

SUSTAINABILITY REPORT 2011-2013

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# SUSTAINABILITY REPORT 2011-2013 CELSA GROUP™

SUSTAINABILITY REPORT 2011-2013 | CELSA GROUP™





## 1. LETTER FROM THE PRESIDENT

## 2. VISION AND STRATEGY

- 2.1. CELSA GROUP™ SUSTAINABILITY MODEL
- 2.2. MISSION, VISION AND VALUES

## 3. ABOUT DE CELSA GROUP™

- 3.1. WHO WE ARE
- 3.2. A COMPANY IN CONTINUOUS GROWTH
- 3.3. WHERE WE ARE
- 3.4. ACTIVITY AND BUSINESS CHARACTERISTICS

## 4. RESPONSIBILITY WITH OUR EMPLOYEES

- 4.1. EVOLUTION OF THE WORKFORCE
- 4.2. HUMAN RESOURCES POLICY
- 4.3. EQUALITY OF OPPORTUNITIES
- 4.4. WORK-LIFE BALANCE
- 4.5. HEALTH AND SAFETY
- 4.6. TRAINING
- 4.7. MANAGING THE PEOPLE

## 5. RESPONSIBILITY WITH OUR SUPPLIERS

- 5.1. SUPPLIER RELATIONSHIP PRINCIPLES
- 5.2. ENVIRONMENT RESPONSIBILITY WITH SUPPLIERS
- 5.3. QUALITY PROGRAMMES

## 6. RESPONSIBILITY WITH OUR CUSTOMERS

- 6.1. OUR COMMITMENT
- 6.2. OUR CLIENT RELATIONSHIP
- 6.3. SUSTAINABLE CONSTRUCTION

## 7. RESPONSIBILITY WITH THE ENVIRONMENT

- 7.1. ENVIRONMENTAL POLICIES AND PRINCIPLES
- 7.2. ENVIRONMENTAL MANAGEMENT
- 7.3. ENVIRONMENTAL ASPECTS
- 7.4. ENVIRONMENTAL IMPROVEMENT PROJECTS

## 8. GLOSSARY OF TERMS



## LETTER FROM THE PRESIDENT

It is a pleasure for me to present to you the memory of sustainability for the years 2011-2013. There is no doubt that these years have been marked by a severe economic crisis that has conditioned all actions carried out in our organizations without neglecting the figures of sustainability that form an essential part of our corporate mission.

I am proud to say that, in addition to being a reference for competitiveness and efficiency in our markets, we care for our environment from a position of ethics and respect and the continuous desire to improve that is characteristic of our highest asset: the more than 6,000 people who make up the CELSA Group™.

During this period we have consolidated ourselves as one of the largest producers of steel in Europe placing us among the leading 30 producers of steel in the world. The company is divided into six business groups with steel mills, rolling mills and processing plants, with presence in all Europe.

Part of our mission statement is the integration in all our business activities of social and environmental concerns and our commitment to the environment, as is reflected by our vision to become a world reference in steel, through an innovative approach.

In CELSA Group™ we are convinced that we can play an important role in the management of the challenges faced by today's society, both through the products that we manufacture as well as through the way in which we manage our operations.

We firmly believe that the sustainable development of our organizations is a guarantee of business success in the years to come. Consistent with this philosophy, have been invested great effort in minimizing the impact of our operations by focusing in recent years on increasing the efficiency of our processes. Thus we have achieved savings in terms of energy consumption, raw material consumption and waste generation.

We promote and participate actively, through different academic and business associations, in the development of brands that certify the values of Corporate Social Responsibility in the steel sector, both in Spain as well as in Europe. In this regard, it should be noted that CELSA Barcelona has been the first European plant to obtain the certificate of sustainability created within the bosom of EUROFER (SustSteel).

I believe firmly that the adoption of the strategy, by the Group, of values that provide these criteria of sustainability has made it possible to overcome these years of financial difficulties by positioning the Group in a situation of optimism for the years to come.

Francesc Rubiralta i Rubió  
**Chairman & CEO**  
**CELSA GROUP™**

# CELSA GROUP™ RESOLUTE SUPPORT FOR SUSTAINABILITY



CELSA Group™ occupies a prominent place within the European manufacturers of steel, with a highly diversified range of products and strong leadership in many sectors. Currently, CELSA Group™ is the first European producer of steel for reinforced concrete, the third for structural profiles and the third for commercial bars and rods, whilst it ranks first worldwide in the manufacture of corrugated steel rolls by means of the Spooler technology.

Within the strategy of CELSA Group™, sustainability is a priority and the different factories operating under this brand are concentrating their efforts in achieving these goals, which have always room for improvement, advocated by these principles of sustainability.

We should not forget that, in the near future, those companies that do not demonstrate their relevance to these principles will have difficulty penetrating the market. Both administrations as well as users demand, with increasing intensity, sustainable development as a prerequisite to ensure that future generations inherit a society, an environment and an economy in good health. One of the basic pillars of sustainability is to have profitable businesses that generate wealth, based on constant innovation and, within these premises, exercising their activities with respect for the environment and with the goal of continuously improving people's quality of life.

At CELSA Group™, we are convinced of the need for new strategies within a globalized economy with the involvement of all sectors and parties concerned. We are aware that our project is more, much greater, than simple compliance with the law.

And, as such, we have decided to voluntarily adopt Corporate Social Responsibility as a business strategy.

Moreover we are also founding members of the Spanish Iron and Steel Sustainability Association, created as a forum for debate, for congregation and for questioning where, with the help of recognized experts, constant inroads are made on a daily basis towards continuous improvement in this new paradigm. Besides, we are leaders in the creation of similar projects in Europe and in those countries where we have a strong presence.

We also want to remind that globalization, whilst demanding a free market, must also require of all players that those other rules of the game which are of no less importance are respected, such as those involving the adoption of criteria for Corporate Social Responsibility, which increasingly us companies are placing in a place of prominence.

Víctor Martínez  
Chief Commercial Officer  
CELSA GROUP™



## 2.1. CELSA Group™ Sustainability Model

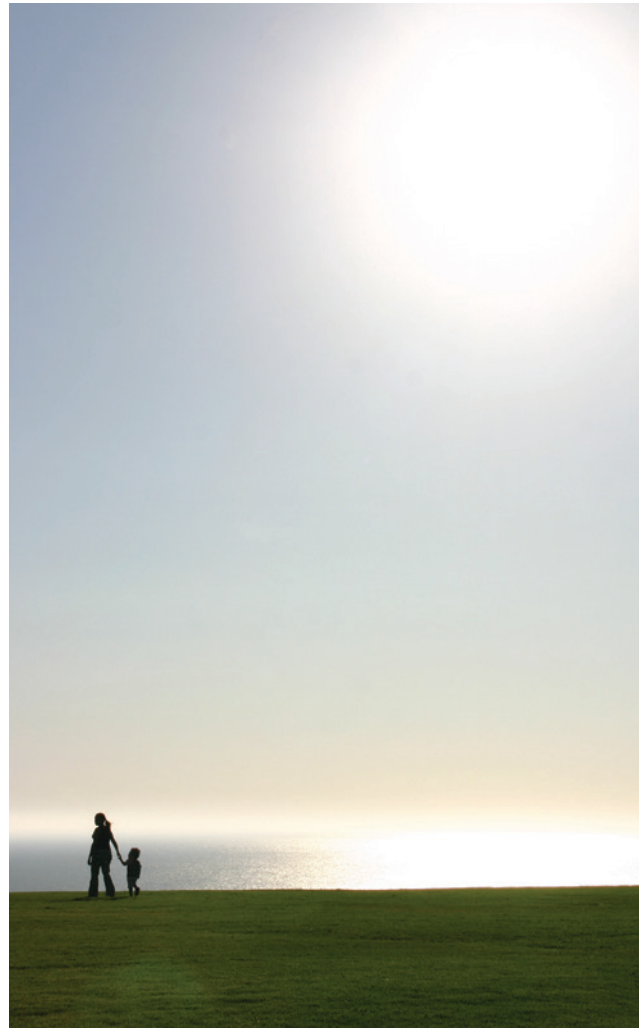
Sustainable development is based on a commitment to improve the quality of life of society today and in the future. For the companies which work under the CELSA Group™ name it means taking into account the environmental, social and economic consequences of the strategic decisions we make in all our daily tasks.

Steel is one of the most recyclable and recycled materials in the world. It can be recycled over and over again without losing its properties and, thanks to its magnetic properties, it can be easily separated for recycling.

*“We take into account the environmental, social and economic consequences of the strategic decisions we make in all our daily tasks”*

Two technologies exist today for producing steel: that which uses a blast furnace, which use iron ore and that used in electric arc furnaces, which recycle scrap and, therefore, respects the environment more.

In CELSA Group™ we produce steel exclusively in electric arc furnaces, using scrap as our raw material in 100% of our products. Thanks to vertical integration, we cover the complete cycle of steel recycling; from the separation and recovery of scrap to its transformation into new steel products.



**In this way, CELSA Group™** contributes prominently in protecting the environment:

Using the most sustainable steel production technology,

recycling steel products at the end of their life-cycle,

recovering the sub-products of manufacturing processes which use steel as raw material

producing fully recyclable products, and,

operating in our facilities in an efficient way

*“All steel products produced by CELSA Group™ come from recycled scrap and are 100% recyclable”*



## 2.2. Mission, vision and values

*“The companies which work under the CELSA Group™ name are one of the biggest steel producers in Europe”*

The starting point for the expansion of CELSA Group™ was CELSA Barcelona. After this, the Group grew by means successive acquisitions, through continually reinvesting the generated resources. Thanks to these investments and the technical, commercial and managerial support given at the moment of purchase, these firms have acquired their own strength and have progressed to become leaders in their specialized areas.

The high competition in costs, along with vertical integration of the company's production units and their affiliates, allowed CELSA Group™ to increase the fabricated products added value and broaden the diversification of sales.

Innovative, global and professional, the companies which work under CELSA Group™ name have become one of the main European steel producers.

We provide an excellent service and deal with our clients directly to adapt to their individual needs. We are a reference in competitiveness and efficiency within our market. We look after our surroundings, wherever we are, from an ethical and respectful stance; the continual effort to improve which characterizes our main value: the people who make up the CELSA Group™ team.

# Our Mission:

We are the European, private iron and steel group with the most diversified range of long products.

## OUR PURPOSE IS:

To satisfy all our customers with quality products and excellent and direct service.

To be a competitive, profitable and innovative group leading our target markets and achieving sustained growth, by being an efficient, flexible and dynamic organization.

## WE BELIEVE IN:

Our personnel, their efforts and professional and personal development, and their teamwork.

Continuously improvement of all our processes and activities and the permanent updating of our technology.

Managing and operating our business in an ethical, safe and environmentally responsible manner.

Working together like this we will become a company with sustainable activity and with an international presence, for the benefit of all the people involved.



# Our Vision:

## WE WANT....

We strive to be a global steel reference through a ground-breaking approach delivering best-in-class service to our clients.

# Our values

We live for our customers

We feel like owners

We respect people and teamwork

We are sharp and flexible

We lead as ground-breakers

We fight for results!

We lead by example



# ABOUT CELSA GROUP™



## 3.1. Who we are

The origins of CELSA Group™ go back to Castellbisbal (Barcelona) in 1967. Today, after more than 40 years activity, the companies which operate under the CELSA Group™ name are consolidated at a national and international level. At present, the company has a presence all over the world with production units in 8 countries with 7 electric steel plants, rolling mills and transformer businesses. The company products are distributed globally thanks to an extensive commercial network.

With a staff team of more than 6,700 people, the group of iron and steel companies which make up CELSA Group™ is among the 40 biggest steel producers and is the third producer in Europe for long products, with the

production of 6.9 million tons of steel in 2013.

Thanks to the high cost-competitiveness and the vertical integration of the steel plants and their affiliates, CELSA Group™ has increased the added value of their products and has widened the diversification of sales.

### The origins

CELSA (Compañía Española de Laminación) was founded in Castellbisbal (Barcelona) in 1967 with the setting up of their first rolling mill. A decade later the first electric arc furnace was inaugurated in Barcelona; this allowed greater independence and improved competitiveness. At the end of the 80s,

coinciding with the great restructuring of the Spanish iron and steel sector, Celsa Barcelona acquired Torras Herrerías y Construcciones – THC -.

After acquiring Siderúrgica Besós in 1991, Celsa Barcelona became a steel producer of reference within the Spanish market, providing new products such as: plates, angles and squares. During this period, two historical Spanish steel plants became part of CELSA Group™: Global Steel Wire (Santander) in 1987 and Nervacero (Vizcaya) in 1989.

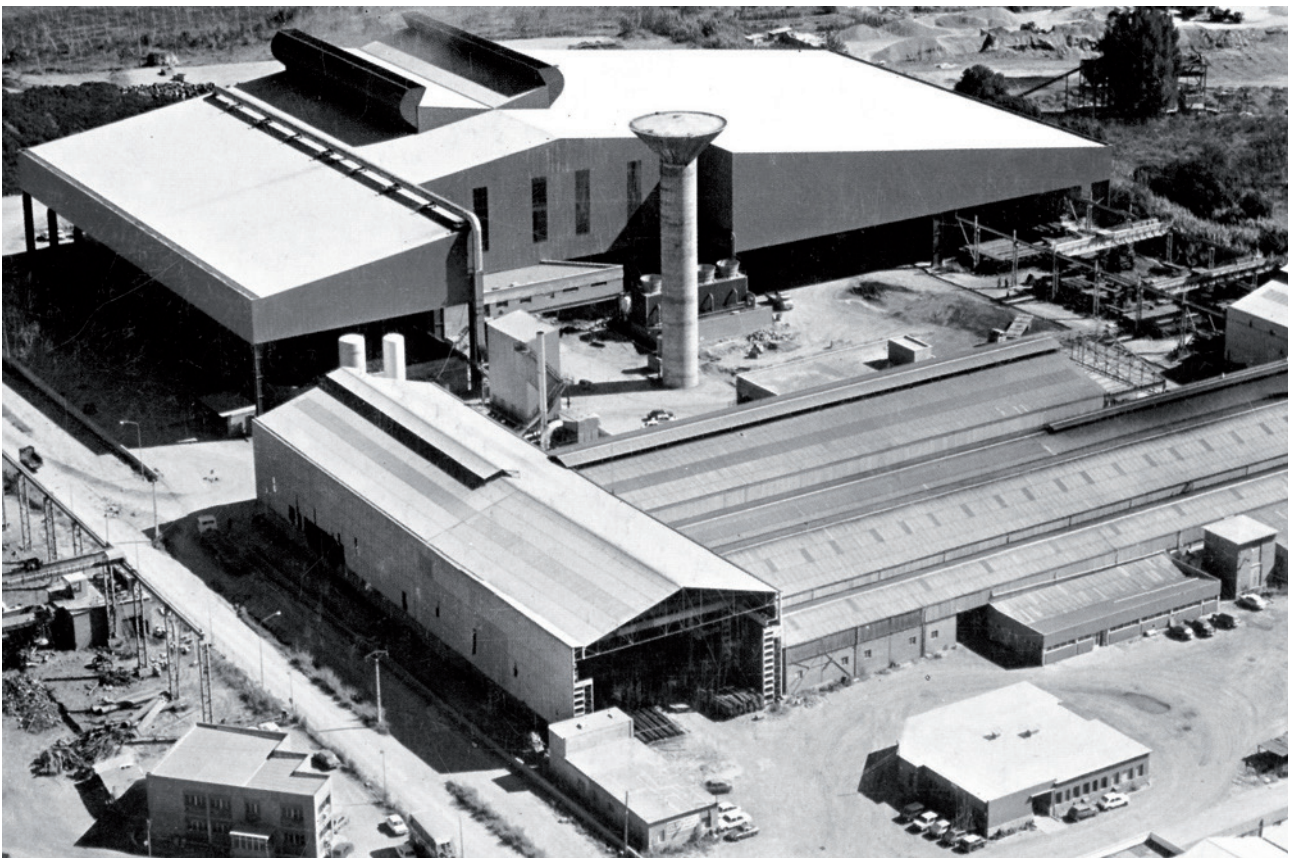
## Diversification

During the 90s there was a great diversification of products and markets when two important Spanish wire drawing companies were integrated into the group: **Tycsa PSC** and Trefilerías **Moreda** in 1991 and **Riviere** in 1999.

In 1996, **Laminaciones Arregui** joined

CELSA Group™. In 1998, **TYCSA PSC**, world leader in high resistance cable production, was founded and in 2003 **B&S Trefilados Quijano**, world leader in wire and its derivatives was born. These transformer companies were later reinforced with the acquisition of **Cables y Eslingas** and **Aceros para la Construcción**, which converted CELSA Group™ in a steel products manufacturer.

*“After more than 40 years of activity, CELSA Group™ is present all over the world, with manufacturing units in 8 countries with 7 electric steel plants, rolling mills and transformer businesses”*



## Internationalization

2003 was a key year in the history and evolution of the country. With the coming of the new millennium, CELSA Group™ began its journey towards international expansion: it increased its final product by 900,000 tons (reaching 1.2 million tons in 2006) from **Celsa Steel UK**.

From then on, the success of this project brought many other acquisitions: **Celsa Huta Ostrowiec** (2003), **Celsa Nordic** (2006), the biggest producer of corrugated reels in the Nordic countries, their products are distributed by **Celsa Steel Service**, with affiliates in Denmark, Norway, Finland and Sweden. In 2007 CELSA Group™ bought **Celsa France** and **Celsa Atlantic**, with steel mills in

Bayonne (France) and two rolling mills for reels and wires in La Coruña (Spain).

In 2008 CELSA Group™ expanded its operations in Great Britain and Ireland by acquiring three reinforcement manufacturers: **BRC**, **ROM Group** and **Express Reinforcements**.

## 3.2. A company in continuous growth

During 2013 the companies in CELSA Group™ achieved sales of 3,911 million Euros.



*“Celsa Group™ is currently located between the first 40 producers of steel in the world (2012 data) and is the third largest company in Europe of long products with a production of 6.9 million tons of steel in 2013.”*

## 3.3. Where we are

Eight large steel manufacturing companies and a growing number of transformer companies operate under the name CELSA Group™ and they are situated in strategic commercial zones. The companies which have steel mills and rolling mills are situated near important commercial ports, or have easy access to the entry and exit of their products by

sea: **Barcelona, Bayonne, Vizcaya, La Coruña, Santander, Cardiff and Mo i Rana**. They are also well communicated by motorways and have their own unstaffed stations to aid rail transport: both finished products and raw material.

At present, CELSA Group™ has production units in 8 countries. The

company's products are distributed globally thanks to an extensive commercial network, which allows us to reach any country in the world.

**○ TRANSFORMER COMPANIES**

**Norway**

- CELSA STEEL SERVICE AS (OSLO)
- CELSA STEEL SERVICE TROMSØ AS
- CELSA STEEL SERVICE FAUSKE AS
- CELSA STEEL SERVICE TRONDHEIM AS
- CELSA STEEL SERVICE ÅLESUND AS
- CELSA STEEL SERVICE BERGEN AS
- CELSA STEEL SERVICE KRISTIANSAND AS
- CELSA STEEL SERVICE PORSGRUNN AS
- CELSA STEEL SERVICE DRAMMEN AS

**Sweden**

- CELSA STEEL SERVICE AB HALMSTAD central
- CELSA STEEL SERVICE AB VÄNNÄS
- CELSA STEEL SERVICE AB VÄSTERÅS

**Finland**

- CELSA STEEL SERVICE OY ÄMINNEFORS central
- CELSA STEEL SERVICE OY ESPOO
- CELSA STEEL SERVICE TAMMET OY

**Denmark**

- CELSA STEEL SERVICE A/S ØLSTYKKE

**United Kingdom**

- BRC PLYMOUTH
- BRC ROMSEY
- BRC MANSFIELD
- BRC BRIERLEY
- CELSA STEEL HEADQUARTERS
- BRC BARNSELY
- BRC OLDHAM
- BRC DARLINGTON
- BRC NEWHOUSE MOTHEWELL
- BRC NEWPORT CR
- BRC NEWPORT WW

**Spain**

- MOREDA-RIVIERE TREFILERÍAS, S.A.
- CELSA ATLANTIC PLANOS.
- TRENZAS Y CABLES PSC, S.L.
- BS TREFILADOS QUIJANO, S.A.

TREFILERÍAS QUIJANO, S.A.

ACEROS PARA LA CONSTRUCCIÓN, S.A.

CABLES Y ESLINGAS, S.A

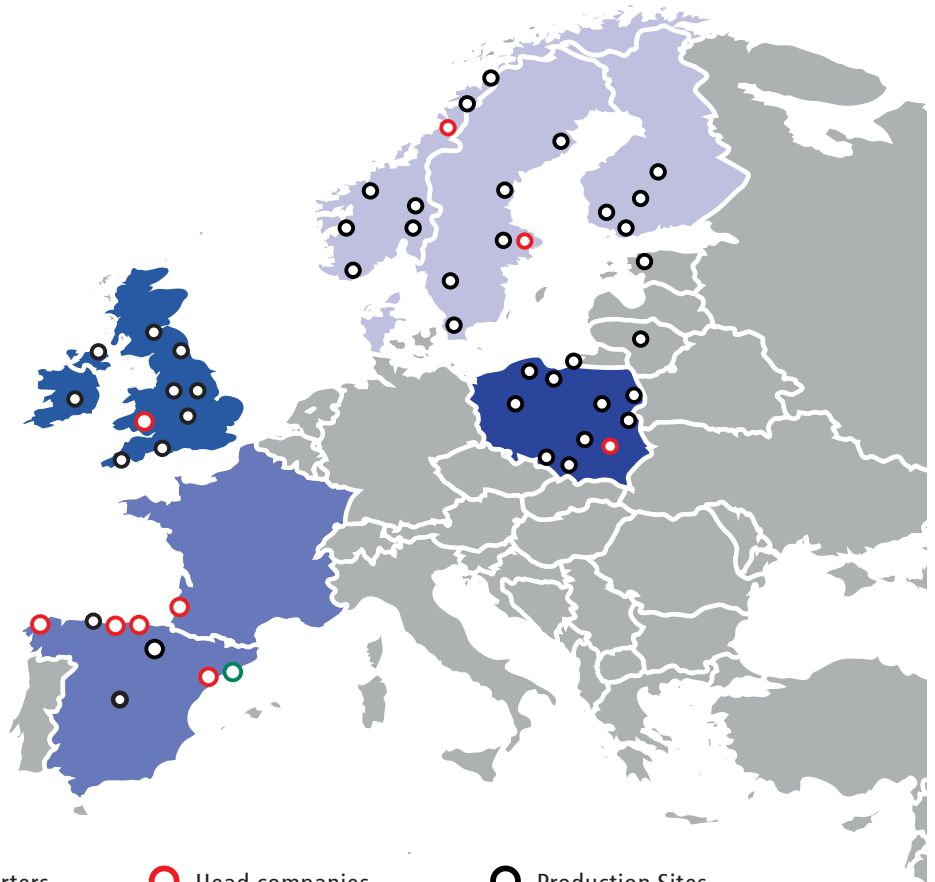
**○ GLOBAL SUPPORT SERVICES**

CELSA GROUP CASTELLBISBAL (SPAIN)

**○ HEAD COMPANIES**

- CELSA NORDIC (NORWAY)
- CELSA HUTA OSTROWIEC (POLAND)
- CELSA STEEL UK (UNITED KINGDOM)
- CELSA ATLANTIC (SPAIN)
- GLOBAL STEEL WIRE, S.A. (SPAIN)
- NERVACERO, S.A (SPAIN)
- COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.A. (SPAIN)
- CELSA FRANCE (FRANCE)

- Celsa UK Group**
- Celsa Spain Group**
- Celsa Nordic Group**
- Celsa Ostrowiec Group**



○ Celsa's Headquarters      ○ Head companies      ○ Production Sites

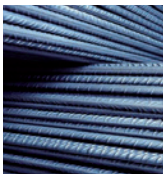
## 3.4. Activity and business characteristics

The strategy of CELSA Group™ aims for maximum product diversification. Today the group operates in three big areas of business: rolled, transformed and forged steel. A constant preoccupation for offering high-quality products governs the company's activities. The products of CELSA Group™ respond to this willingness to innovate constantly and cutting-edge technological solutions to improve client satisfaction, day by day.

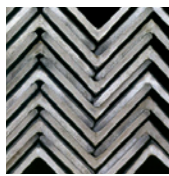
The companies in CELSA Group™ have clients in such diverse sectors as energy, construction, automotive industry, capital goods, agriculture, fishing and farming, locksmith, forges, mechanization, mining, naval construction and tooling.

### Rolled products

Ribbed round rods



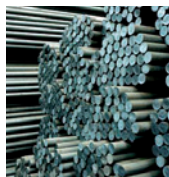
Angles



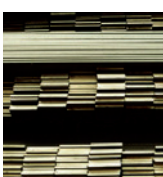
Channels



Smooth round



Flats



Wire and wire rod



Strip



### Processed products

Tubes



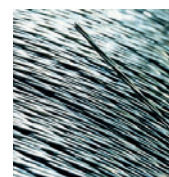
Framework



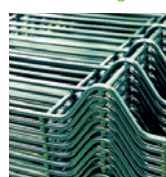
Electro-welded wire mesh



Steel wire



Metal fencing



Steel chain



Technical and mattress springs





## Forged products



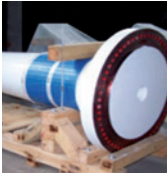
Steel ingots



Fibred crankshaft axles



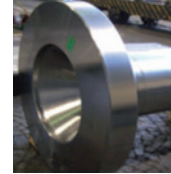
Axles and boat propulsion components



Main aero-generator axle



Assembles crankshaft axles

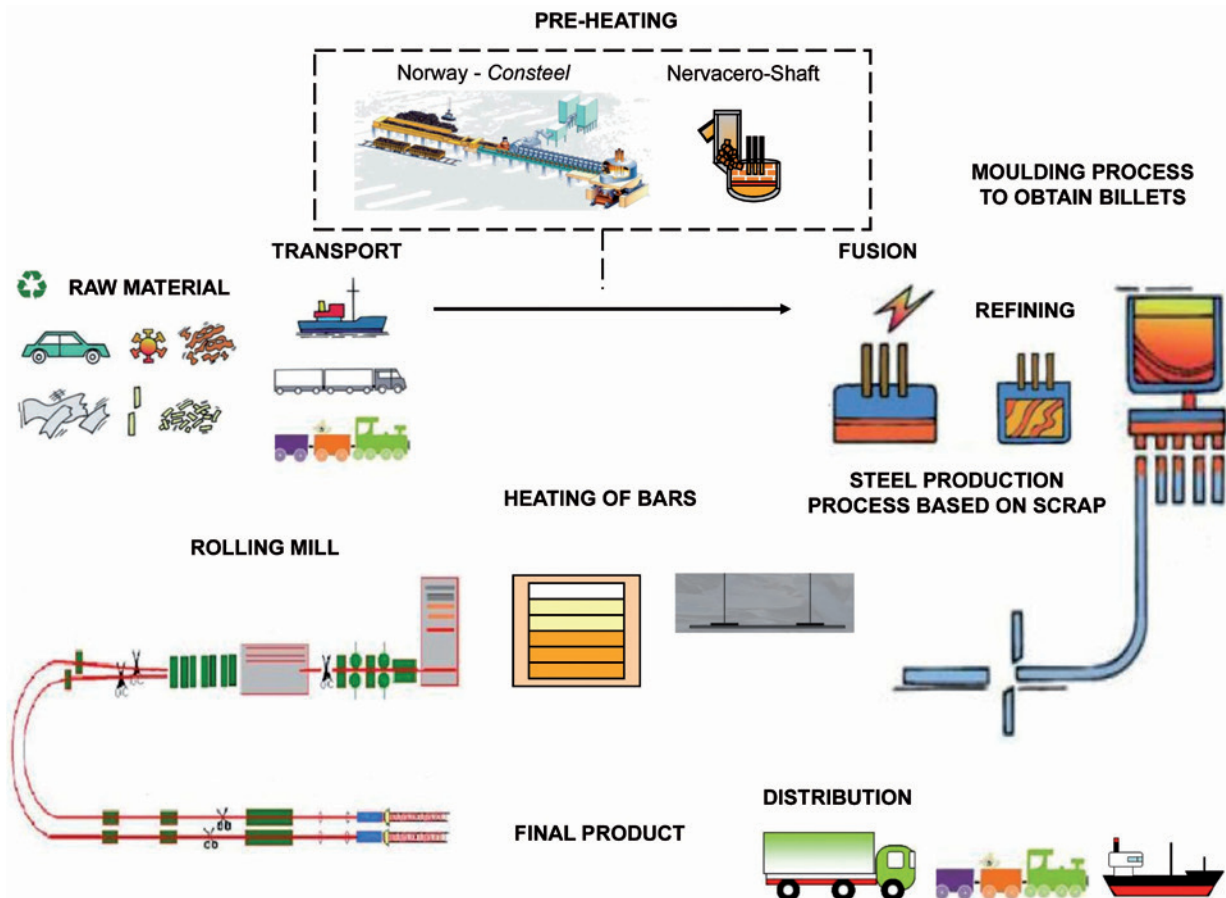


Forged pieces

## Production process

CELSA Group™ makes steel by recycling scrap, contributing to the conservation of the environment and its natural resources.

In the CELSA Group™ plants melt scrap in an electric arc furnace to obtain steel, which is later passed through a rolling mill to obtain different finished products: bars, corrugated reels, cables, commercial rods, beams, angles, smooth reels, etc.



# RESPONSIBILITY WITH OUR EMPLOYEES



## 4.1. Evolution of the workforce

The employees are the cornerstone of CELSA Group™. There are more than 8,700 people in the CELSA Group™ team.

*“There are more than 8,700 people in the CELSA Group™ team: 6,700 are direct employees and the rest belong to external companies which work very closely with us”*



## 4.2. Human resources policy

CELSA Group™ believes in people. From Human Resources we **facilitate and support** achieving the strategies and objectives of the CELSA Group™ companies through people. Our aim is to contribute to creating an **organizational climate** and a **common culture** based on **our values** and being known as an **employer of reference** and **socially responsible**.

- we support our **internal clients** acting as **allies** and with a **vocation for service**
- we **bring value** as **specialists** in **personal** and **organizational development**,
- we promote the **integration of safety** into culture and management.

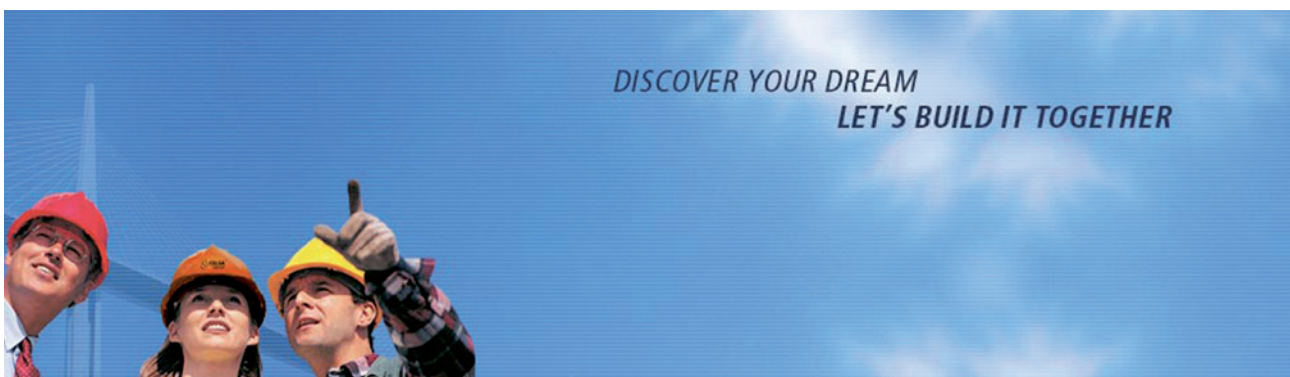
In this way we will achieve an organization with **committed people, prepared for the future**.

### Ethical and Personal Conduct Code

Since June 2009, CELSA Group™ has had an Ethical and Personal Conduct Code which sets down the behavioural guidelines for each and every employee that works for the companies working under the CELSA Group™ name.

Each person is responsible for following the Code, through their own behaviour, respecting the laws, values, principles and rules of the Code and any other regulations which exist, or could exist. Likewise, the Code includes employees encouraging subsidiary and investee companies, their suppliers and interest groups to be governed by codes of conduct and values similar to those established in the Code.

## 4.3. Equality of opportunities



On the premise that the job to be done is more important than the person who does it, CELSA Group™ eliminates any indications of discrimination on the base of sex, race, ideology, nationality, religion, sexual orientation, or any other personal, physical, psychological or social condition, both from the point

of view of access and incorporation and the point of view of equality of opportunity for employees of both sexes.

CELSA Group™ belongs to a sector where women have traditionally had a low presence, but this tendency is

being turned upside down, to the point that in some areas as essential for the company as the technical prevention team and the financial department the team is almost completely made up of women.



## 4.4. Work-life balance

CELSA Group™ respects the personal and family life of all its employees and we promote conciliation policies which facilitate a better balance between this and the person's work responsibilities.

## 4.5. Health and safety

One of the main objectives of CELSA Group™ is to achieve a safe and healthy work environment for our employees. This commitment extends to all the people who, without forming part of our organization, participate constantly: suppliers, contractors, clients, visitors or the neighbouring community. CELSA Group™ should also be a safe place for them.

We constantly strive to maintain the workplace accident free. We concentrate all our available resources on integrating

health and safety into an essential part of our daily management. We employ the same dedication and effort into complying with these principles as we do in satisfying our clients. We give the same priority to quality, productivity and costs.

CELSA Group™ is a member of the Worldsteel Association and, as such, adopts its principles regarding health and safety. We share the principles of the 'Worldsteel Health and Safety Principles' as a sustainable and respectful way to do business.

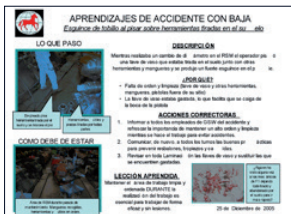
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*"We concentrate all our resources on integrating health and safety into an essential part of our daily management"*  
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## Shared Principles of Safety

- 1** All professional accidents and illnesses can and should be prevented.
- 2** Those in control are responsible and accountable for performance regarding health and safety.
- 3** Commitment to training the employees is fundamental.
- 4** Working safely is a condition of employment, promotion and career.
- 5** Being excellent in health and safety leads us to excellent business results.
- 6** Health and safety is integrated into all the processes in managing the business.

## Our work health and safety programme

From among the many elements which make up the model for managing the Work Health and Safety of CELSA Group™, we highlight those towards which we dedicate most of our efforts:



### Accident and Incident Investigation Programme

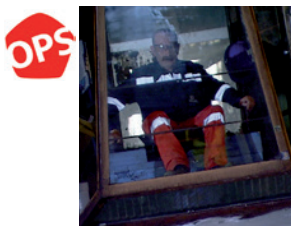
Investigation and analysis of each and every accident or incident that occurs, involving either our own employees or contractors. Identifying the causes, with the objective of implanting action plans to avoid their repetition. In the most relevant of events are lessons to be learned that are transmitted to all members of the Organization.



### HN PROGRAMME:

#### Hazards Notification

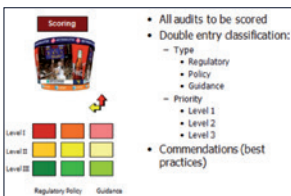
Programme which encourages anyone who detects a situation that puts health and safety at risk to report it by using a Risk Correction Card. These cards are looked at and evaluated to generate action plans which aim to eliminate these risks or mitigate them and get them under control if they cannot be totally eliminated.



### SPO PROGRAMME:

#### Safety Preventative Observation

As part of our daily activity, we frequently make observations about the normal development of the work done, focusing on identifying acts and conditions which are unsafe and taking action to correct them. All employees take part in this programme, including directors, supervisors, employees and staff from collaborating companies.



### SECONDARY AUDIT PROGRAMME:

CELSA GROUP™ makes cross-plant corporate audits (also known as secondary audits). The aim is to check that the industrial installation and health and safety management systems are implanted. They are effective in preventing accidents and incidents at work and comply with legal requirements and the policies of CELSA GROUP™.

These audits mean revising the management systems to identify deviations and establish corresponding action plans.

They are also an excellent means of developing safety leadership in operational area directors because they represent 50% of the audit team.



**PROGRAMME 10:**

**The 10 Safety Rules which Save Lives**

We develop, introduce and improve the level of effort in the area of standards and safe work practices; these are the cornerstone of our management model. The following stand out among these standards: leadership, working at height, operations using cranes and hoisting loads, DECAP (De-energising, Secure, Ensure and Check), entry to confined spaces or high-energy work, among others.

**IT APPLICATION:**

**Prosafety web**

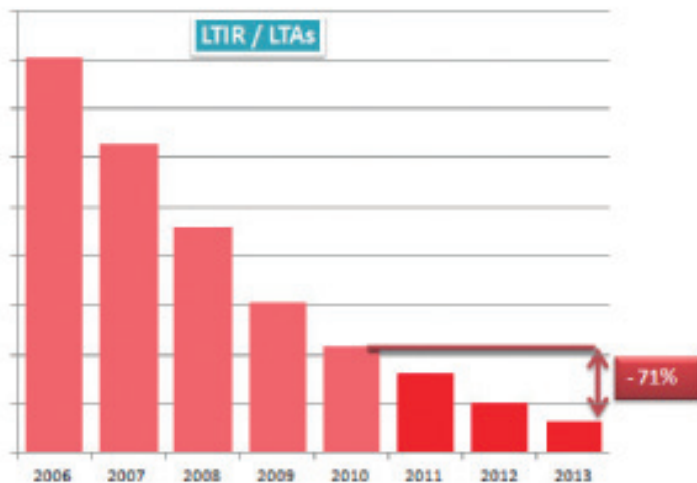
Corporate IT application which permits the management of the different safety tools (report and investigation of accidents, communicating risks, SPO, audits, etc.), facilitating transparency in safety activities and managing the action plans derived from these.



## Our Progress

OHSAS 18001 is an evaluation tool for the Health and Safety at Work management system within companies. Its implantation allows risks to be prevented, dangers to be identified and necessary control measures to be put in place in the workplace to try to avoid accidents. Regular audits allow constant supervision and improvement in the running of Health and Safety material in the workplace.

This certificate is an internationally recognized specification which defines the requirements necessary for establishing, implanting and operating an effective health and safety at work management system. It is a regulation that has been developed by specialist agencies and is certified by international regulation organizations, integrating the most advanced occupational health and work risk administration experiences.



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*“One of the most significant progresses in the area of safety up to now is obtaining **OHSAS 18001** certification in all our main companies”*  
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CELSA Group™ manages the results and information related to health and safety as an integral part and critical factor in the success of our business.

We follow the safety indicators, among other business variables, to ensure continuous improvement of our operations and results.

Our long-term objective is to reach Zero Accidents in all our operations and we invest all our enthusiasm into achieving this goal.

During the period of 2011-2013 we have reduced our rate of frequency of accidents (number of accidents leading to medical leave per million hours worked) for all staff members by 71 % with respect to the data of 2010.

## 4.6. Training

CELSA Group™ encourages personal and professional development of every one of us and our teams. Training is one of our priorities and we dedicate a large part of our efforts to this. In this way we pass on our know-how from generation to generation and, at the same time, preserve our enterprising spirit thanks to the breath of fresh air that the younger generations bring us.

The present policy of CELSA Group™ is to promote internally: 95% of vacancies are filled internally. When bringing in new talent, the company plumps for incorporating people who can be trained within the company. For this reason, two programmes were set up years ago to train talented youngsters who then become part of the company. The Graduate programme (a 5 year rotational programme aimed at recent graduates) and MBA & Master programme (a 3/5 year rotational programme for professionals from MBA courses from the best business schools) guarantee the development of a pool of future directors and managers for the organization. These programmes permit our professionals to develop their careers along a general or specialized line, with international experience and rotation between different functional areas.

CELSA Group™ participates regularly in work forums at different universities and business schools, as well as on a web site -[www.celsagroup.com/e\\_recruitment-](http://www.celsagroup.com/e_recruitment-), where job offers are presented. Likewise, we offer part-time, paid placements (INTERNSHIP PROGRAM) for students within the different companies distributed throughout Europe and in the different work areas.

On another front, the company has set up professorships, like that at the Universitat Politècnica de Catalunya (UPC) and the IESE Business School and Investigation and Development Centres, as well as collaborative conventions with various organizations.

The most demanded profile is that of recently qualified engineers, who join a five year development programme and progressively occupy intermediate positions in different departments and business units, both nationally and internationally.

The fact that we are one of the few metallurgical companies in Spain, and the only one in Catalonia, has allowed us to develop numerous, made-to-measure technical training projects. In

this way, and within the TQM CELSA Group™ programme, the company has implanted the Zeplin methodology, which attempts to develop mid-management into becoming leaders in their areas. The company also relies on coaching and mentoring programmes designed for higher-level positions.

*“Training is a priority for CELSA Group™ and we dedicate a large part of our efforts to this”*

### Work Climate Surveys

Using the Work Climate Survey, elaborated every 2 years, employees anonymously express their evaluation of the distinct aspects which influence their work. The objective is to discover their level of satisfaction and their opinion regarding aspects of their professional tasks, the organization, internal communication, training and management.





## 4.7. Managing the people

CELSA Group™ prepares the staff to be autonomous. Thus, the company helps develop each employee's abilities. The objective is for each person to take the lead in their own professional development. To carry this out, CELSA Group™ has implanted the PDIS (People Development Integrated System), a tool for managing people in which, on one hand, individual objectives are set, while, at the same time, determining where effort should be directed over the coming year and also identifying talent and planning careers. This system has been developed in all the business units with the aim of:



**ENSURING** our professionals are satisfied and remain within CELSA Group™ adding value

**CONSTRUCTING** the attitudes, abilities and knowledge required in the steel world in the future

**ATTRACTING**, motivating and developing the best and most brilliant talents

**HAVING** a common, easy and coherent tool which catalyses the company's strategy through its personnel

### The 4 processes which make up the PDIS are:

- **Managing Performance:** this is a process through which people receive feedback and orientation about how they are performing their tasks and the areas in which they must improve and develop. In Managing Performance objectives, areas of responsibility, abilities and values are evaluated. Improvement plans are established and orientated towards progress in results as professionals and as an organization.
- **Professional Career Management:** this is a process by which people and professionals get to know their strengths, areas to improve and their possibilities for future development as future directors or managers. The individual, as owner of their professional career, decides if they want to take on new and more complicated responsibilities and the organization will decide if they are prepared for these.
- **Talent and Succession Plan Management:** a process by which the organization detects and develops enough talent to a quality that guarantees future development and generational handover. Thanks to this process, personal expectations, future leaders and organizational needs are united. The future is planned.
- **Managing Objectives:** this process assigns the organization's objectives individually down the chain. The objectives come from strategic reflexion, the budget and the annual value evaluation. Achieving them feeds the salary variables and evaluating the achievement adds to the performance evaluation and the fixed salary policy.

# RESPONSIBILITY WITH OUR SUPPLIERS



## 5.1. Supplier relationship principles

CELSA Group™ incorporates a series of standards for conduct in the relationship with its suppliers within the framework of the Ethical and Professional Conduct Code. These are:

- Everyone in CELSA Group™ who participates in the process of selecting contractors, suppliers and external collaborators has the obligation to act in an impartial, objective way, applying safety, quality and cost criteria and avoiding a conflict between their own personal interests and those of the companies within CELSA Group™.
- We should avoid any type of interference or influence from our clients, suppliers or third parties, which could alter our impartiality and professional objectivity.
- The reception of any type of remuneration or financing from clients or suppliers is strictly forbidden.
- It goes against professional ethics for any employee to receive any kind of gift, invitation, favour or other type of compensation from clients or suppliers, save those related to courtesy or of symbolic value.

*“Celsa Group™ incorporates a series of standards for conduct in the relationship with its suppliers within the framework of the Ethical and Professional Conduct Code”*

## 5.2. Environmental responsibility with suppliers

CELSA Group™, as part of the commitment to Sustainability, proposes that their suppliers progressively adopt these measures so they can play an active part in protecting the environment through prevention and minimizing pollution.

The protection of the Environment is part of the work of the employees, contractors, suppliers and clients, who should be aware of their

responsibilities regarding minimizing the environmental impact of their respective activities. This undertaking requires a lot of information, training and communication between the parties involved.

For this reason we make all our suppliers participate in our environmental policy and we insist that our contractors fulfil their commitments in the same way as the personnel of CELSA Group™.

Likewise, when awarding contracts and work to companies, CELSA Group™ values positively those proposals which incorporate the implantation of an Environmental Management System.

The CELSA Group™ companies, as a downstream user of a supply chain of chemical substances, ensure that their suppliers meet the requirements of the REACH Regulation on safety in the marketing of chemicals in Europe.



*“We insist that our clients respect the Environment in the same way our company does”*

## 5.3. Quality programmes



All the companies which operate under the CELSA Group™ name are aware of the great importance their clients give to the guarantee of good service and quality products. For this reason, we put our effort into guaranteeing maximum quality of our products, due to the responsibility their use implies.

We have all the technical and human resources necessary to do this. We are able to ensure that the steel produced is traceable; we always know what casting ever made a certain product. This assures our clients receive an efficient and rapid response to queries of any kind.

# RESPONSIBILITY WITH OUR CUSTOMERS



## 6.1. Our commitment

All the companies within CELSA Group™ are service-oriented companies. Over the years we have concentrated our efforts on offering maximum quality and attention in the service our clients require.

We are a company that produces steel and very diverse derivative products; we produce a wide range of products for many sectors.

We offer our clients products which are of the highest quality and are highly competitive.

Our commitment to innovation, through sponsorship, research and training, gives us access to the latest technology and a vision of the future. These requirements are essential to deal with our relationship with our clients in today's market.

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*"Our commitment to innovation gives us access to the latest technology and a vision of the future, essential requirements in dealing with our relationship with our clients"*  
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## 6.2. Our client relationship

The relationships we build with our clients are based on trust. This contributes an inherent added value to both the products that CELSA Group™ delivers and the service offered. It is this added value which sets us apart from our competitors.

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*“The relationships with our clients are based on trust. Here is the added value which sets us apart from our competitors”*  
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Over the years we have created strong ties with our clients and suppliers, building long lasting relationships based on mutual trust and shared interests. These relationships have survived periods of recession and have been reinforced in periods of growth.

The confidence and satisfaction of our clients is fruit of our immediate personal attention, our broad range of high quality products and the constant innovation and adaptation to the markets. We are flexible, dynamic and efficient and

we are always close to the final client. Our main objective is to guarantee our clients' satisfaction.

To this end we use a tool CRM (Customer Relationship Management), which serves to register all our clients' complaints and follow-up their resolution. The information obtained is introduced into the Total Quality Management (TQM) process to ensure that the questions have been resolved according to our continuous improvement programme.

## 6.3. Sustainable construction



CELSA Group™ is concerned with caring for our surroundings, the Environment, the use of natural resources, the people who work with us and society in general. We are working to become market leaders, with sustainable growth.

In the United Kingdom we have promoted Eco-Reinforcement, along with other companies. This is a pioneering initiative within the sector and is based on providing aid to clients dedicated to the design and construction using reinforced concrete. We make available steel products that comply with strict social and environmental guidelines covering the entire supply chain.

CELSA Group™ is a founding member

and promoter of the Asociación Española Sostenibilidad Siderúrgica (Spanish Iron and Steel Sustainability Association), which is dedicated to promoting Corporate Social Responsibility (CSR) and Sustainability within the Spanish iron and steel sector.

CELSA Barcelona was the first Spanish steel company to be honoured with the Steel Sustainability Mark, which is attributed by the Spanish Iron and Steel Sustainability Association and is intended to highlight those companies that manufacture steel products under a Corporate Social Responsibility strategy, who seek excellence and assume responsibility for the environment. In recent years all the Spanish and French plants of CELSA

Group™ have been awarded this mark, an unmistakable sign of the commitment by the group towards sustainability management systems.

At the same time, CELSA Group™ is leading similar projects elsewhere wherever we have a stake in the steel industry, whilst promoting and participating prominently on a European level in the development of SustSteel, a mark of sustainability for steel products for the construction industry, under the umbrella of EUROFER, the European Confederation of iron and steel producers. CELSA Barcelona was the first company to receive the certificate, and the right to use the SustSteel mark, the Nervacero plant also having been recognized in 2012 in this respect.



CELSA Group™ has four steel mills registered with EMAS, the most demanding European award in terms of environmental management. Plants awarded this recognition are CELSA Manufacturing UK (Cardiff, UK), CELSA France (Bayonne, France), Global Steel Wire (Santander, Spain) and CELSA Armeringsstal (CELSA NORDIC, Norway).

Our goal is to obtain future certifications for the rest of our companies.

## 7.1. Environmental Policies and Principles

All the companies in CELSA Group™ are aware of our Corporate Social Responsibility and reassert our commitment to Sustainable Development. Our main priorities remain Health and Safety, the Environment and Quality. We are aware that our future growth depends on them.

We recycle annually, via steel mills, more than ten million tons of ferrous scrap, thus contributing in this way to bettering the environment in two ways: by avoiding the accumulation of waste and by obtaining the return of material with added value without undermining our natural resources.

We are aware that our operations might have an environmental impact in the areas in which we operate; our plants are equipped with the necessary facilities to reduce or eliminate this impact. Among them are systems for the collection and treatment of fumes as well as facilities for the treatment of waste water and solid waste. These installations ensure the minimization and control of our environmental impact.

Not only do we comply with regulations for the protection of the environment which are in force in Spain and in the European Union (the most demanding

worldwide), but our commitment goes beyond that. We contribute on a daily basis towards the protection of the environment by improving our methods and our installations, establishing controls on emissions and discharges, looking for new applications for the re-use or recovery of our waste and investing in technological improvements for the minimization and treatment of waste and emissions.

*“Celsa Group™ recycles more than ten million tons of scrap a year, so contributing positively to the environment”*

# Environmental Policies

1

Comply with legal obligations and requirements within our area of business. Information, cooperation and transparency with the Authorities.

2

Sign voluntary agreements and commitments with local communities for environmental improvement projects; information dissemination and training regarding the environment to employees and neighbours.

3

Work with proven, certified environmental management systems adapted to the nature of our business, which ensure care and respect for the Environment. Encourage every person in our organization to act in an environmentally responsible way.

4

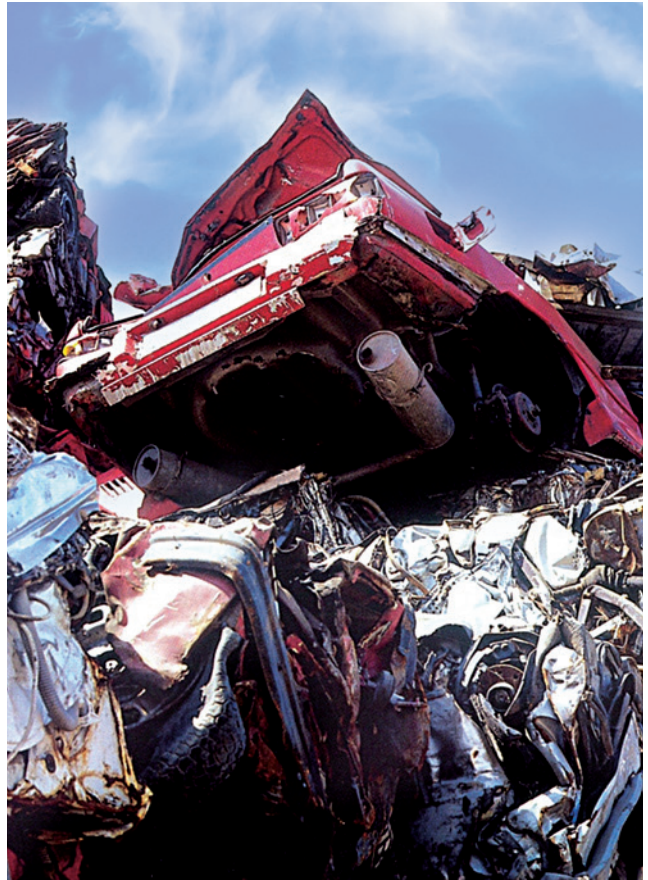
Continually improve our processes and develop and invest in new technologies which allow us to prevent and minimize our atmospheric emissions, waste generation and squandering of resources. Take environmental factors into account in the designing of equipment and facilities.

5

Promote environmentally responsible behaviour in our suppliers, contractors and subcontractors. Make their commitment to this a determining factor when choosing them.

6

Encourage the collection, recycling and reuse of our products and work with our clients to promote awareness of the life cycle of steel. Participate in initiatives which promote the use of environmentally responsible products.



## 7.2 Environmental management



**Celsa Group™ has given itself the goal of protecting the Environment when undertaking its activities of producing and selling steel.**

**Both the steel and the production process used in our plants stand out due to their ecological values and their ability to recycle compared to other products and technologies.**

**Our commitment to the Environment forms part of a general policy of total quality; this commitment is totally guaranteed thanks to the application of an environmental management system based on a series of environmental principles.**

### Environmental Principles

- Efficient and responsible use of **natural resources** and **energy**.
- Application of **continuous improvement** and **pollution prevention** when managing processes, this includes periodical checks of the **environmental objectives** and **goals**.
- Development of a production system that respects the Environment and complies with related **legal requirements**, commitments and voluntary agreements signed by CELSA Group™.
- Promote the implementation of waste hierarchy, in such a way that it favours the following management processes: **prevention, reuse, valuation and recycling** whilst leaving **removal** of waste to landfills as a last resort.

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*“ CELSA Group™ has given itself the goal of protecting the Environment when undertaking its activities of producing and selling steel ”*  
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- Take into account and minimize the impact of the environmental aspects from the equipment design stage to its installation, by using the best, affordable technology available.
- Development of **each person's environmental commitment** related to our business, including: managers, employees, contractors, clients and suppliers; making information and training an essential tool.

- **Open and transparent communication** with all the parties concerned, with special emphasis on respectful environmental integration into our surroundings. Proof of this are the Environmental Product Declarations that are elaborated as a source of information to customers of the environmental impact of products.

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*“This proposal is reflected in the ISO14001 environmental management system certification of new companies that operate under the CELSA Group™ name ”*  
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## 7.3 Environmental Aspects

### CO2 emissions

CELSA Group™ produces its steel from scrap using the electric arc furnace process.

We are recyclers of steel and produce it in the most sustainable way.

The technology used in our steel mills is the most respectful and friendly within the steel industry and emits one-sixth of the CO2 emitted in integrated steelworks.

CELSA Group™ participates in the Program of Action for Climate of the World Steel Association. This program provides the benchmark for the sector and the identification of best practices for minimizing CO2 emissions. CELSA Group™ has participated in this project for more than 5 years with recognition.

The steel industry is within the scope of the directive which establishes a scheme for greenhouse gas emission allowance trading. All companies that operate under the CELSA Group™ brand must comply with the requirements for monitoring CO2 emissions as well as the reductions imposed by these regulations.

Plans of action undertaken for the reduction of our CO2 emissions are linked to the energetic optimization of our process as well as the choice of raw materials with minimal impact in terms of carbon footprint.

In the last 5 years CO2 emissions consolidated by the group have been reduced by 220,000 tons as a result of the improvement in the energy efficiency of the processes and the use of materials with less impact with regards to CO2 emissions.



### Water consumption

In Celsa Group™ we are convinced of the need to minimize the consumption of water in our processes due to the scarcity of this natural resource. Therefore we are continuously implementing actions aimed at gradually reducing the specific consumption of water reaching the most efficient values from the Sector in most of our plants.

Efficient water management is based on the use of semi-closed cooling circuits that allow continuous reuse of most of the water in the process as well as the implementation of collection systems and reuse of rainwater. Equally the commissioning of fully enclosed refrigeration systems are being favoured in which the cooling of water in the circuit is obtained by using dry coolers without loss of water by evaporation.

Another way to minimize the consumption of water is by ensuring that the quality of the water used throughout the production process is maintained, thereby minimizing water discharges. To this end all plants have inline physical-chemical treatment systems installed on all circuits so as to remove contaminants dissolved in the water and thereby facilitate reuse in the process.

### Electricity consumption

The production process that is being developed in the group plants is an intensive process in the consumption of energy. The main sources of energy used are electric power and natural gas. Aware of the impact that energy obtained from fossil fuels has on climate change, actions have been implemented to reduce resultant energy consumption via benchmarking exercises both within the Group's companies and outside of them.

The energy consumption of CELSA Group™ is monitored in detail and we carry out reduction projects and energy audits, adapting ourselves to the best practices and technologies on a global level.

### Noise reduction

CELSA Group™ carries out the actions and investments necessary to absorb the noise, with the objective of minimizing its impact; among these is the undertaking of studies and noise maps. Thanks to these measures, noise levels have been reduced in the plants over the last few years.

## Emissions in the air

Major sources of air pollution at the CELSA Group™ plants are electric scrap metal furnaces that melt scrap in steel mills and the reheating furnaces in hot rolling. The most significant contaminants associated with these areas are solid particles, metal oxides and combustion gases which include CO<sub>2</sub>.

Within CELSA Group™ we possess facilities recognized to have the best available technology to filter emissions and to achieve the minimum impact on air quality. In addition, we perform regular checks to monitor and control that they are working correctly and to ensure we are operating within our established parameters.

During the process of hot rolling the principle fuel is natural gas, which reduces the emission of such pollutants as particles and sulphur dioxide which are associated with the use of more contaminating fuels. In one of the plants, CO generated in other industrial processes is used in the reheating furnace instead of fossil fuels so as to reduce emissions into the atmosphere.

## Waste

In spite of the high level of efficiency in our processes, at CELSA Group™ we generate waste which is inherent to the steelmaking process such as slag, steelmaking dust and refractory material originating from the electric arc furnaces, as well as iron oxide from the rolling mills.

Our commitment to the environment in relation to waste management is being developed as part of our policy of continuous improvement and is demonstrated in our search for new industrial uses for the waste generated in such a way as they become by-products or commercial alternatives to last generation commercial products that require natural resources for their production.

The last waste management option available is that of removal to landfill and this is only considered when all other forms of waste management that would allow for total or partial recovery prove to be unviable. Currently about 90% of residues are reused, recycled, recovered and valued.



### Slag from electric arc furnaces (EAF)

This heavy, dense material is produced during the melting process that recycles scrap in electric arc furnaces. It stands out for its high resistance to wear and its excellent durability, which makes it ideal for use in road building, in loose materials and asphalt, as well as high specification aggregates. Likewise, it is used more and more in the prefabrication industry.

### Scrap from ladle furnace (LF)

The scrap from secondary metallurgy is produced in a ladle furnace (LF). This has certain cementation properties due, mainly, to its high CaO content. It can be used as a fertilizer and to improve the ground. It can also be used as a raw material in cement manufacturing process.

### Dust from the Electric Arc Furnace (EAF)

When steel is produced in an electric arc furnace, 12-20 kg of dust is formed per ton of steel. This dust is considered dangerous waste, due to its high content of heavy metals, mainly zinc and lead. At CELSA Group™ we refine our steel work dust to recuperate the zinc, rather than the alternative: send it to the dump. One of our plants has a refining plant within its premises to enrich the Zinc, by reintroducing the steel dust into the EAF.



### Mill Scale

Scale is a steel industry by-product resulting mostly from the hot rolling process of steel that has its origin in the surface oxidation of the hot steel and consists for the most part of iron oxides such as FeO and Fe<sub>3</sub>O<sub>4</sub>. Its exact composition varies, depending on the type of laminated steel and the lamination process, but the iron content is usually 70 %. Scale is sold to other industrial processes such as primary steel production as this is a material that currently competes commercially with iron ore as well as in the iron alloys industry that uses it as an additive in the production process and in cement production.

### Refractory material from furnaces

In our production processes we obtain refractory material, composed of magnesite (MgO 96.8%) and calcium (CaO 2.2%), from the demolition of furnaces.

It has been shown that the magnesite contained in this product is as effective as that contained in pure dolomite- rock composed of CaMg(CO<sub>3</sub>)<sub>2</sub> – and it is, therefore, used in agriculture.

Likewise, we obtain dolomite refractory waste from the demolition of ladle furnaces and this can be used to make fertilizers.

### Hazardous waste

In the CELSA Group™ plants we have systems for the selective collection of waste and special facilities for the storage and packaging of hazardous waste that prevent soil contamination and guarantee safe handling both for its workers and the environment.

### Effluent

One of our priorities at CELSA Group™ is to reduce water pollution. For this, we have treatment processes for the effluent (decanters, hydrocarbon separators, etc.) and we carry out control measurements of the discharges, such as: solids in suspension, COD, metals, hydrocarbons and others.

As far as possible and within the possibilities of each plant, discharges are preferably channelled into sewage systems which are downstream, in contrast to natural water channels.

### Soil protection

The CELSA Group™ plants are equipped with facilities for the storage of both waste as well as chemicals that ensure safe handling for our workers and prevent soil pollution, through the use of covered and waterproofed sites, retaining basins, etc. In many of the plants of the CELSA Group™ there are networks of wells and piezometers that allow us to monitor the state of the groundwater and to ensure the absence of soil contamination.

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*"Thanks to the work that  
Celsa Group™ has done,  
we have reduced energy  
consumption per ton, CO<sub>2</sub>  
emissions, PM10 and PST  
emissions"*  
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## 7.4. Environmental improvement projects, investing in a sustainable future

Innovation is fundamental for the iron and steel industry. Secondary steel working is a sustainable process which uses scrap steel in its manufacturing process instead of natural resources.

In line with our business strategy based on continuous improvement, the CELSA Group™ plants constantly invest in their installations, the objective being to have the Best Available Technologies at their disposal. Once the plants are equipped with the technology means to control all environmental aspects, benchmark exercises are carried out between plants with the goal of unifying the optimal operational criteria of the plants.

We will present some of the relevant projects we have set up and which have achieved positive environmental results.

## Case Study Celsa BARCELONA

### Hot billet charging

During 2012 a new system for the hot loading of billets was launched. These can be transported directly, without intermediate storage, from exiting continuous casting to the entrance of the reheating furnace of the rolling mill.

The new system can be described by the following points:

**1.** The billets, obtained from continuous casting, are collected and moved via a transferral system that deposits them on a roller conveyor equipped with scales.

**2.** The billets are weighed and the system moves them towards the hot or cold loading area:

**a.** Hot loading: the incandescent billet, by means of a new device, is led directly to the entrance of the reheating furnace of the rolling mill (minimum intermediate cooling).

**b.** Cold loading: the billet is transported to the location of a new rotary cooler. Here it remains the time deemed necessary to force the temperature drop. Subsequently, it is led to an accumulating table, where a crane moves it to the intermediate storage areas.



### Environmental improvements

Less consumption of natural gas in the reheating furnace. The billet is introduced into the furnace whilst it is hot, reducing the need to increase its temperature before rolling and leading therefore to a decreased consumption in natural gas. This fact also leads to a minimization of atmospheric emissions of combustion gases and, mainly, of carbon dioxide.

Thanks to the implementation of hot loading, we have achieved an 11 % reduction of the specific gas consumption per ton produced.

Similarly, a reduction of 4,749.78 tonnes per year of CO2 emissions into the atmosphere has been achieved.

## Case Study Celsa Huta Ostrowiec

### Brother's Keeper

In order to expedite construction of "Taking Care of Each Other" culture in a very compliance driven and heavily dependent organization, CELSA Huta Ostrowiec site decided to implement the Brother's Keeper program.

Employees volunteer to make couples where their mission would be to take care of his couple, in the day to day work in a continuous basis, to ensure he does not get hurt.

Families and children were invited to the kick-off and follow-up of the program. They were also invited to request periodically progress on the program to their family workers.

Program has resulted in a rapid acceptance of safety feedback at all levels in observations and contributed to reduce injury rate in one year by more than 60 % on the site.



## PROGRAM BASIS AND INTENT

A similar concept to the Brother's Keeper program has been seen in high risk first line army operations. These soldiers are coupled and committed to support their colleague in all interventions.

On many occasions we are aware that our performance in safety is not all it should be and we have difficulties in trying to change it. The operating teams find themselves increasingly alone undertaking their work, without the presence of a foreman who is overseeing them and instructing them so that their work is done safely.

On the other hand, it is common that we find it easier to recognize at risk behaviour in other people than in ourselves.

In order for us to be committed to watching out for the safety of others we must be motivated, establish a link and eliminate mental barriers.

This barrier often represents the tacit agreement between colleagues not to meddle in another person's affairs, especially in not revealing the breaching of regulations. When rules are broken, we usually react negatively towards the person who

## Case Study NERVACERO

### Adequacy of the ironing area of the furnace and slagging pots for the reintroduction of white slag into smelting furnace

In order to reduce the quantity of white slag destined for landfill, to improve the ferric recovery and to reduce the dust emissions in the outdoor manipulation of slag, a modification has been made in the steelworks operation to introduce the white slag to the smelting furnace by loading it into the scrap bins whilst it is still hot.

has exposed us, avoiding any possibility for them to provide us with or to receive constructive feedback. This happens even though when we openly admit that we would prefer to be warned about a danger that may affect us.

**The Brother's Keeper program is a tool that will enable us to:**

- Have support in order to improve health and safety in work performance.
- Eliminate mental barriers in order to establish open communication regarding the evaluation of a work colleague's performance.

The values that the Brother's Keeper program promotes are focused on providing support and help to others, to combat the difficulties they come up against in achieving an objective, as well as cooperation to achieve a common team objective.

## RESULTS

The most relevant indicator of the program's success is that the 58 employees have passed more than one full year accident-free. In all the cases their jobs are in areas of high risk with very high accident rates.

The program has contributed to a reduction in the accident frequency rate with a reduction of 60%.

The participants have evaluated the program very positively, the majority of them expressing that it has helped them reduce their usual risk behaviour. In some cases they have even admitted that the interventions have clearly prevented accidents.

to achieve this, the slagging pots area has been modified, so as to get the slag into the scrap bins whilst still hot and into to the smelting furnace, without loss of temperature or steel.

The aim is to introduce approximately 50-60 % of the slag produced by the smelting furnace and thus reduce material sent to landfill by approximately 8,000 tn.

The investment has been 400,000.



## Case Study Celsa Nordic

### Declaration of Steel Reinforcement Products for Concrete

A third party verified Environmental Product Declaration (EPD) has been prepared during 2011, in line with the environmental objectives for 2011. The Life Cycle Assessment (LCA) has been done by IVL Swedish Environmental Research Institute and the EPD has been registered at EPD International ([www.environdec.com](http://www.environdec.com)). The EPD considers the raw material supply, transportation to fabricators in the Nordic markets and fabrication at the Celsa Steel Service production sites.

The EPD is based on the most recent standards (EN 15804) and the Product Category Rules (PCR) for construction products and construction services. The LCA is based on mainly specific data from our operations in 2010.

The EPD will meet demands from Celsa's clients in the Nordic countries and it is a tool for the Celsa Nordic group to show environmental performance (for instance CO<sub>2</sub>). It is also a verified and verifiable source of information that can be used to show environmental improvements and transparency. The EPD is marketed through Celsa Steel Service as a tool to communicate how the company is working with environmental performance and the effects of measures taken over time.

While working with a life cycle perspective Celsa has learned how different materials influences the environmental performance of the final product, but also that emission from transportation is limited by the use of vessels and that the use of renewable energy (hydro power) for the steel production is an advantage that makes Celsa Armeringsstål environmentally competitive.

## Case Study Celsa UK Manufacturing



### Melt Shop – EFSOP® Expert Furnace System Optimisation process

In 2011 the Melt Shop installed the EFSOP system to the Electric Arc Furnace (EAF). The EFSOP analyses the furnace off gas using a probe which is located in the 4th hole extraction elbow. EFSOP uses realtime measurements of the off-gas chemistry to optimise chemical energy and post-combustion under closed-loop control conditions.

The off-gas chemistry with the process variables are used to optimise electrical energy, carbon and lime usage, slag formation and control as well as fume system heat load.

By achieving chemical energy and combustion optimisation through improved process control this results in lower electrical energy usage (kWh) and other sources of energy (i.e. carbon injection and natural gas). This therefore reduces carbon dioxide (CO<sub>2</sub>) emissions, both direct and indirect.

As EFSOP reacts in real time, the gas delivered through the burners can be reduced and the oxygen increased in order to combust these gases that would have normally been lost as a waste by-product. This recovered chemical energy allows a reduction in electrical energy consumption whilst increasing process reaction rates and improving our yield, as the burner activities are optimised resulting in reduced over oxidation of the steel.

The use of the EFSOP combined with the energy efficiency work with the Carbon Trust Wales, has seen the Melt Shop achieve a 6% improvement in energy consumption in 2011. This means a **reduction in CO<sub>2</sub> emissions by over 18,000 tonnes** in 2011.

# GLOSSARY

## B

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**BAT (Best Available Technologies):** Most efficient and advanced phase of activity development and running, which shows the practical ability of certain techniques to set down, in principle, the limits for emissions, or, when this is not possible, reduce emissions in general and their impact on the environment and health.

**Biodegradable:** Able to be assimilated (decomposed and metabolised) by the ecosystem

**Biodiversity:** Variety of organisms which exist in an ecosystem.

**BOD:** Oxygen dissolved in water and required by organisms for aerobic decomposition of organic material in the water.

**BREF (Bat Reference Documente Ef):** Documents which define the Best Available Technologies (BAT) for each industrial sector, these definitions are non-binding. It collects the fundamental aspects of the production processes and the associated environmental problems.

## C

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**Certification:** Activity which established that a particular company, product, process or service complies with defined requirements as regards technical norms and specifications.

**CO<sub>2</sub> (Carbon Dioxide):** Chemical compound generated from the combustion of carbon. Its emission into the atmosphere contributes to global warming.

**COD (Chemical Oxygen Demand):** Measurement of the oxygen necessary to oxidise compounds present in water, both organic and inorganic, by strong oxidising agents in acid.

**CRM (Customer Relationship Mangement):** Marketing strategy designed to proactively construct consumer preference for particular company. This, logically, produces more loyalty and, therefore, larger economic benefits.

**CSR (Corporate Social Responsibility):** Management system and policy referring to the economic, social, environmental and human rights areas, which increase value for certain interest groups, as well as transparency of related information.

## D

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**DBQ05:** Oxygen consumed during microbiological oxidation of organic and inorganic material present in water, over 5 days (at 20 degrees C).

**Degradable:** That which can decompose under certain environmental conditions (e.g. microorganisms, light, etc.).

**Domain:** Zone, surroundings and circumstances in which a being or object finds itself. Conditions and circumstances that surround a person, animal or things.

**Dumping:** When residual effluent is disposed of outside the industrial facilities.



## E

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**Eco-index:** Specific data which gives information about the environmental behaviour of an organization.

**Eco-management Manual:** Documents which describe the global system and refers to the procedures for implanting the organization's environmental programme.

**Eco-management System:** Part of the general management system which includes the organizational structure, planning activities, responsibilities, practices, procedures, processes and resources to be developed, applied, reached, reviewed and maintained within the eco-policy.

**Eco-policies:** General objectives and principles related to the environment, including compliance with all legal requirements pertaining to the environment. Commitment to continually improving as regards environmental behaviour. It sets down the framework for establishing and reviewing environmental objectives.

**EMAS (Eco-Management and Audit Scheme):** European regulations which permit voluntary participation of organizations to evaluate and improve their environmental behaviour.

**Emission:** Expulsion into the atmosphere, water or ground of substances, vibrations, radiation, heat or noise coming directly or indirectly from certain sources or activity.

**Environment:** Made up of the physical, chemical, biological, visual and social agents which constitute the surrounding in which human beings live.

**Environmental accident:** Event or circumstance that directly, or indirectly, affects the environment.

**Environmental audit:** Management tool that periodically, objectively and systematically evaluates and documents the efficiency of the organization, management system and procedures designed to protect the environment. The aim of the audit is to aid operational control of any practices that could have an environmental impact and evaluate the environmental policies of the organization, especially the environmental aims and objectives.

**Environmental impact:** Any change in the environment, be it of benefit or not, which is derived, wholly or partially, from the activities, products or services of an organization.

**Environmental Objective:** General environmental objectives that originate from eco-policies an organization sets itself, when possible these are quantifiable.

## G

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**Greenhouse Effect:** Heating of the atmosphere produced by an alteration in the thermal equilibrium, due to heat radiation being inhibited by an increase in the concentration of gases.

## H

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**Heavy metals:** Metals with a density of more than 6 gr/cm<sup>3</sup>. The best known are copper, chromium, zinc, cadmium, mercury and lead.

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**I**

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**Immission:** Level of pollutants at ground level, this can be temporary or permanent.

**Interest Groups:** All those groups which could be significantly affected by the activities, products and/or services of a company: shareholders, employees, clients, suppliers, authorities and governments, local communities and society in general.

**ISO 14001:** International norm which defines the process for controlling and improving the environmental performance of an organization.

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**N**

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**NOx (nitrogen oxides):** Generated during combustion processes. They are responsible for acid rain.

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**P**

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**PM10:** Particles suspended in the air and with a diameter of up to 10  $\mu m$ .

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**R**

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**Recycling:** Reintroduction as raw materials of elements or products which were discarded during industrial activity.

**Refining:** All procedures which allow the exploitation of resources contained within waste products, without endangering health or using methods which could harm the environment.

**Reuse:** Use of discarded materials in the same production cycles in which they were generated.

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**S**

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**Significant Environmental Aspect:** Something which has, or can have a significant impact on the Environment.

**Sustainable Development:** A way of progressing which satisfies present needs without endangering future generations.

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**T**

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**TQM (Total Quality Management):** Excellence in management. A management system based on continuous improvement of all the activities and of the participation of all the people within an organization. It aims to achieve permanent customer satisfaction, maintaining economic efficiency.

**TSS (Total Suspended Solids):** Total of the solid particles suspended in the air.

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**W**

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**Waste:** Any substance or object which is found in the annexes to the Waste Law and which its owner intends to dispose of. In any case, those which appear in the European Waste Catalogue (EWC) would be included in this definition.





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