDAR-sludge drying plant

Solar drying is a technology that enables us to stabilize the water purification plant sludge, eliminate the water it contains and increase calorific power.

The process takes place in greenhouse-type chambers, by means of solar radiation, and a biofuel is obtained which can, amongst other ultimate purposes, be sent to the Energy Recovery Incineration Plant.

With this new treatment we cover the production peaks of sludge in summer, compensate for the difference between compost production and demand and improve the quality of the compost.

In June 2008 the first tonnes of sludge entered the facility, commencing the start-up of sludge loading.

The installation for the exploitation of heat from the exhaust of the biogas engine has now been put into service. Performance trials are due to take place in 2011

The production data of the Solar Drying Plant are:

SOLAR DRYING PLANT PRODUCTION DATA:

INSTALLATION: SOLAR DRYING	2009	2010
EDAR sludge intake (T)	24,594	26,338
Digest intake (T)	1,037	2,818
Total treated (T)	25,631	29,156
Exit to evaluation (T)	7,367	9,117

The nominal capacity of the installation is 30,000 tonnes/year, and the good weather conditions this last year enabled us to nearly reach this figure, even without the biomethanation heat exploitation system operational.



2.6. Incineration of waste with energy recovery

By incinerating waste with energy recovery we obtain a quick, safe and environmentally-friendly elimination of refuse, with strict control of gaseous emissions, complying with European and Spanish norms and at the same time producing electrical energy.

Waste incineration eliminates the risks of the pollution of aquifers, spontaneous combustion, pests, bad odours and uncontrolled emission of gases typical of rubbish dumps.

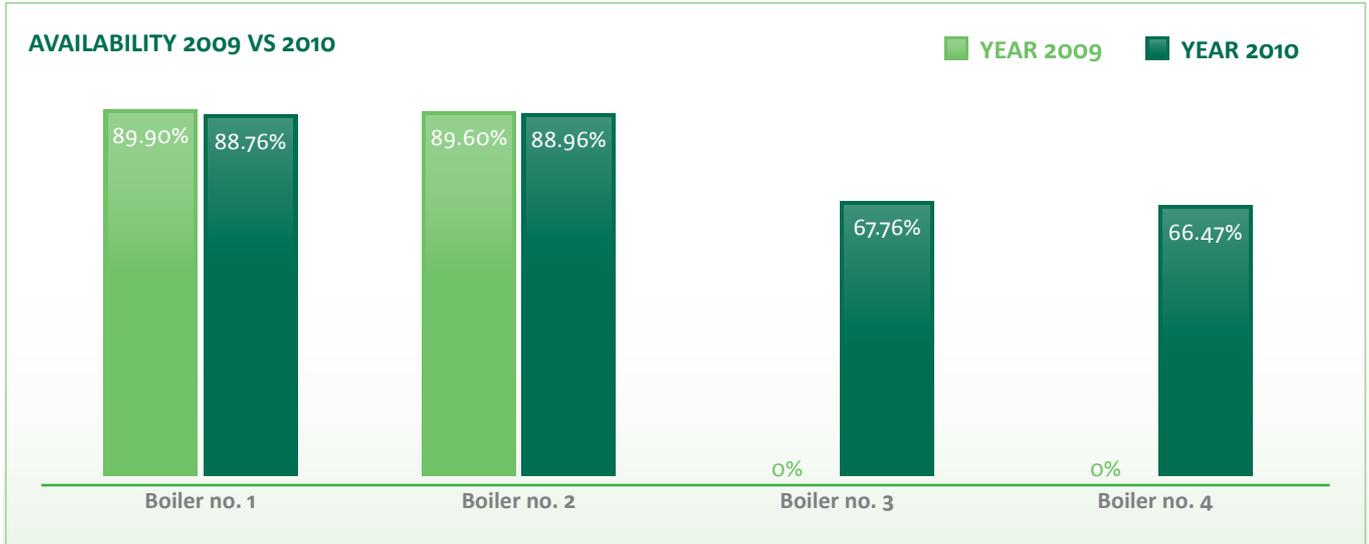
Over the year 2010 the Son Reus Incineration Plant with Energy Recovery has performed to full capacity, except in November, which was the month of the general inspection of the lines, with an average availability of 88% on lines 1 and 2 and 67% on lines 3 and 4. Most of the actions carried out, corresponding to the predictive, preventative and corrective maintenance of equipment and installations, have been performed with all four incineration lines operating. Lines 3 and 4 are under guarantee.

We should emphasize the following improvements or significant changes introduced in the facility over the year 2010:

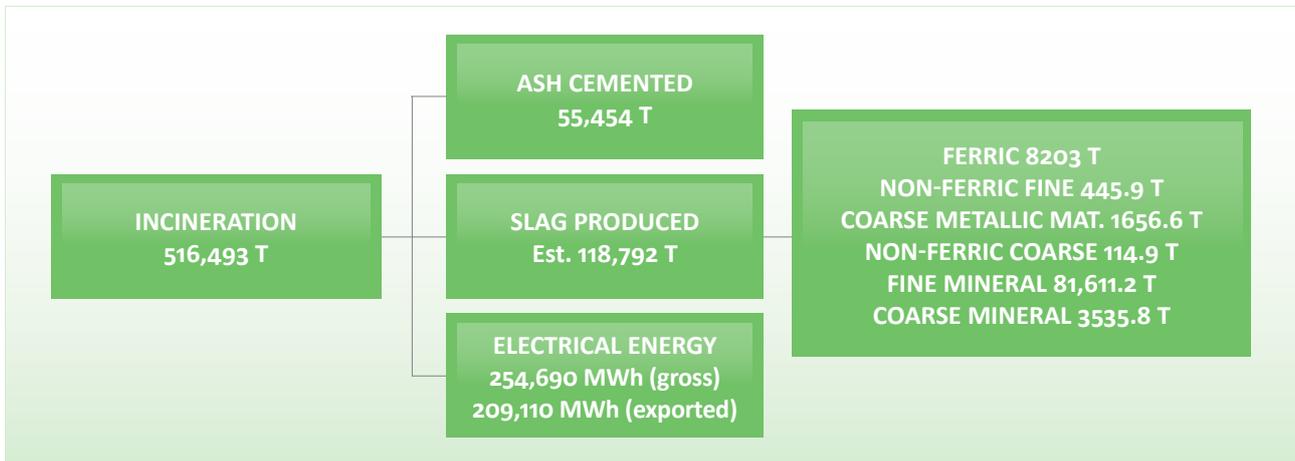
- Lines 3 and 4 have been started up, increasing the waste treatment capacity from 300,000 metric tonnes/year to 732,000 tonnes/year.
- Because of this we have increased electrical energy production with the commissioning of the new turbogenerator. The official names will be Grupo 1 (Generator Lines 1 and 2) and Grupo 2 (Generator Lines 3 and 4)
- Changes have been introduced in the operating shifts to adapt to the technical requirements and workload of the new installations, with maintenance being carried out by operating personnel.
- A C&D waste storage unit is now available to absorb the intake of refuse, acting as a lung warehouse. The total intake in the C&D unit was 7741 metric tonnes.
- The commissioning of the new incineration plant has made for a drastic reduction in the amount of urban waste destined to dumps, the objective for coming years – and that set by the PDSCGRUM – being zero waste destined to dumps.

	Boiler no, 1	Boiler no, 2	Boiler no, 3	Boiler no, 4
Hours 2009	7,869	7,852	-	-
Hours 2010	7,710	8,028	2,994	2,923
Availability 2009	89.9%	89.6%	-	-
Availability * 2010	88.76%	88.96%	67.76%	66.47%

* Counting the hours dedicated to the general inspection of the lines.



The production data for the Incineration Plant with Energy Recovery for the year 2010 were:



- The surpluses that could not be incinerated due to lack of capacity of the facility were eliminated by placing in a refuse tip, with 26,937 tonnes of municipal waste being diverted to the landfill managed by the Municipal Waste Company of Palma as opposed to 184,249 tonnes (decrease of 580%)

With regard to the by-products from the incineration process (cemented ash and slag), they were both subjected to specific treatment in accordance with the destination and usage envisaged for them.

The slag is collected in two pits ambos and sent to a specific treatment plant designed mainly to extract the recoverable fractions (Fe scrap, non-Fe metals and dry slag or mineral slag) by mechanical means and using magnetic separation and induction.

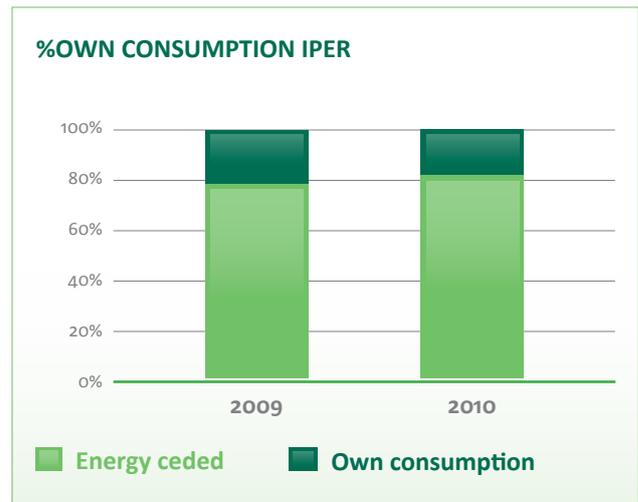
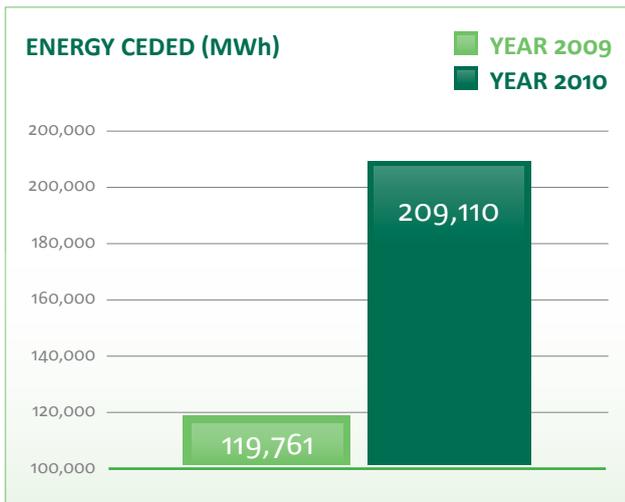
After a maturation period this mineral slag also turns into a recoverable fraction as a substitute for dry aggregates or as filler in the construction sector.

Moreover, the ash is mixed with special cement and water and transported to the security depot adjacent

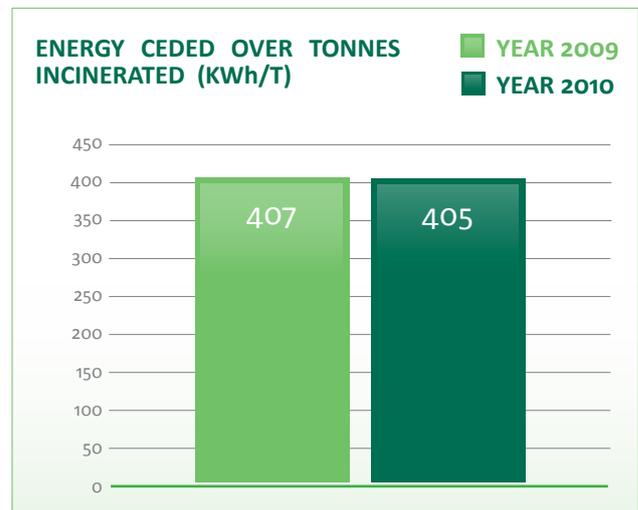
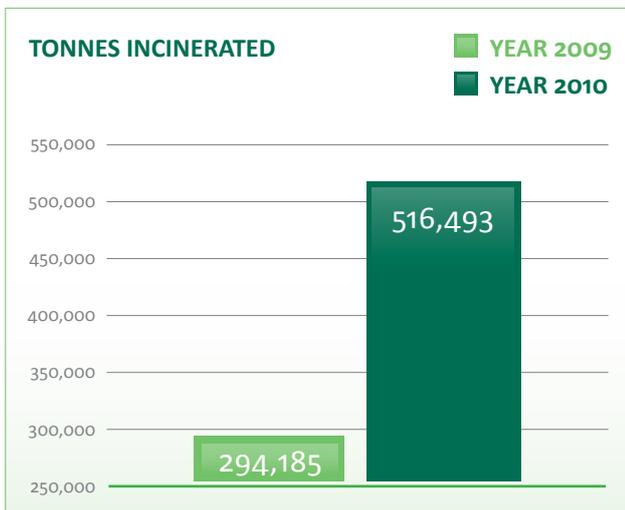
to the Incineration Plant. Once cemented, the ash is catalogued as non-hazardous waste. The current sectorial master plan envisages the reutilisation of the ash as a substitute for raw materials.

In 2010 we proceeded to incinerate 4589 tonnes of used tyres (NFU as per Spanish initials) from SIGNUS and the temporary stockpile attached to the Secure Depot.

Over the year in question a gross amount of energy of 254,690 MWh was produced, representing an increase of 67% compared to the previous year due to the commissioning of the new incineration lines. For the same reason, the plant's own consumption recorded for this year increased to 45,579 MWh, as compared to the 32,627 of the year 2009, giving rise to a resulting net energy ceded to the general electricity network of 209,111 MWh.



*The difference in electrical energy production between the year 2009 and 2010 is caused by the commissioning of the Tirme 2 group.



2.7. Rejected Material Depot Zone 2 (Santa Margarita).

Over the year 2010, TIRME has continued to run the Rejected Material Depot in Santa Margarita although there has been no intake as all the waste was diverted to the incineration plant with energy recovery.

We are continuing with the Cantabria University project on monitoring and modelling the tip, in accordance with the "MODUELO" model.

Work has continued on the "Rubbish dump mining" project, with different trials being carried out with the aim of studying the viability of emptying, transporting and subsequently treating the C&D waste deposited in the Z2 RMD (Rejected Material Depot Zone 2) from the year 2005 to 2010.



- 3.1. Environmental controls applicable to the functioning of the installations**
- 3.2. Control of effects on the local surroundings**
- 3.3. Environmental control of by-products**
- 3.4. New lines of work embarked upon during 2010**



Environmental controls applicable to urban waste treatment installations envisaged in the PDSGRUM are regulated through a specific Environmental Measures and Monitoring Programme (hereafter PMVA as per its Spanish initials), approved by a Resolution by the Regional Minister for the Environment and published in the Official Gazette of the Balearic Islands (BOIB no. 59, May 17th, 2001). This is an extensive, ambitious programme which specifies the environmental aspects under study (waste water, emissions into the atmosphere, noise, soil, air quality and by-products such as slag, cemented ash and compost), the parameters to be controlled, and the frequency and type of analysis.

These are all applied bearing in mind the possible effects on the natural surroundings and the populations near the treatment plants operated by TIRME on the island of Mallorca, with the ultimate goal of guaranteeing the proper functioning and minimal impact of the installations, complying with applicable environmental legislation and, if necessary based on the results, adopting the appropriate corrective measures.

To develop the controls envisaged in the PMVA, a collaboration agreement was signed between the Council of Mallorca, the University of the Balearic Islands and TIRME, with the consultancy services of the authorities' collaborating entities and specialist laboratories and entities.

The data are delivered to the Council of Mallorca and presented and discussed in the PMVA Technical Follow-Up

committee (comprised of representatives of the Balearic Government's Regional Ministry for the Environment, representatives of the Council of Mallorca, TIRME and the University of the Balearic Islands). The results of the application of the PMVA are published annually through the Follow-Up Committee for the Management of Non-Hazardous Waste in Mallorca. This committee is comprised of representatives from the Council of Mallorca, the Government of the Balearic Islands, the municipalities where the treatment plants are located, citizens' organisations (Federations or Associations of Local Entities of the Balearic Islands, Neighbours' Associations, etc.), institutions of recognised prestige from the Autonomous Region (University of the Balearic Islands, professional associations, etc.) and other ecological and social organisations.

All of this guarantees the quality of the data, independent analysis of the results, and transparency and dissemination of the information.

Below is a general breakdown of the main results attained in the year 2010, obtained through application of the PMVA, and grouped together as follows:

- Environmental controls applicable to the functioning of the installations.
- Controls on the effect on the area.
- Environmental control of the by-products.

3.1. Environmental controls applicable to the functioning of the installations

3.1.1. Emissions

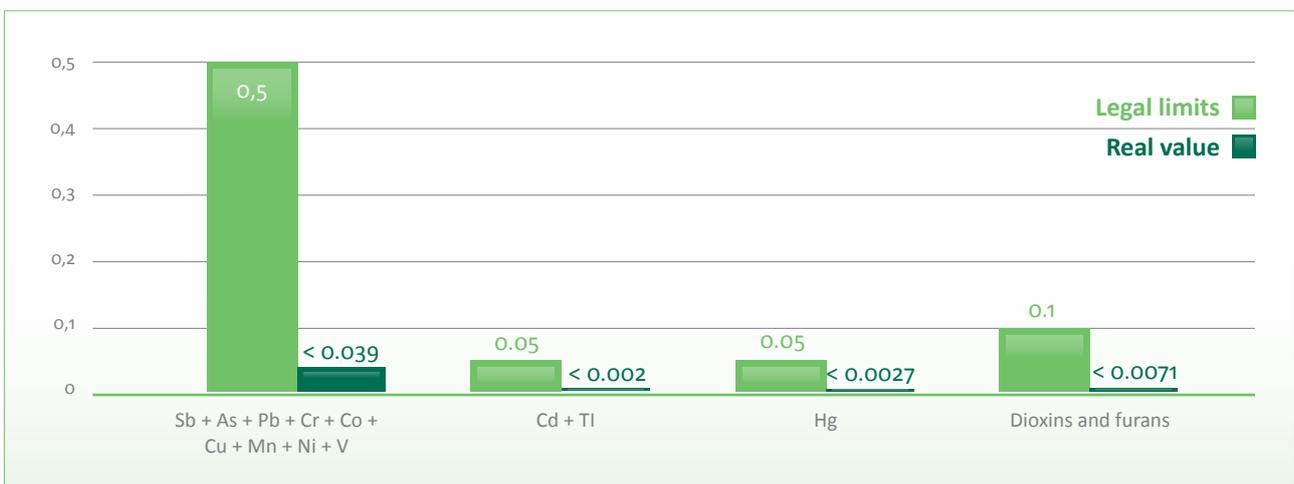
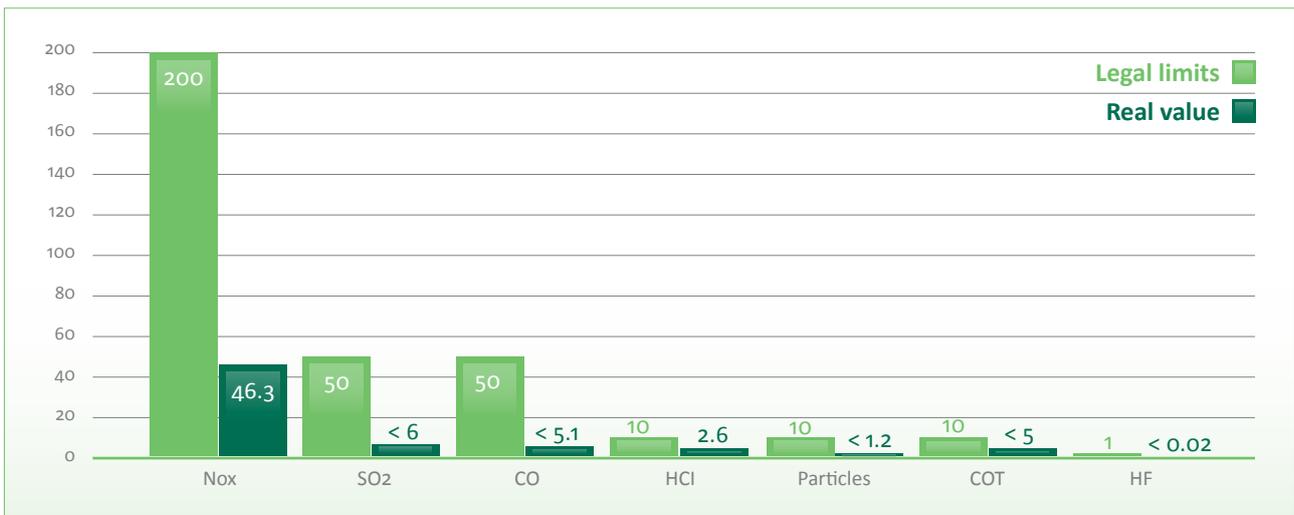
In this section, the main sources of gas and particle emission into the atmosphere are, in this order:

- The two lines of the Energy Recovery Incineration Plant
- The combustion engine of the Methanation plant, for the production of electrical energy using the biogas generated in the process.

To carry out continuous measurements of the emission of pollutants into the atmosphere, automatic analysing equipment is installed on the chimney or the exhaust exit for the combustion gases, which provides quality data on the emissions for the plant operator, as well as information to be reported back to the authorities for demonstrating compliance with the law. Moreover, periodic emission checks are carried out by an external company that collaborates with the authorities.

In the case of the emissions from the Energy Recovery Incineration Plant, throughout 2010, continuous checks have been carried out on the parameters indicated in Royal Decree 653/2003 on the incineration of waste.

The results obtained for the different parameters regulated by the aforementioned royal decree are represented in the following graph, in which the annual average value emitted for each pollutant is compared with the legal limit:

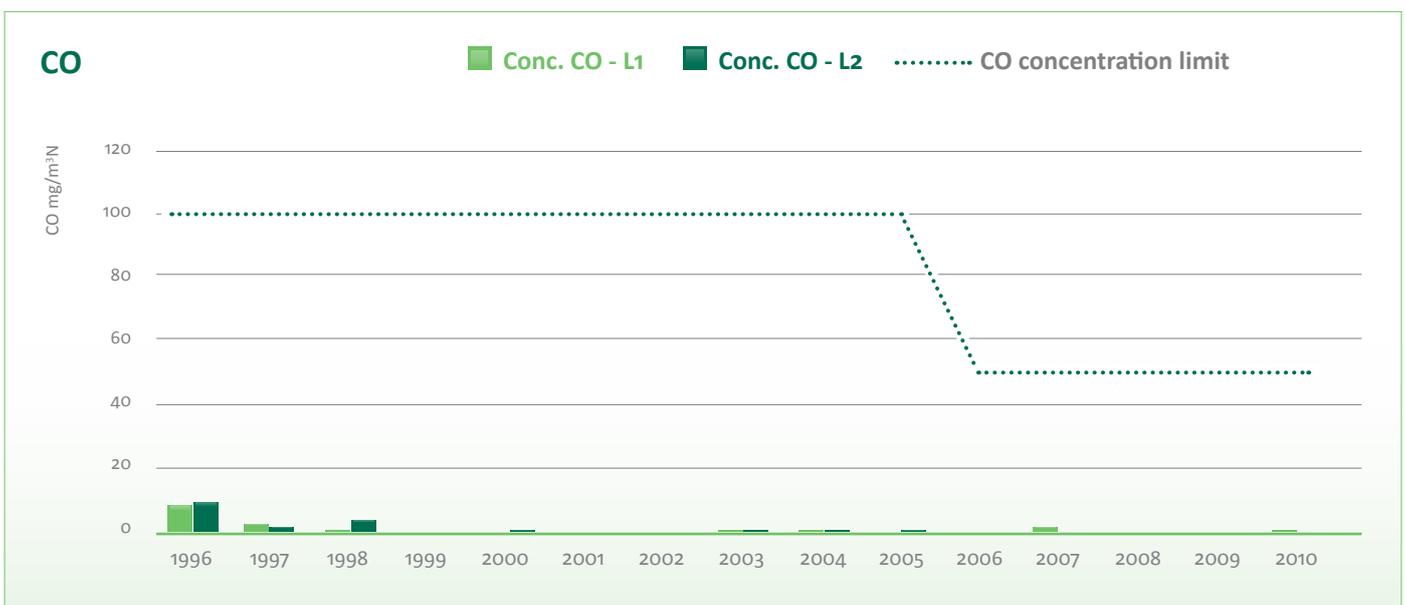
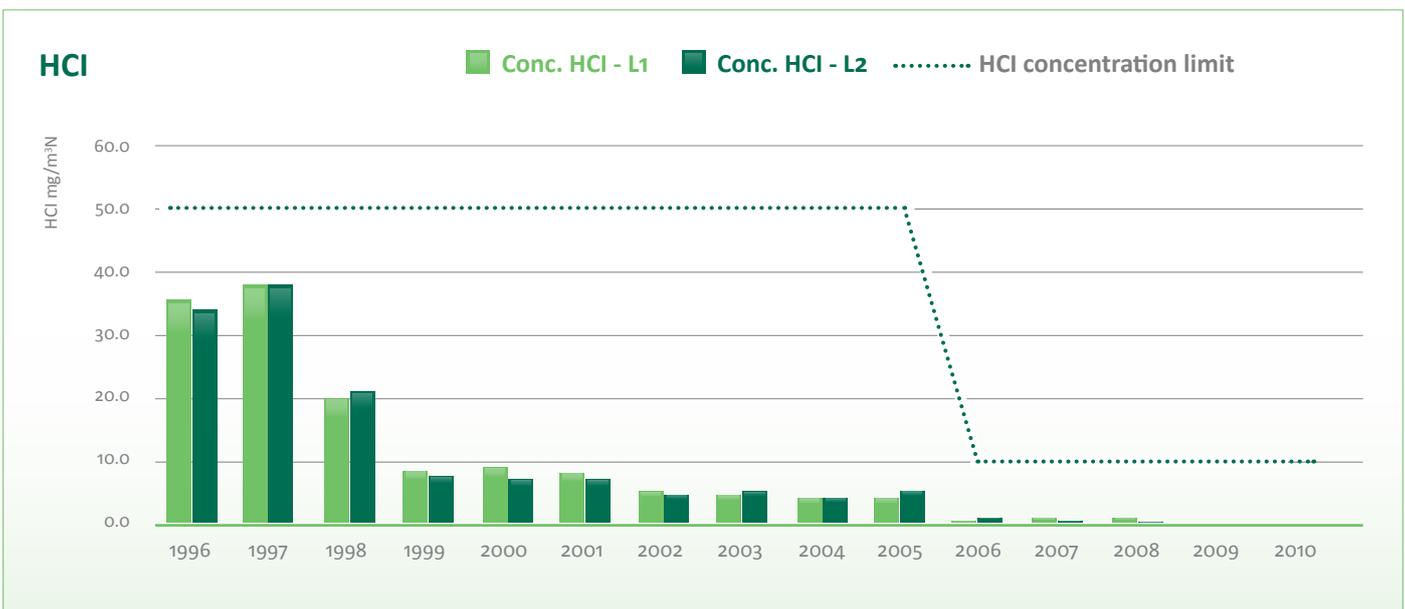


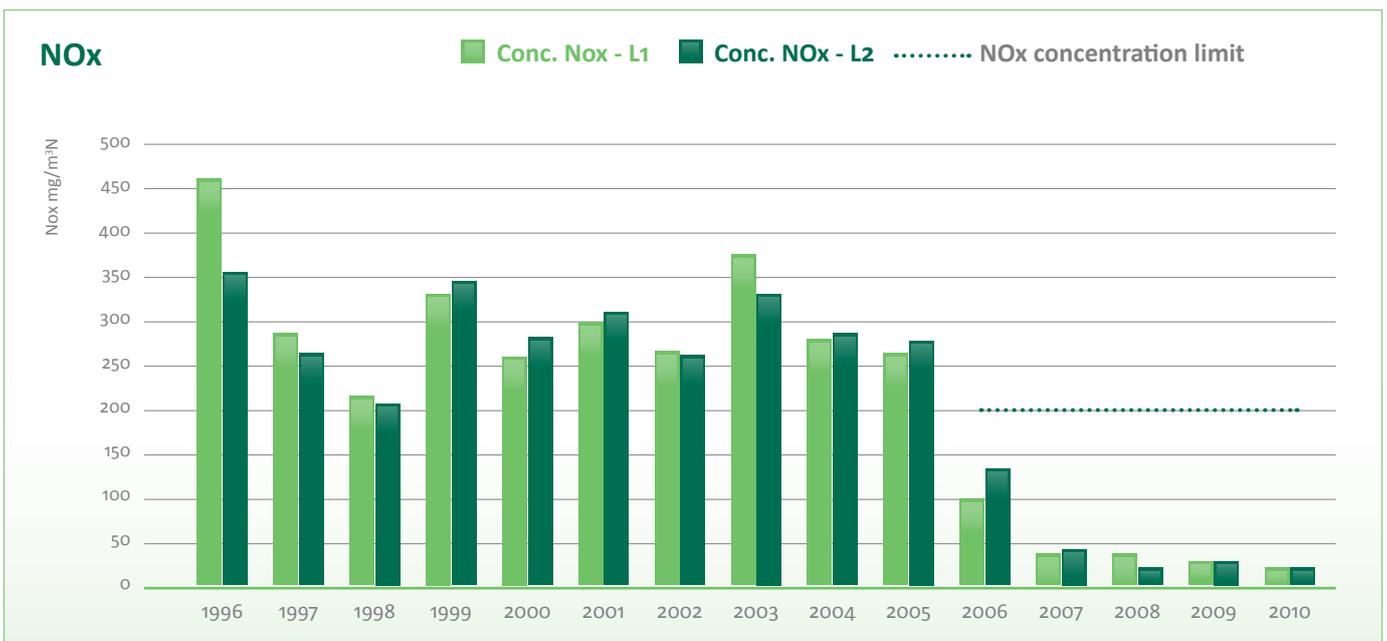
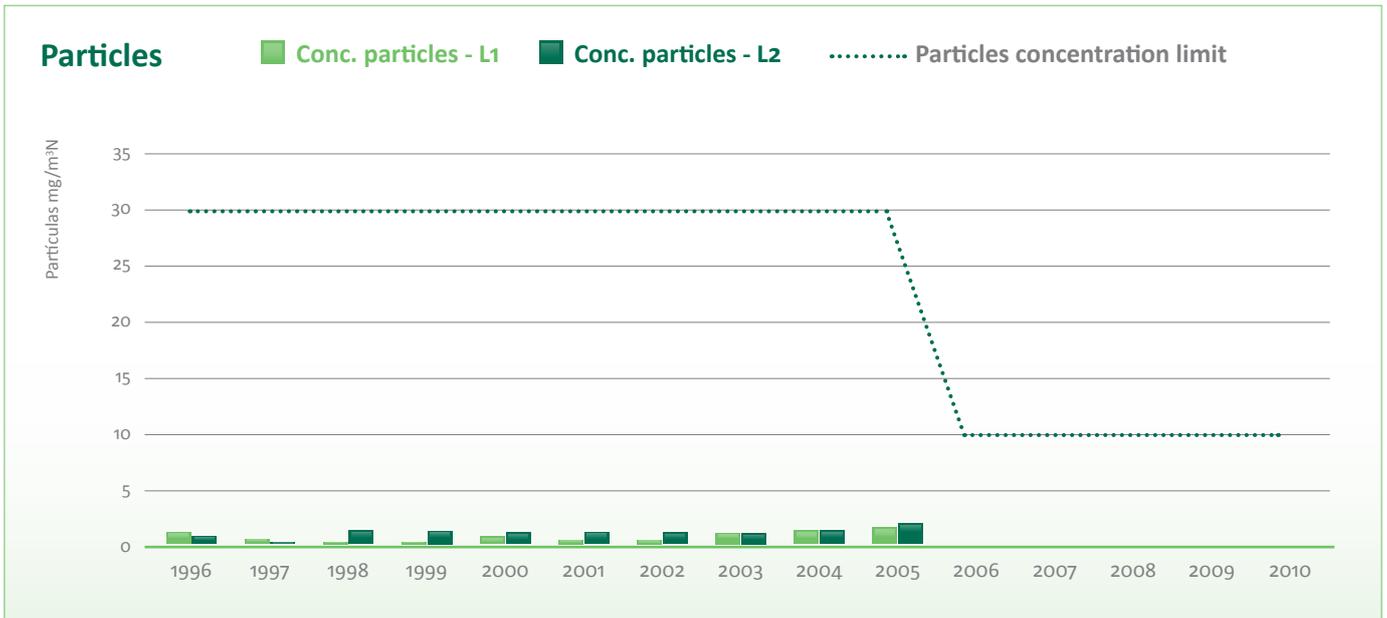
Units in mg/m³N, except for dioxins and furans which are given in ng i-TEQ/m³N.

The changes in the law introduced by the passing of the aforementioned royal decree, which began to be applied to the Son Reus Energy Recovery Incineration Plant in late 2005, have made it necessary to modify both processes and installations since then, with the aim of keeping emission levels below the increasingly strict legal limits. Among the changes introduced, we should highlight the installation of a catalytic system to reduce the nitrogen oxides, the acquisition and installation of

additional measuring equipment to continually monitor new parameters and the start-up of redundant analysers in order to guarantee the availability required for the measurements.

The improvements made over this period are clearly visible in both incineration lines. On the graphs below one can see the evolution of the emission of pollutants from when the Incineration Plant was brought into service until the present:





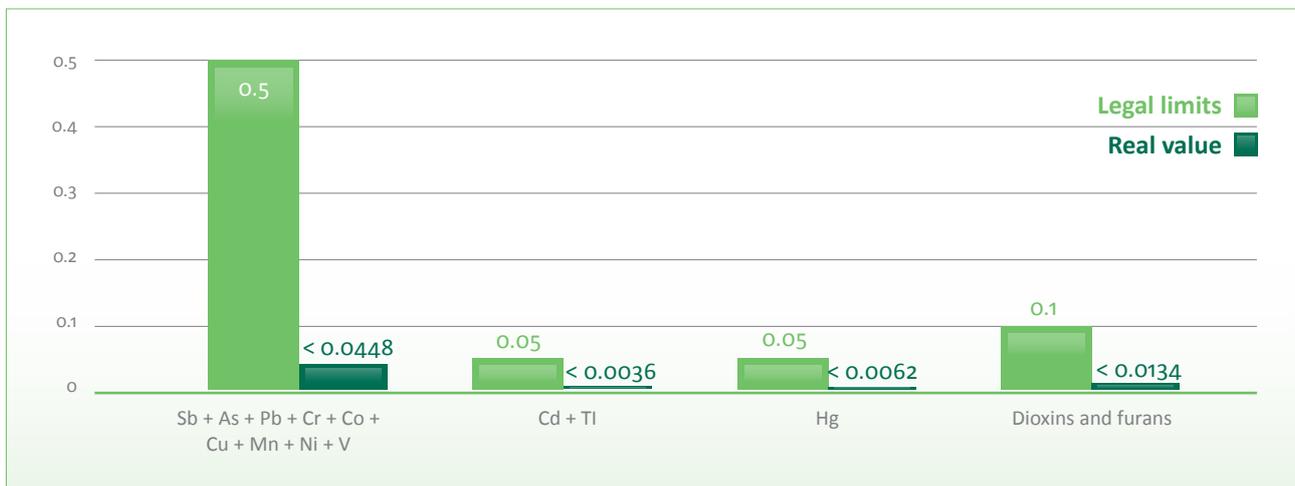
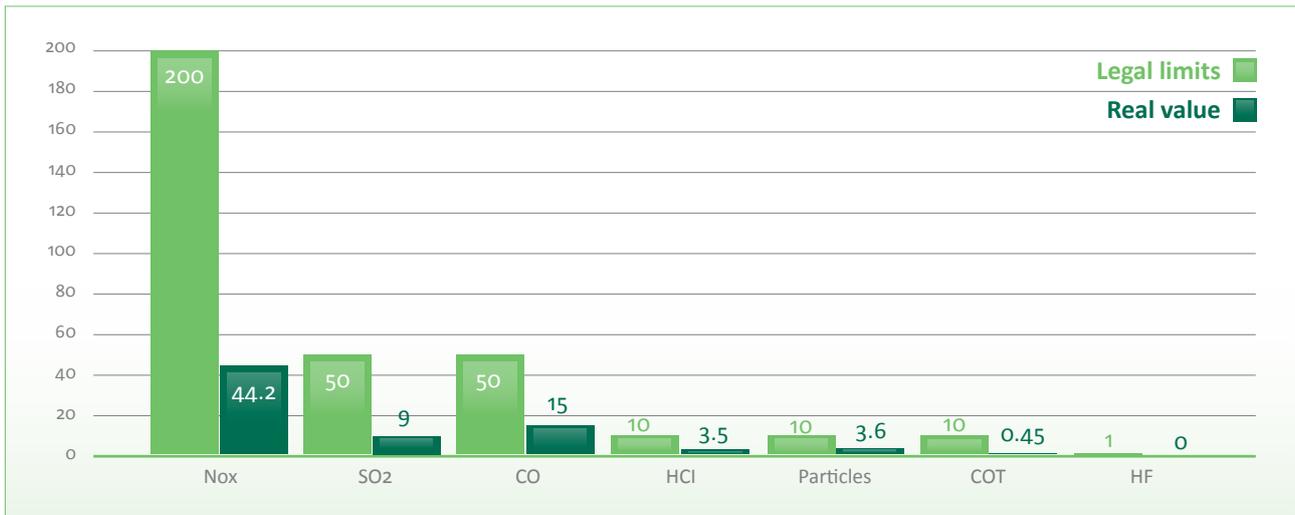
Over the year 2010 the commissioning in the trial stage of the Extension of the Energy Recovery Plant was set in motion (lines 3 and 4). The work carried out as regards emissions into the atmosphere of the new installation consisted of the following:

- Verifying the correct installation of the continuous measurement systems, as well as the calibration of the systems in accordance with UNE EN 14181 norm to ensure the quality of automatic measuring systems.
- Continuous monitoring and evaluation of the installation's emissions to optimize and adjust the pu-

rification of the new lines, and verify their adaptation to Royal Decree Real 653/2003, on waste incineration

- Regulation inspections of the installation by collaborating entity of the authorities to prove the legal fulfilment of parameters that are not continuously measured.

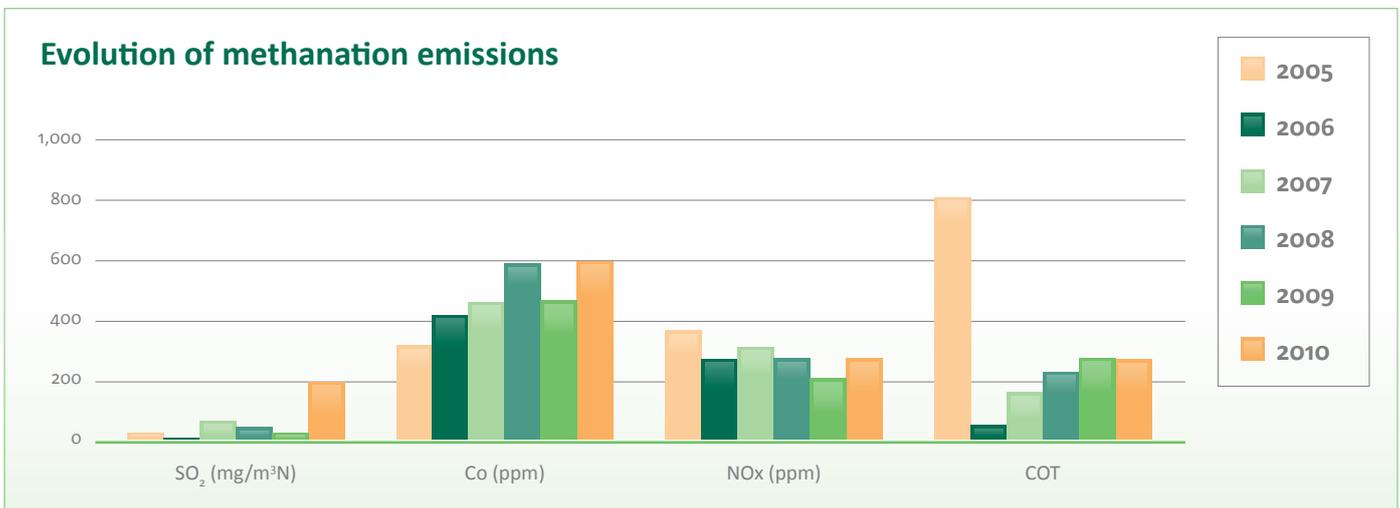
Below we show two graphs that summarise the emissions of the new line s. The first one refers to the continuously-measured parameters of emission as compared to the legal limits. The second one (heavy metals and dioxins) is a summary of the data obtained by the entity collaborating with the authorities during regulation inspections.



Units in mg/m³N, except for dioxins and furans which are given in ng i-TEQ/m³N.

As for the Methanation plant, it was started up for a testing period in the year 2005, and therefore measurements of the parameters stipulated in the PMVA 2001 are available from this time. We should take into account the fact that the functioning schedule of the

biogas engine is discontinuous (2-5 hours a day), which makes the taking of measurements in stable conditions difficult. The graph below shows the levels of emissions reached in 2010, compared with the data available since the beginning of the plant's activity.



In 2006 the company also began managing a landfill site for the dumping of rejects from the construction and demolition waste treatment plants in the municipality of Santa Margarita (Zone 2). Its inclusion in the public system for insular management of urban waste meant that the control of emissions of gases from the landfill site (CH₄, H₂, CO₂ y O₂) was in turn included in all of the environmental controls carried out in the installations. Since the measurements taken from the samples taken on the surface of the landfill (the installation has no degasification system), the results obtained were below the limits of detection for methane, hydrogen sulphide and molecular hydrogen the PMVA Technical Follow-Up Committee decided to stop taking these measurements.

The type of waste deposited (rejected material from the treatment of waste from construction and demolition and bulky waste) contains low percentages of easily biodegradable organic matter, which explains the low level of biogas produced. However, we should point out that waste has ceased to be received in this landfill since mid-2009, due to the commencement of the start-up tests for the new Son Reus incineration lines with energy recovery.

We may also include the monitoring of odorous compound emissions (ammonia, hydrogen sulphide, mercaptans, VOCs, etc.) in this group of controls of emissions into the atmosphere, with the monitoring of H₂S emissions at the exits of the biofilters of the composting and Methanation plant included in the PMVA.

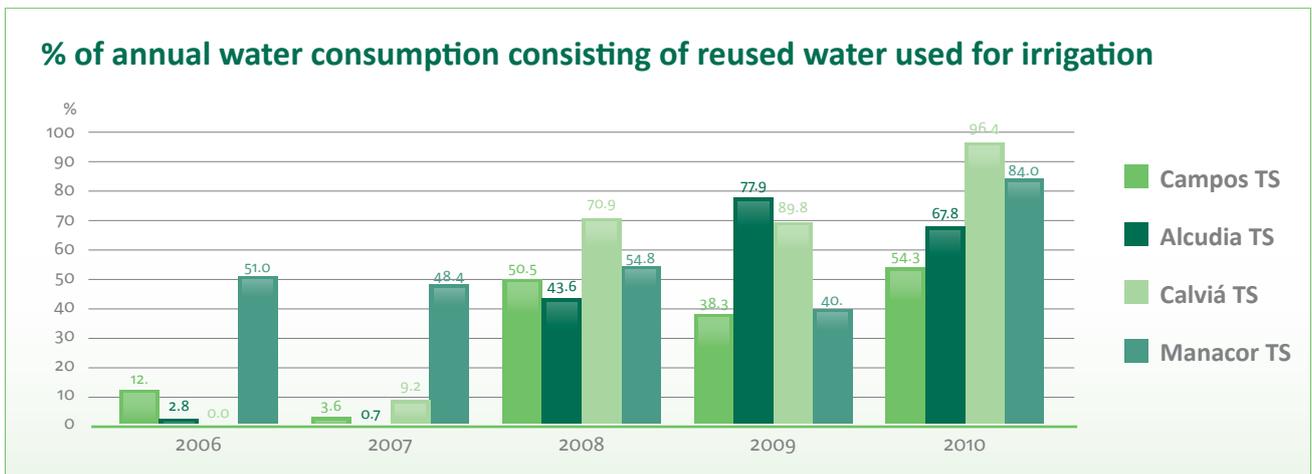
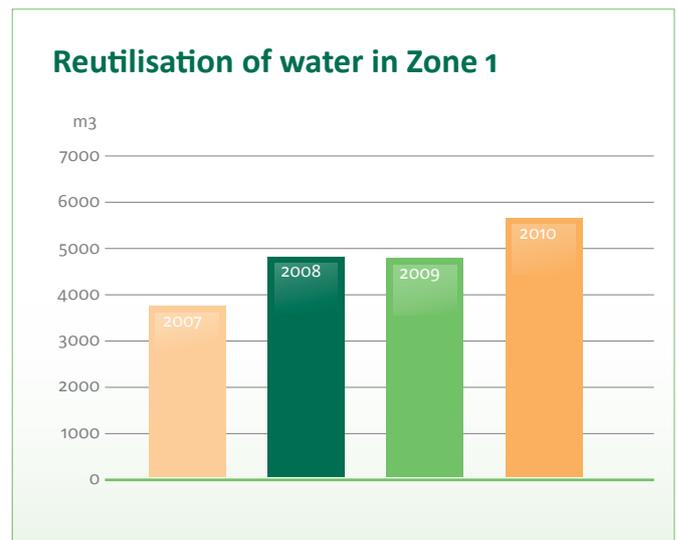
3.1.2. Water management (waste water and rain water)

The PDSGRUM installations were designed and constructed to minimise the consumption of natural water and the generation of liquid waste. To this end, all the installations that re-

quire it, (basically the Methanation plant and the transfer stations) have been equipped with water treatment units, with a view to the reutilisation of the water in internal processes. Also, the two main areas of waste management (Can Canut and Son Reus), and the rejected materials depot in Zone 2 (Santa Margarita) are equipped with storage pools and tanks for collecting and using rain water, water from processes and/or leaching.

The different flows of water are subject to control to guarantee that reutilisation of them takes place in environmentally appropriate conditions. The optimisation of management of the water in the internal processes, the redesign of networks and improvement of water treatment systems have allowed us to attain high levels of reutilisation, and the consequent reduction in the consumption of natural water.

By way of an example, the graphs below illustrate the increase in the reutilisation of process waters in our installations:



3.2. Control of effects on the local surroundings

3.2.1. Air quality

To monitor the air quality in the local surroundings there is a permanent station situated at the Joan March Hospital and a mobile unit, which measures the air quality in the urban areas of Palmañola, Es Garrovers and Son Sardina (the villages close to the waste treatment installations of Zone 1 – Can Canut and Son Reus area) on a rotating basis. There are continuous automatic analysers, and more specific campaigns are carried out periodically.

During 2010 the mobile units and manual campaigns have been adapted to meet the requirements of the Integrated Atmospheric Authorisation of the installations of the Energy Recovery Plant, the Secure Depot and the Sludge Treatment Plant. These adaptations consisted of:

- Installation of new continuous measuring equipment: continuous PM2.5 measuring equipment both in the permanent station and the mobile unit, as well as continuous measuring of solar radiation in the permanent station at the Joan March Hospital.
- Purchase of new manual sensors for carrying out campaigns so as to adapt to the new reference norms that have appeared.
- Changes in the types of campaigns and fractions sampled (samples obtained previously on total Solid Particles are now taken on PM10 or PM2.5, etc.).

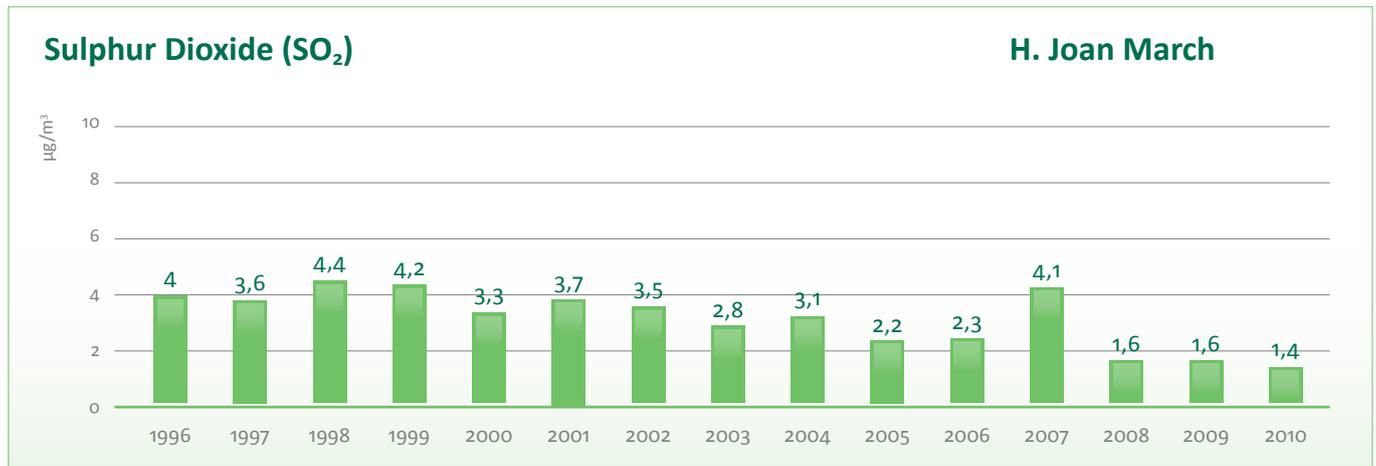
The data for the different parameters are compared to the limit values, threshold or objective, depending on the case, established by the reference legislation, and are also compared to historical levels. On the table below is a compilation and comparison, by way of an example, of the interval of values (max.-min.) measured during the years 1995 and 1996, used to establish the zero mark, the reference values according to currently-valid regulations and the averages recorded for different pollutants during 2010 en el Hospital Joan March, en Palmañola y en Es Garrovers:

Pollutant (mg/m ³)	Previous (95-96)	RD 102/2011	Hospital Joan March 2010	PALMANYOLA 2010	ES GARROVERS 2010	SON SARDINA 2010
PM2,5		25	7,5	5	5,1	-
PM10	65,8 - 5,1	40	10,7	24	31	25,5
SO2	10,6 - 0,6	20	1,4	0,8	1,0	0,9
NO	1,2 - 0,0		0,7	0,7	2,3	1,3
NO2	14,5 - 1,2	42	10,6	7,4	11,2	8,4
NOx	-	30	11,7	7,7	14,4	10
Ozone	-		74,6	63	56,5	53,5
SH2	-		-	0,5	0,6	0,6

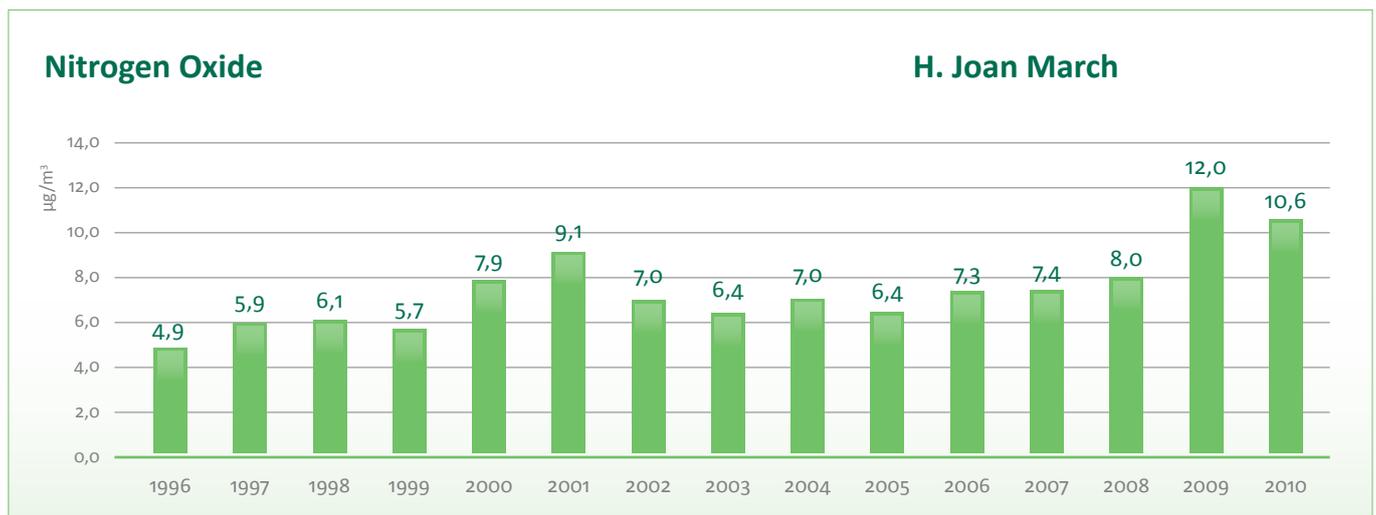
Metals (ng/m ³)	Previous (95 -96)	RD 102/2011	2010			
Iron	735 - 54		152,1	345,7	285,7	81,9
Zinc	70 - 4		20,7	14,3	18,3	8,7
Mn	12,9 - 1,4		3,4	7,1	5,1	1,6
Cu	35,6 - 8,9		2,9	4,1	7,8	3,5
Ni	42,3 - 0,0	20	1,4	2,7	2,4	1,7
Pb	21,4 - 6,2	500	1,4	1,9	5,2	3,0
Cr	43,7 - 0,0		0,6	1,1	1,2	0,7
Cd	0,2 - 0,0	5	0,1	< 0,01	0,3	0,6
As	-	6	0,4	0,7	0,5	2,5
V	-		3,8	5,0	3,8	4,1

	Previous (95 - 96)	Legal Ref.	2009
PAHs (ng/m ³ BAP)	4,8 - 1,2	1	0,031

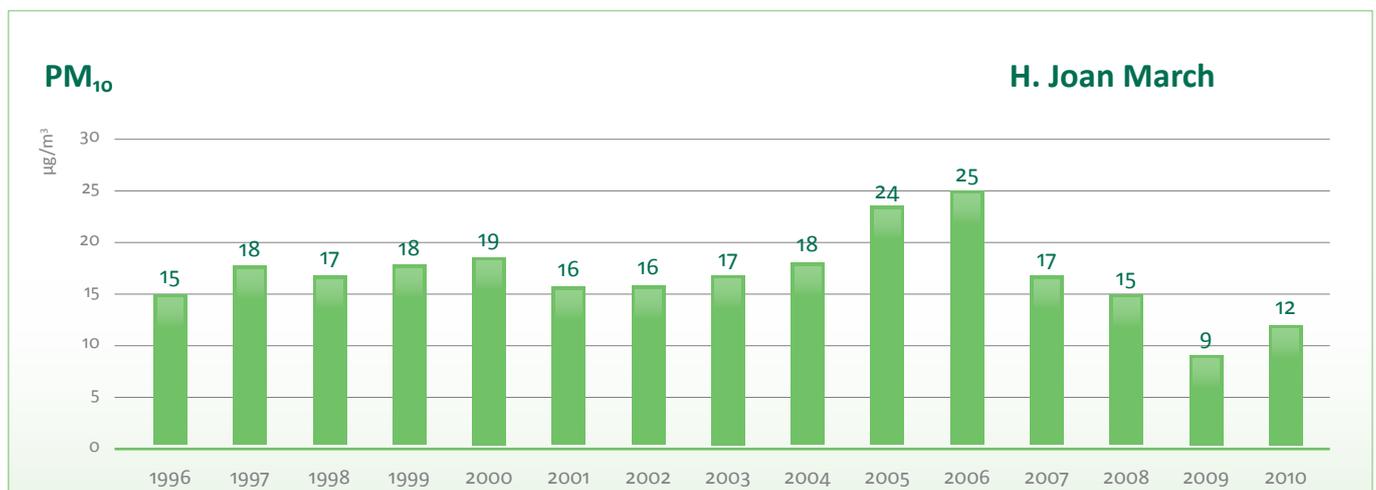
The evolution in the levels of the different immission contaminants is also shown on the following graphs:



* The reference value = 20 µg/m³ for the protection of ecosystems.



* The reference value = 30 µg/m³ for the protection of vegetation.



* The reference value = 50 µg/m³ for the protection of human health.



The comparison between the values obtained for the different parameters before and after the incineration plant was brought into service, their evolution over time and the current situation, shows that there has been no significant effect on the quality of the air in the surroundings as a result of the waste management activities performed in Zone 1 (Can Canut and Son Reus area).

3.2.2. Ground surfaces and soils

In accordance with the PMVA the levels of PCDD/Fs and heavy metals (Zn, Ni, Fe, Cd, Pb, Hg, Mn, Cu, As, Sn, Cr, Ba, Co, Mo) are analysed annually at 6 and 13 points respectively, situated in the area around Zone 1 (Can Canut and Son Reus area), using two of the most distant points (J, L) as a reference. The data available from the campaign carried out in 2010, and their comparison with the background levels and historical values allow us to conclude that there have been no effects to date.

3.2.3. Analysis of sub-soils and subterranean water

In this case the environmental monitoring is based on the realisation of piezometric controls, sample-taking and physical-

chemical and microbiological analyses at different times of year. The PMVA specifies which wells are designated for the monitoring of the waste treatment plants, indicating those located upstream and downstream of each of the facilities, in accordance with the piezometric levels and direction of the resulting subterranean water flow. With the choice of the wells and the comparison of the results, one can detect any contamination of the aquifer in advance.

This control is complemented by the analysis of the sub-soil (non-saturated area) both in Zone 1 (Can Canut and Son Reus area) and in Zone 2 (Sta. Margarita), and the hydrogeological studies (saturated area) also carried out every five years in Zone 1. During 2010 no checks of the non-saturated zone have taken place (they were performed in 2006 for Zone 1 and in 2008 for Zone 2) but a hydrogeological study of Zone 1 was performed, with analyses being made of a total of 33 wells in the zone.

To date the PDSGRUM installations have not been found to have any effect on the quality of the subterranean water monitored.

3.2.4. Noise levels

Noise levels are another control parameter included in the PMVA. The measurements are taken at different locations and different times of day (morning/afternoon/night; working day/public holiday or weekend) at a total of 17 points in the immediate vicinity of all the treatment plants in Zone 1 (Can Canut and Son Reus area) and in a total of 5 neighbouring populated areas.

With regard to the noise levels, from checks carried out during 2010 at different points on the perimeter of the installations and in populated areas nearby, we may conclude:

- All the sonometric measurements for which acoustic quality objective levels have been defined as per RD 1367/2007 fulfil the objectives except for the morning measurement at point 5 (75.9 dB(A)). Measuring station 5 is located in a difficult area of Son Reus with direct influence of traffic during the morning work timetable and of the Combined Cycle Station, in addition to which during this campaign it was affected by the activity from the work going on to close the Emergency Landfill Site.
- The effects of noise levels on the population centres lying in the evaluation area are basically caused by traffic travelling along nearby road infrastructures.
- The noise levels decrease considerably on public holidays, due to the decrease in variable activities (intensity of road traffic, human activity and industrial activities in the area).



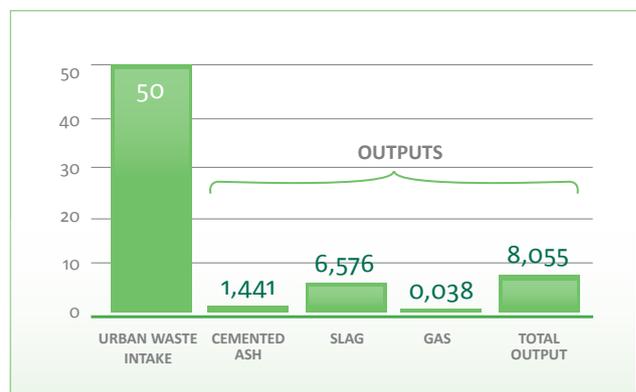
In comparison to the measurements of previous campaigns, we may assert that the environmental acoustic levels of Zone 1 are maintained with slight occasional increases on working days due to a larger number of emission points from the API-RE work and the work on the closing of the Emergency Landfill Site as well as the consequent flow of vehicles.

3.3. Environmental control of by-products

3.3.1. Cemented ash and slag from incineration

Since the declassification of cemented ash and slag in 1996, periodic analyses of the waste and of its leachates have continued to be carried out, both with regard to the levels of heavy metals, dioxins and furans and the analysis of toxicity according to official methods. The results achieved during 2009 indicate, as has been the case since the tests started, that the cemented ash, slag and its leachates are neither toxic or hazardous.

The analysis of dioxins and furans in the ash and slag, together with the controls carried out on the emissions to the atmosphere from the Energy Recovery Plant, and a comparison of them with the levels of dioxins present in the entering waste material, show moreover that the incineration of waste at the Son Reus plant leads to a net destruction of dioxins present in the urban waste, reducing their presence by more than 80%. Furthermore, the levels have always been well below the authorised limits.



* NB: The unit of measurement is µg I-TEQ/t RSU

As well as the routine checks, as part of the trials to guarantee the Extension of the Energy Recovery Plant, over the year 2010 a series of analytical checks have been performed on the ash, the cemented ash and the slag: characterisation of dangerousness and content of metals and persistent organic compounds. The results are analogous to the ones obtained in the past for the existing lines.



3.3.2. Compost production

With the aim of controlling the compost obtained from the organic fraction of and the sludge from the water treatment plants, and avoiding any environmental damage as a consequence of their application as soil fertilizer, the following parameters are monitored: humidity, pH, conductivity, organic material, particle size, impurities, ammonia nitrogen, nitrates, degree of maturity, relative C/N levels, heavy metals (Cd, Cr, Cu, Hg, Ni, Pb, Zn), pathogens and germination test (E. Coli and Salmonella), to ensure the level of sanitation of the product. These controls are carried out on the compost produced in each and every one of the composting plants (Can Canut area, Felanitx, Sa Pobla, Ariany and Calvià). The frequency with which the samples are taken is set by the nominal treatment capacity of the installations, and is every three months in the largest plant (the one located in Zone 1- Can Canut area) and every six months in the others.

The results obtained are compared with the quality criteria established by Royal Decree 824/2005, concerning fertilizer products and their modification as a result of the publication of Order APA/863/2008. The characterisation of them, made from an agronomical and environmental perspective, has allowed it to be marketed with guarantees regarding the application of the product.

As for classification of the compost according to the quantity of heavy metals (dependent on the quantity of metals in the intake sludge and the FORM), this has improved considerably since the Solar Drying Plant started up because, as far as is possible within the management framework, the sludge which worsens the quality of the finished product due to its quantity of heavy metals and which has in the past caused most of the compost to be classified as type C is diverted to this facility. Over last year the improvement in the quality of the compost could be seen, above all in the Ariany and Sa Pobla installations.

3.4. New lines of work embarked upon during 2010

During 2010 the following actions related to the environmental control of the waste treatment plants were undertaken:

- Inclusion in the environmental control plans of the new requirements stipulated in the Integrated Environmental Authorisations granted to TIRME for the following IPPC installations: Incineration Plant with Energy Recovery and its Extension, Secure Depot for cemented ash, Slag Treatment Plants (because it is a technically related installation) and Landfill for rejects from C&D (construction and demolition) and bulky waste materials in Santa Margarita.
- Incorporation of checks on new waste treatment plants, currently in the commissioning phase (Extension of the Son Reus Energy Recovery Plant and solar sewage-sludge drying plant) as a consequence of the 2006 review of the PDSGRUM to include improvements in the urban waste management service.
- Execution of the endorsement tests to assess the environmental performance of the new equipment (emissions to the atmosphere, odorous emissions, noise, etc.)
- Adaptation to the UNE-EN 14.181 standard on the assurance of quality in automatic measuring systems.
- Collaboration with the maturity studies on slag carried out when the new slag treatment plant was started up.





TIRME's firm commitment to quality and excellence came into being with the company itself, and was formalised with the introduction, in the year 2000, of a voluntary management system based on the international regulations of the ISO 9000 series. Naturally, the environmental side of the management and health and safety at work have also been basic pillars of TIRME since its beginnings, with strict control of the environmental aspects and the risks to people. In this way an environmental management system has been developed and introduced, based on the UNE-EN-ISO 14.001:2004 standard, and a health and safety at work management system based on the OHSAS 18001:2007 standard.

Throughout 2009, TIRME has continued to work on the consolidation of the Integrated Quality and Environment Management Systems, in accordance with the UNE-EN-ISO 14001:2004 and UNE-EN-ISO 9001:2000 standards, for the currently certified activities of Design, Construction, Start-up and Usage of Waste Treatment Plants and Associated Infrastructures. By way of a novelty, this year we have included the specific processes of the Light Packaging Selection Plant in the Integrated Management System, obtaining the certificate for this installation after the excellent results of the external audit.

And TIRME has also gone one step further along its path towards Total Quality, strengthening this global concept and including important aspects such as Corporate Social Responsibility in its entrepreneurial culture and its values. The company's ultimate objective is to satisfy the needs and expectations of clients, personnel, shareholders, suppliers and society in general in a balanced fashion, focussing strategies towards a new way of understanding relationships with the physical, social and economic surroundings. Proof of this is the introduction of the model of the Family-Responsible Company, certified in 2008, the inclusion of new management systems such as the prevention of occupational hazards as per the OSHAS 18001:2007 standard, for which it was certified in 2009, the certificate for Information Security as per standard 27001, Social Responsibility as per standard RS-10 and that on Energy Efficiency as per standard ISO 16001:2010. As a result of the introduction of this latter model, the company has carried out an exhaustive energy audit. The study of the most important consumers and knowledge of the critical points this audit has provided has enabled us to define a plan of action geared towards the improvement in efficiency of our activity, based on the creation of an interdepartmental work group.

On the table below we can see the main landmarks in the evolution of our management system.

YEAR	LANDMARK	IMPROVEMENTS ACHIEVED
1999	Creation of the Quality Committee and launch of the introduction project for management models as per standards from the ISO 9000 series and the ISO 14000 series	Training of the workforce in management models Introduction and development of the environmental and quality management systems of TIRME
2000	1st ISO 9001:2000 quality management system certificate 1st ISO 14001:1996 environmental management system certificate	Securing of certificate with the following scope: <ul style="list-style-type: none"> • Treatment of waste by incineration with energy utilisation. • Running of transfer stations (Alcudia, Manacor, Binissalem)
2003	Renewal of the quality and environment management system certificate	Extension of the scope of the certified management systems to include: <ul style="list-style-type: none"> • Desing, construction and start-up of waste treatment plants and associated infrastructures. • Running of transfer stations in Campos and Calvià
	Surveys carried out on external client and internally	Development of the "Assessment of client satisfaction" process
2006	Renewal of the quality and environment management system certificate	Consolidation of the personnel participation systems through improvement groups, suggestions box
2008	Family-responsible company model (EFR1000-1) certificate	Inclusion of practices and policies of conciliation of personal, family and work life in the company management system.
2009	Securing of the Health and Safety at Work Management System certificate as per standard OHSAS 18001:2007	Inclusion of the management system for prevention of occupational hazards in the business management model.
	Execution of the first EFQM self-assessment	<ul style="list-style-type: none"> • Revision of Mission and Vision • Formalisation of Values • Revision of the strategic planning process and the balanced scorecard.
2010	Execution of the first integrated audit of the four management systems certified at TIRME (quality, environment, health and safety at work, family-responsible company).	<ul style="list-style-type: none"> • Maximum integration of systems in business management • Extension of the scope of the environment management and quality system to include the Operation of the Packaging Selection Plant.





Several R&D+I actions were carried out during 2010, geared towards the continuous improvement of the quality of the by-products and their applicability, the optimisation of production processes, and the evaluation and introduction of new, more energy-efficient technologies, always with the ultimate aim of achieving a sustainable management of resources that will ensure permanent improvement of the activities performed and being environmentally-friendly.

To achieve this, research is carried out through multi-disciplinary work teams who deal with different lines of action. In this way, a transfer of knowledge is assured which facilitates the proper development of the R&D+I projects at the same time as it enriches each of the participants.

Several projects are being developed either internally or in collaboration with different institutions. The lines of research currently open can be grouped into several blocks:

1. Ensuring and optimising quality in the processes.
2. Utilisation of by-products.
3. Environmental improvements.
4. Management of water resources.
5. Energy efficiency.
6. New technologies

The research lines currently open are:

Characterisation study of slag from incineration for use in public works and manufacture of non-structural piece of concrete.

The object of this study is to determine the geometric, physical and environmental characteristics of the slag that comes from incineration with the aim of taking advantage of it as dry aggregate. This initial study will conclude with the securing of EC marking on the products produced in the Slag Plant. To do this different phases have been established within the product: Design of a plan for sampling and selection of the initial tests according to applicable UNE norms, introduction of the control of production in the slag plant and, finally, initial inspection by a notified body in order to obtain the CE marking of the products.

Diagnosis-study of the current situation at TIRME regarding energy efficiency.

The basic objectives in terms of energy policy of developed countries are based on ensuring energy supply, contributing through energy to the competitiveness of the economy and integrating environmental goals. To attain these objectives the tendency is to diversify energy sources and origins, improve energy efficiency, provide incentives for



new energy and technology R+D+I and strengthen cooperation between countries.

This study aims to be in line with this energy policy and its objective is to appraise the current situation of the company as regards energy efficiency in four areas: culture, maintenance, energy control and technological innovation.

In this way we will be able to make efficient progress on the measures to be adopted to ensure a sustainable energy model in the company and introduce a culture based on saving and optimisation of energy resources.

Introduction of virtualization technologies in desktop environments with VDI and virtual servers (Green IT)

The virtualization project is set within the company's innovation plan, with the aim of improving the management of the information systems, and is also included within the Green IT strategy that complies with the directives of the organisation in matters of energy efficiency.

The main courses of action are, on the one hand, the replacement of all the company's micro-computing system based on office PCs for thin clients, which will enable us to reduce

energy consumption by 80-90% at each work station. Moreover, the virtualization of the servers in the CPD and the consequent withdrawal of hardware enables us to achieve a better rate of energy saving, by decreasing from 15 physical servers to 4, and continue growing in terms of virtual servers.

Participation in the mutual comparison method programme for the analysis of water with the Water Laboratory of the Water Resources Department of the Balearic Government's Regional Ministry for the Environment.

INLABAG is a work group comprised of both public and private laboratories from the Balearic Islands which perform water analyses. The purpose of this group is to develop exercises for mutual comparison between laboratories. The coordinating laboratory is the Water Laboratory of the Water Resources Department of the Balearic Government's Regional Ministry for the Environment. These exercises are a fundamental tool for evaluating and improving the quality of the laboratories' results, and enables the participants to demonstrate their technical competence to their clients through accreditation entities (ISO 17025) or certification (ISO 9001).

TIRME has an internal laboratory that performs analysis on



and monitors the parameters for the processes carried out in the waste treatment plants. Participation in this programme assures the quality of the tests, trials and optimisations of processes used internally within the company.

Environmental monitoring and optimisation of the running of the Corral Serra tip (Rejected Materials Depot Zone 2 - Santa Margarita) in the period 2009-2010. Agreement with the Leonardo Torres Quevedo Foundation. Environmental Engineering Group of the University of Cantabria (UC).

This long-term project began in 2005 with the aim of introducing efficient measures that will enable us to analyse the potential contamination of the soil and subterranean waters, the potential biogas of the old waste and potential settlements and monitor the evolution of the leachates of the current waste. To achieve this a monitoring and control plan was designed for the functioning of the tip, making a model of all the variables of the processes that take place in the tip using a tool called MODUELO which deals with and forecasts the behaviour of the gases and leachates generated by waste.

Monitoring and control of the temperature of used tyre storage cells in open spaces based on sensor network technologies.

Research agreement with the Electronic Systems Group of the Physics Department of the University of the Balearic Islands (UIB).

This project's goal is to develop a fire monitoring and control system in used tyre storage cells in open spaces by creating a network of sensors capable of registering the surface temperature and internal humidity of the used tyre cells buried under dry aggregates in airtight conditions without altering these conditions.

This technology is applicable to many areas, both in industry and in nature.

Project for the reutilisation of treated water and rainwater for use in different internal production processes.

The purpose of this study (commenced in the year 2006, and currently extended with the new incineration lines), is to optimise the management of treated or rain water used in the process with the aim of attaining a high level of reutilisation of said water. To do so, the water available inside the system which comes from different sources (treatment plant, rain, rejects from production processes...) is evaluated and studied and consumers and actions designed to reduce consumption of this precious natural resource are proposed. Over the year 2010, 61,000 m³ of water was reused.

Support for the research project developed by the University of the Balearic Islands (UIB) to characterise the odours generated during the management of urban waste within the actions envisaged in the PMVA.

The main purpose of the research is to establish a correlation between the quantification of a series of compounds and the perception of the intensity of the odours, allowing for its transformation into a useful indicator for monitoring of the nuisance caused by the waste treatment plants and the definition of plans of suitable action if necessary. Over the year 2009 efforts were concentrated on the development of analytical methodology and the establishing of the sampling and characterisation plan.



6.1. MAC Insular, S.L.

6.2. Balear de Trituracions, S.L.

6.1. Mac Insular, S.L.

MAC Insular S.L. is the concessionary company responsible for the management of public service related to the transfer and treatment of waste from construction and demolition, bulky waste or used tyres on the island of Mallorca. At present Tirme S.A. has a 60% share of the company and is responsible for its management.

To manage the aforementioned waste products, MAC Insular S.L. has, in accordance with the corresponding Master Plan, 6 transfer and pre-treatment centres, strategically located in different places on Mallorca, and 2 treatment plants, on in the municipality of Santa Margarita and the other, which is the most important one, located in the municipality of Bunyola, close to the main area of influence in the production of this kind of waste.

During 2010 a reduction in sales of 17% was recorded compared to the previous year, reaching a figure of 21,138,812 €, with a loss after tax of 1,692,500 €.

6.2. Balear de Trituracions, S.L.

To cover any specific needs that may arise in any point of the island of Mallorca regarding volume reduction through shredding of specific types of waste (pruning waste, mattresses, furniture...), TIRME has a 52% share in the company Balear de Trituracions S.L.

In 2010 sales stood at 947,458 €, 6% less than in 2009.





At 31st December 2010 the construction work on the new infrastructures, installations and improvements envisaged in the third PDSGRUM, which were authorised by the Council of Mallorca, have been completed. The main projects executed were: Third and Fourth Incineration Line with energy Recovery, Landfill Site, EDAR Sludge Solar Drying Plant and Extension of Slag Plant. The other projects and improvements contemplated in the aforementioned revision of the

PDSGRUM (Adaptation of Transfer Stations, Improvements in the Zone 1 Treatment Plants, Improvements to Infrastructures,...) are awaiting approval by the Council of Mallorca.

With regard to the financing of the aforementioned investments and improvements envisaged in the third PDSGRUM at 31st December 2010 the necessary sums have been made available.



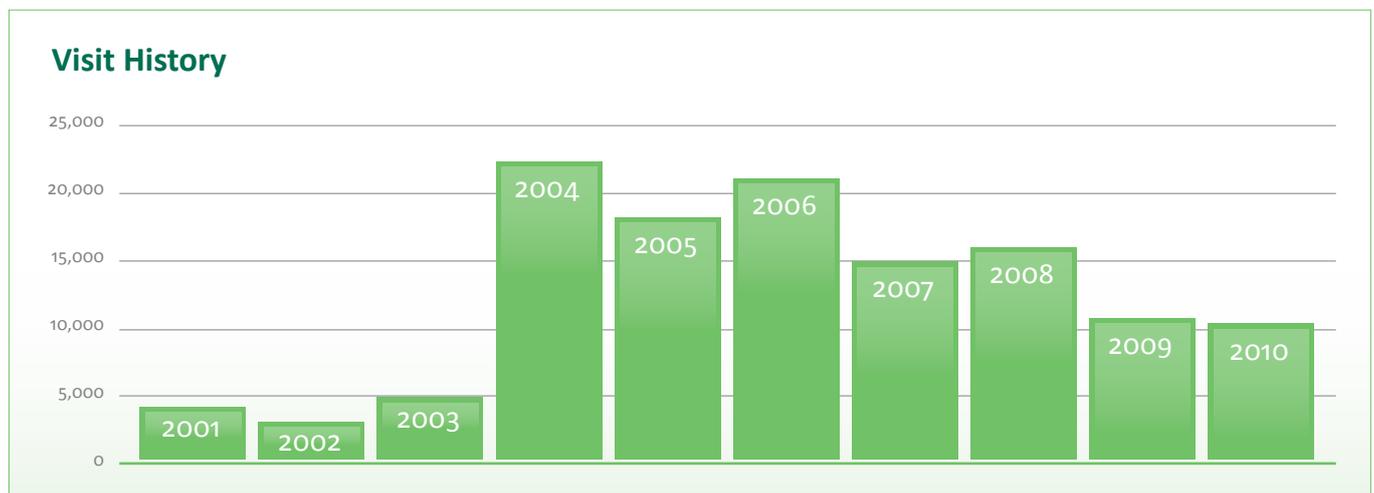
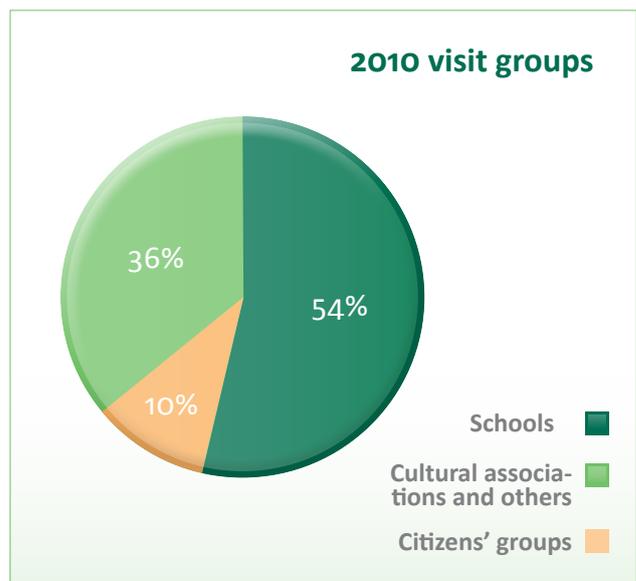


Within the model of waste management in Mallorca, education and raising public awareness is vital importance, as the recycling of waste must necessarily depend on sorted collection with the indispensable and necessary involvement and collaboration of citizens.

Within this framework, the Environmental Information and Education Centre is a structural tool for education, diffusion and support of environmental activities and initiatives, with particular attention being paid to the environmental aspects and problems of our society.

Over the year 2010 the installations of the Environmental Technology Park received a total of de 10,257 visits, divided up as follows:

- Schools (educational centres): 5,540 (54%).
- Citizens' groups: 1,045 (10%).
- Cultural associations and others: 3,672 (36%).





Of the events held in 2010 that took place in the Environmental Information and Education Centre, we should highlight the following:

CAMPAIGNS:

- Closing ceremony of the XII 'Els Reis de Vidre' ("Kings of Glass") campaign (5th January)
- Prize-giving ceremony for "IX Concurs Objectes Fets amb Residus" ("VIII Objects Made with Waste Products Contest, May)
- Closing ceremony of the XVI "No les llancis" ("Don't throw them away") campaign (15th December)

CONGRESSES AND CONFERENCES:

- Conference- "Calentamiento global y cambio climático: expectativas energéticas y economía del reciclado" ("Global warming and climate change: energy expectations and recycling economy") Sr. Manuel Tamames (12th February)

- "10th INSULEUR Forum" (11th June)
- "Consell Administració Centres de Salut de Mallorca" (Board of Directors, Health Centres of Mallorca – 22nd June)
- Conference- "Població, Mediambient i Creixement econòmic. Tres peces d'un mateix trencaclosques" ("Population, Environment and Economic Growth. Three pieces of the same puzzle") Sr. Antoni Riera (28th June)

SYMPOSIUMS:

- "Meteoalerta 2010" Technical Symposium (9th September)
- "Coal Community 2010" Symposium (22nd September)
- "AEVERSU" Symposium (14th December)

TRADE FAIRS:

- FIRA ECOLÒGICA (ECOLOGICAL FAIR – 25th and 26th March)



9.1. Sponsorships

9.2. Collaboration

9.3 Conferences

9. Cooperation with other organisations

9.1. Sponsorships

Over the year 2010 TIRME has continued to participate in specific campaigns focussing on the separation and reduction of waste, such as the “No les llancis” campaign and “Els Reis de Vidre”, sponsored by TIRME and the Chamber of Commerce of Mallorca with the collaboration of the Council of Mallorca, the Government of the Balearic Islands and the Sa Nostra savings bank, among others.

It also collaborates with the Royal Medicine Academy of the Balearic Islands in their annual prizes sponsoring the best environmental medicine project. And the organisation also participated in the “XV Premio Sant Albert” (“XV Sant Albert Prize”) and the “Premio de Investigación Química 2010” (“2010 Chemical Research Prize”) awarded by the Chemists’ Association of the Balearic Islands.

In 2010 TIRME continued to form part of the +O2 Foundation, which was established on 22nd July 2009 at the initiative of nine Mallorcan companies, including TIRME itself. The companies that have started up this initiative are all leaders in their sectors and are committed to the environment. They have adopted this measure to compensate for the CO2 emissions into the atmosphere they produce as a consequence of their economic activity.

9.2. Collaboration

9.2.1. Mallorca recycles

In Mallorca, when one speaks of waste, one is also speaking of a pioneer environmental programme, that is ‘Mallorca recicla’, or ‘Mallorca recycles’. The result of an agreement between the Council of Mallorca, the company TIRME and the Deixalles Foundation, ‘Mallorca Recicla’ works to raise awareness amongst citizens specifically in the area of urban waste.

‘Mallorca Recicla’ is a programme that has promoted the reduction, reutilisation, recycling and recovery of waste since 1996. This initiative seeks to promote the participation of society as a whole, as well as continued adaptation to technical, legal, social changes etc., and the versatility to reach all the citizens of Mallorca by publishing material, preparing presentations for courses, presence in trade fairs and diffusion in different communications media (radio and TV programmes, newspaper articles and its own web page). All of these training activities, appraisal and educational tasks are totally free.

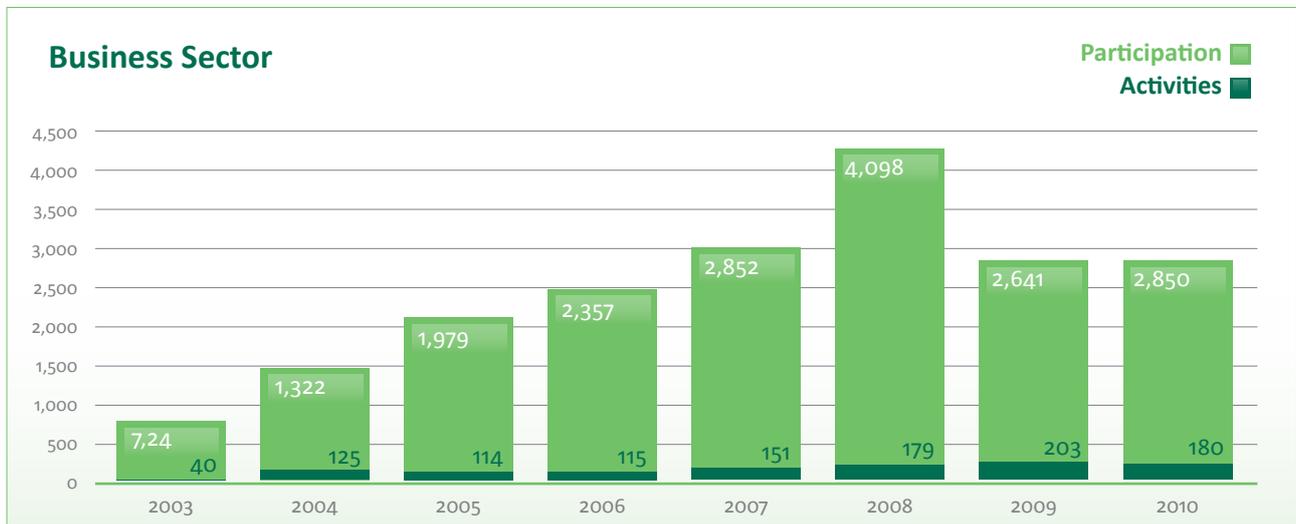
The main objective is to make people aware of the contents and purpose of the Master Plan for Waste Management of Mallorca and sensitize, raise awareness and assess the population, placing emphasis on the 4 Rs from the beginning. To achieve this, four areas of action have been established:

- Education, business, citizens and local authorities:

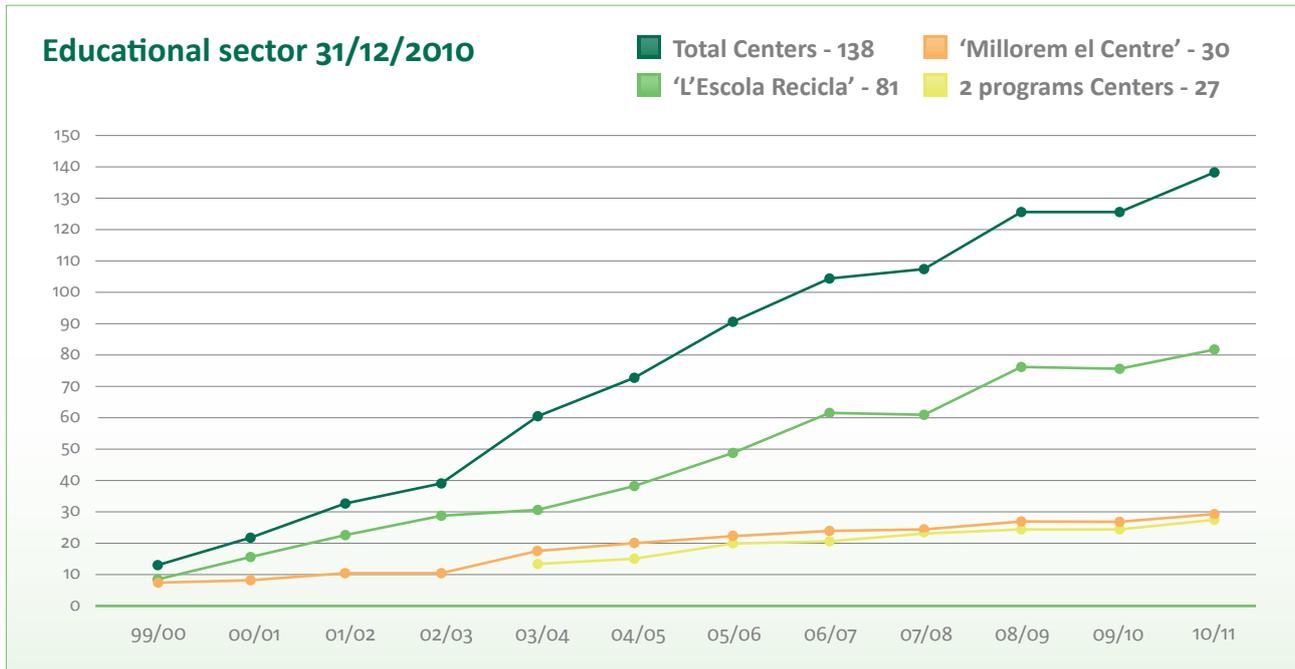
The most notable activities in 2010 were:

- 138 schools joined the ‘Mallorca recicla’ programmes.
- In the area of business, 180 activities were performed with the participation of 2,850 people.
- In 2010, ‘Mallorca recicla’ incorporated new activities, such as:
 - The exhibition “Residu = Recurs” (“Waste = Resource”)
 - Dr. Trencaclosques.
 - The game “Afina la Punteria i recicla” (“Improve your aim and recycle”).
- Mallorca recicla’ directly administered training courses to 18,181 people, in the educational sector, business, citizens and local authorities
- With regard to complementary or ludic-educational activities, participation stood at 29,758 people.

Comparison business sector



Educational sector: centres and programmes



9.2.2. Deixalles Foundation

On 5th March 2001 a contract was signed with the Fundació Deixalles (an institution dedicated to the insertion of underprivileged persons into society and the labour market through jobs related to the collection, sorting and sale of urban waste), for the different installations belonging to TIRME.

9.2.3. University of the Balearic Islands

9.2.3.1. Postgraduate course: University expert in waste management

During the 2009-2010 academic year the postgraduate University expert in waste management course continued.

This postgraduate course began in January of 2010. The sessions were imparted in the Environmental Information and Education Centre of the Environmental Technologies Park of Mallorca.

The postgraduate course, which is aimed at university graduates, set as its objective the training of professionals in waste management, so that they might work in different sectors: administration, management, training, environmental education and, primarily, to give a global view of the management of urban waste, construction and demolition waste, bulky waste and hazardous waste, with an emphasis on their management in our autonomous region.

In 2010 we began to work with the FUEIB (Fundació Universitat Empresa de les Illes Balears / University-Company Foundation of the Balearic Islands) to turn this postgraduate course into a Master's in Environmental Engineering and Management.



9.3. Conferences

Throughout the year 2010 TIRME has given 15 all dealing with subjects related to the activity it performs. These talks formed part of symposiums or conferences held by different organisations in which TIRME was invited to participate in order to contribute by telling of its experience and vision of the matters being dealt with.

The organising bodies were:

- Institutions: ISR (Institute for the Sustainability of Resources), Mancomunidad de Pamplona, Health Centres of Mallorca.
- Congresses: 10th Annual INSULEUR Forum, Symposium on Chemical Recycling and Energy Recovery from Plastic Waste, AENOR Sustainability Symposium, , TICAEB, CONAMA10 (National Environment Conference).

The main issues dealt with were:

- Communication strategy of the Environmental Technologies Park
- Solar EDAR sludge drying plant
- Incineration
- Company presentation
- The urban waste management model in Mallorca
- Dioxins and incineration

The talks were given in:

- Spain: Palma, Madrid, Pamplona, Valencia
- Abroad: Brazil, Berlin.

10.1. Human team

10.2. TIRME's social commitments



10.1. Human team

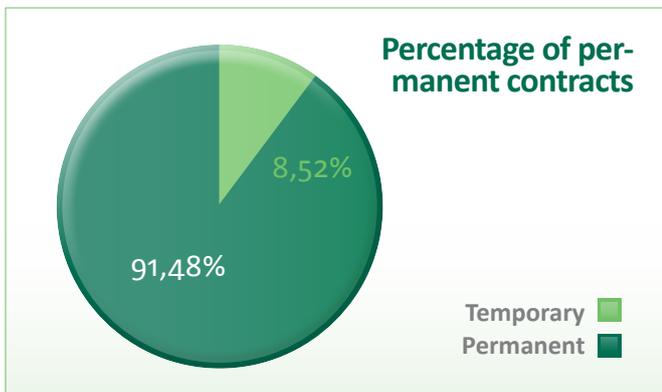
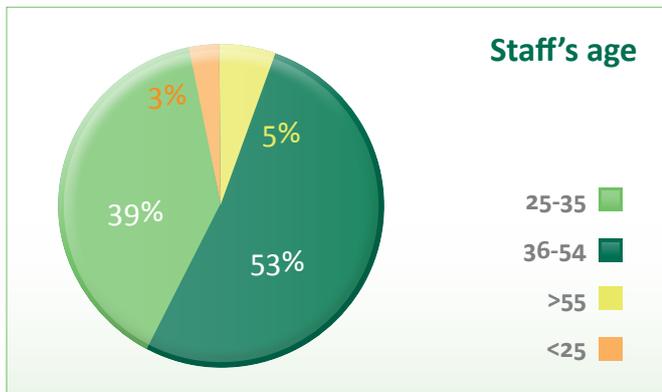
10.1.1. The people

The personnel who make up the workforce of TIRME play a key role in the performance of all of the company's activities and the assumption of new projects on the island of Mallorca.

Over the year 2010, TIRME's average workforce grew to 352 people, representing an increase of 0.86% compared to 2009. 92% of these employees are included in the working conditions regulated by the company's collective agreement.

The average age of the staff is around 37, which allows for a suitable balance between the freshness of new ideas from the younger employees and the practical knowledge and experience of the older ones.

In accordance with its socially responsible company policies TIRME adopts the agreement to not engage any workers who are minors, and follows an internal regulation for hiring labour and a common ethical code for the whole workforce.



Procuring the loyalty of the workforce is still one of the key points dealt with by TIRME's human resources departments, which is demonstrated in the graph below, where we can see that the rate of permanent work contracts stood at 91.48 % as opposed to 8.52 % of temporary contracts. This latter contracting mode is mainly attributable to specific jobs or services.

10.1.2. Opportunities

TIRME works continuously to guarantee equality in the treatment and opportunities provided to men and women and the non-discrimination due to gender, race, country of origin, age or religion. To achieve this objective measures have been established in all of the processes of staff selection, training, wage policies, promotions, redundancies, etc. These principles are promoted by TIRME's management and form part of the company policy.

In 2010 TIRME approved its third plan for equal opportunities and treatment for men and women.

The company continues to take into account the local and regional employment criteria, above all in its transfer stations, thus contributing to the reduction of commuting.

TIRME encourages the incorporation of women into the labour market. The percentage of women in the workforce stands at 16.91% (59 women). Although there is no representation through women on an executive level, we should emphasise, as a positive aspect, that on the level immediately below this (heads of department) 36.36% of the posts are held by women.

By activity sectors, the position of 'chief technician' is that in which women have the highest amount of representation due to the type of activity offered in the offices.

POSITION	PERCENTAGE OF WOMEN
Heads of department	36.36 %
Heads of service	25 %
Head technician	26.67 %
Chief technician I	23.40 %
Professional A	14.12 %
Professional B	1.69 %
Professional C	15.94%
Auxiliary professional	34.48 %



At TIRME we work to integrate disabled workers into the staff, opting for direct hiring in order to promote the insertion of disabled persons into the labour market, beyond the level required by the Law on the Social Integration of Disabled Persons (Ley de Integración Social de los Minusválidos - LISMI). We are also committed to support projects for companies with initiatives in this area.

2.86% of the workforce is represented by this sector through direct hiring, and these workers hold a variety of different posts.

10.1.3. Training

The company has a policy of continuous training for its staff, through the planning and execution of different training actions (technique, skills, prevention of occupational

hazards, languages, etc.). The aim is to ensure that each worker has the necessary skills to carry out tasks that affect quality, the environment, the prevention of occupational hazards and raising awareness on family-responsible company issues, and to make them aware of their importance for the achievement of the company goals and policy.

To fulfil this objective TIRME draws up a training plan every year, taking into account the strategic objectives, investments and educational projects, amongst others. Over the year 41 training activities took place from this plan, and 9,696 hours were invested in them.

A further 28 additional training activities took place, lasting 2,386 hours, with the aim of guaranteeing adaptation to the new training models of the continuously-changing market.



10.2. TIRME's social commitments

10.2.1. The conciliation of personal and family life with work (work-life balance)

TIRME has been distinguished with the certificate for a family-responsible company (Spanish initials EFR) and offers its workers a wide range of social and work services, helping them to conciliate their personal and family life with work.

A whole series of measures has been adopted with the following objectives:

- To promote the awareness of the organisation regarding conciliation and create a corporate culture that respects the values of said conciliation.
 - To boost internal communication as an indispensable instrument for generating trust in the organisation, lending uniformity to the behaviour of the company and strengthening its results.
 - To manage conciliation in the same way as quality or the impact on the environment are managed, by measuring the effect that it has on the goals.
 - To improve the tools that directly affect the management of the workforce, as this is directly proportional to the increase in the production capacity of work and on its quality; this is achieved by improving the workers' skills.
 - To prepare measures designed to lend flexibility to the working timetable and space so as to adapt them to the needs that may arise at any given time in the lives of workers
- To offer support to people in their professional and personal development, and equip them with the skills and abilities necessary for conciliation
 - To place the services of the company at the disposal of the workforce, from its installations and infrastructures to the resources it has with the aim of improving quality of life and conciliation.
 - To guarantee that the personal and family situation of workers will not be an obstacle to or condition of hiring or promotion.

10.2.2. Health and safety

TIRME has renewed its OHSAS certificate thanks to the fact that the integration of the prevention of occupational hazards has been one of the key policies of the company's management since it started up.

TIRME continues to be committed to implementing good practice in the area of prevention of occupational hazards in the company, as a result of which the following actions have been carried out this year:

- Database of safety specifications of chemical products used in the Tirme installations. The objective of this database is to make the safety specifications of the chemical products used in TIRME's centres available to all personnel for consultation prior to use and/or storage.
- Creation of PPEs catalogue. The objective of the creation of this catalogue is to have the information on the PPEs necessary for fulfilling their functions available to all employees.
- SAE (ESC): Employee Service Centre. The objective of the ESC is to help staff improve their strategies, tools and personal resources for the resolution of conflicts, work-related stress, improvement of their performance, etc...
- Physiotherapeutic exercises .The objective of these exercises is to help personnel integrate certain patterns of conduct (habits) prior to work activity. This would include warming-up, stretching, exercises to tone specific muscles, etc... and reduces the risk of accidents due to muscular and skeletal disorders.
- Risk communication reports. The objective of these reports is to make it easier for staff to collaborate and participate in the fulfilment of one of their Health and Safety at Work obligations, that is reporting any situation which, in their opinion, could reasonably involve some kind of risk to the health and safety of personnel, so that it can be corrected.



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