2021-2023 Sustainability plan

SUSTAINABILITY

TOGETHER
EVERYONE
ACHIEVES
MORE

"We have an opportunity every day to work towards a better future. One with greater tolerance, more united and caring about the planet and its inhabitants.

In this sense, the challenge of Coated Solutions is to achieve a sustainable industry model and maximize the goal of decarbonization through the circular economy.

We must act responsible with the planet and the society where we live. I´m strongly confident that this is the best way to create value for the company, employees and shareholders."

Paulo Gonçalves
Industry Manager

Contents :

Coated Solutions Aranda

Production: Prepainted coils
Capacity: 100.000 t/year

Coated Solutions Santander

Production: Prepainted coils
Capacity: 120.000 t/year

Coated Solutions Aveiro

Production: Prepainted coils
Capacity: 100.000 t/year

Coated Solutions León

Production: Pickled coils
Cold rolled coils
Hot dip galvanized coils
Capacity: 520.000 t/year

Eco Steel Solutions

Production: Eco pickled surface (EPS)
- Coils & sheets
Smooth clean surface (SCS)
- Coils & sheets
Capacity: 150.000 t/year

Governance and communication

This document was born out of the need to make public our responsibility for communication and transparency, from the industry division and as part of our culture and commitment to the society we live in. Sustainability has been and continues to be a fundamental pillar when it comes to creating value in the industrial environment where we carry out our activity. We promote local development near our production centres, always preserving the environment and safeguarding people's welfare.

We have a team whose sole focus is on sustainability, it is in charge of checking and bringing the objectives set within the sustainability plan to life, including their exhaustive monitoring to verify and secure the success of our plan. On an annual basis, results will be published highlighting the effort and perseverance shown on the way to a more sustainable future.

OTHER COMPANIES BELONGING TO NETWORK STEEL GROUP:

NETWORK STEEL

Plafesa Grupo

Reference framework & public policies for sustainability

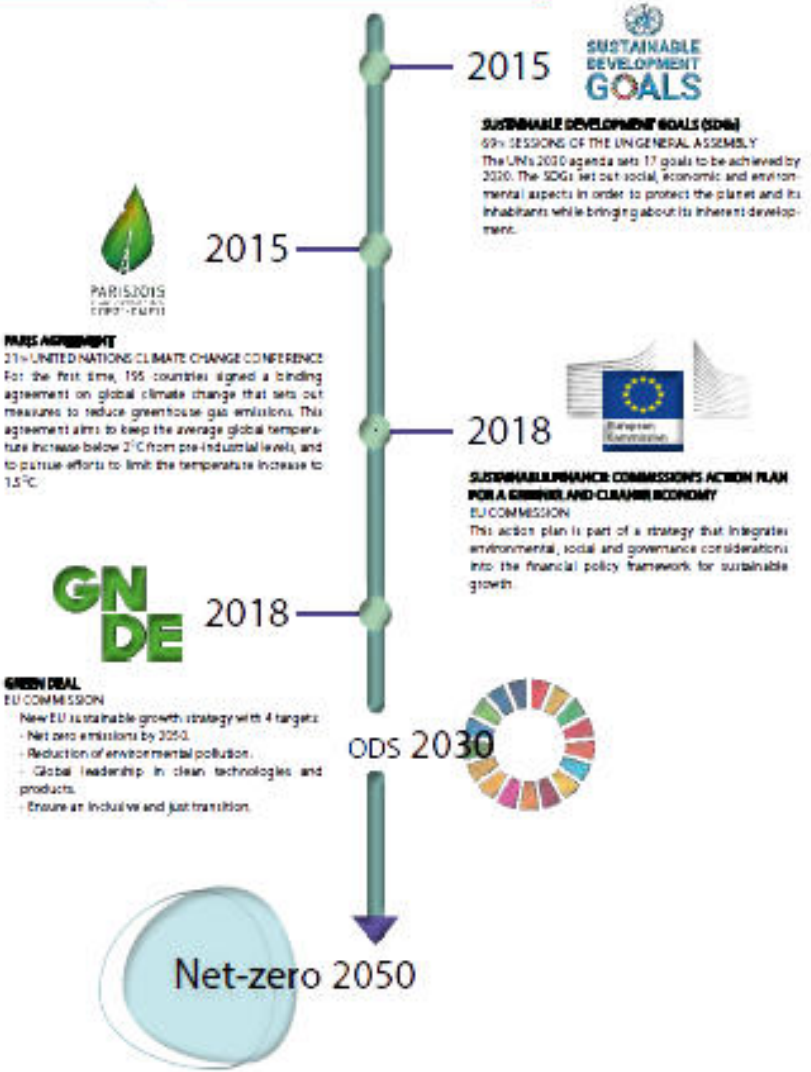
The creation of a more sustainable future

The development of our sustainability plan has been benchmarked against current legislation and requirements at a national, continental and global level. Within the established deadlines, the challenges to meet are the 2030 horizon with its SDGs, and Net Zero in 2050.

The circular economy and the challenge of net zero waste is another of our goals. As a steel processor, we are faced with one of the materials that best adapts to these principles, given its durability and recyclability, without forgetting the added value that we provide from Coated Solutions.

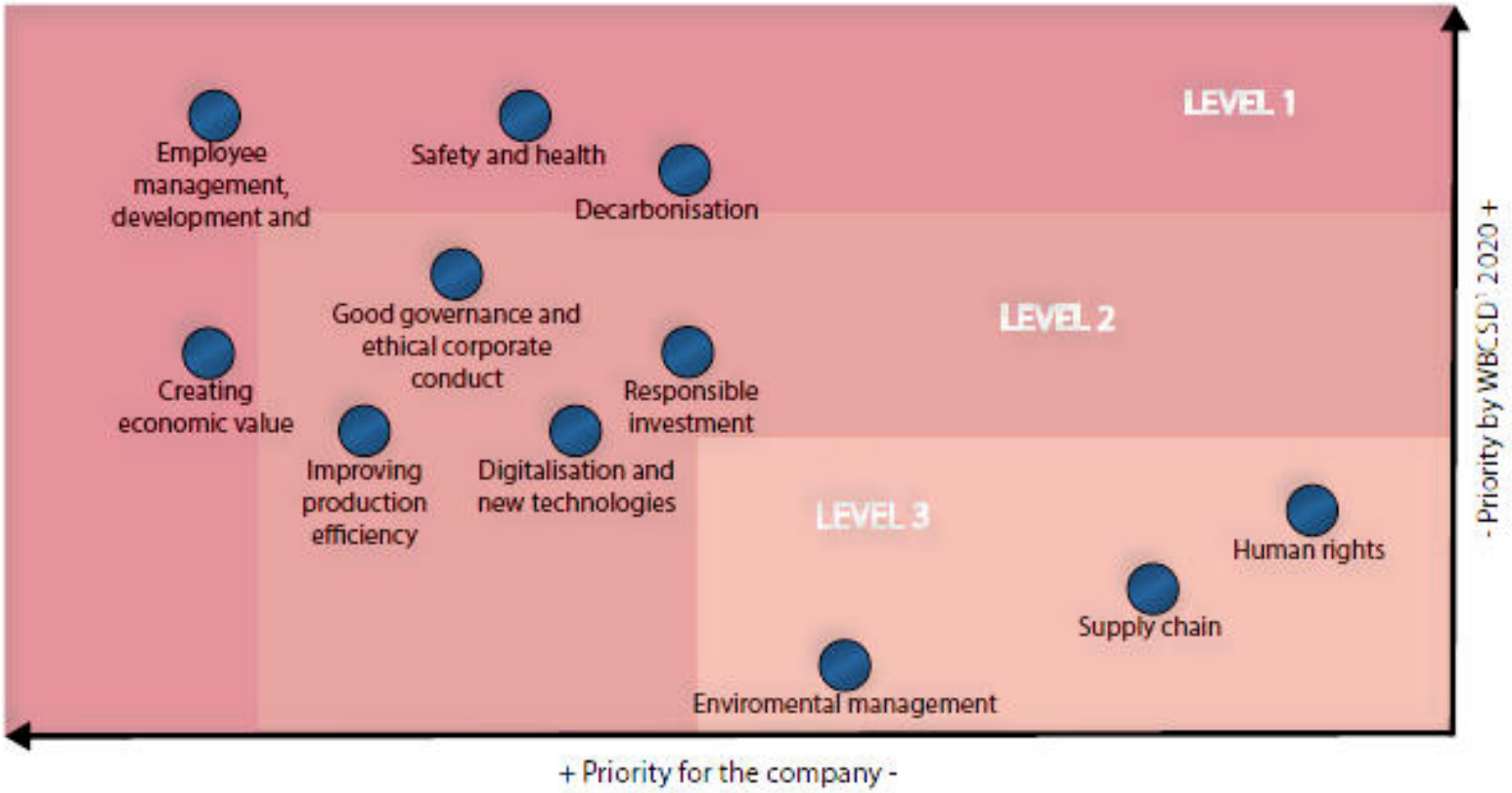
The European Union has launched its unprecedented economic package, Next generation EU, with the aim of building a system which is capable of coping with possible new challenges, such as those taking place in key areas such as the ecological transition, digital transition and reindustrialisation.

We have been striving since the beginning of our industrial activity to be at the edge of these challenges, optimising processes and resources in an efficient way and thus contributing to a more sustainable future.



Materiality: Selection of topics

As we are carrying out our first sustainability plan, and due to the lack of procedures to detect which topics are of interest for our business environment, the choice thereof has materialised through internal surveys in our different departments, which are in direct contact with stakeholders and the topics best suited to their requirements have been identified.



[1] World Bussines Council for Sustainable Development

Materiality: Trending topics

When creating our sustainability plan, we keep in mind the issues of greatest concern to society. All of our policies and actions in this regard comprise plans which, in one way or another, are engaged with currently emerging concerns.

Renewables energies

Reaching the goal of decarbonisation by 2050 would not be possible without the substitution and installation of new forms of clean energy. The use of already existing technologies combined with the emergence of new energy storage systems and the use of hydrogen, comprise a present which flags in a more energy sustainable future.

Gender equality

Gender equality implies that men and women receive the same rights, benefits, equal opportunities, equal sentences and are treated with the same respect in all aspects of daily life. It is not only a fundamental right, but constitutes one of the essential foundations for building a peaceful, prosperous and sustainable world.

Climate change

Reduction of greenhouse gas emissions is another of the major objectives of sustainability policies, for example, limiting CO_2 emissions vis-à-vis pre-industrial levels to try to mitigate the rise in global temperature and not change the state of the Earth's climate system.

Sustainable mobility

The emergence of electric vehicles, and engines powered by alternative fuels, represent the great hope with respect to conventional ones. These are responsible for particulate and NO_x emissions which have a harmful effect on health and the environment. Besides, in the EU, they also generate 70% of greenhouse gas emissions.

Circular economy

As an alternative to traditional linear economic models and given the availability of limited resources on the planet, the need arises for us to adapt to circular economy principles when creating goods and services which, from a holistic point of view, cover the period from their design to the end of their life cycle.

Materiality: Our contribution to trending topics

Commitment to renewable energies

The company is committed to installing energy generation systems using renewable sources, specifically the installation of solar panels that generate enough energy to be self-sufficient, therefore, ensuring that part of our electricity supply comes from renewable sources. Also considered will be other sources of energy that complement those already existing in some of our facilities.

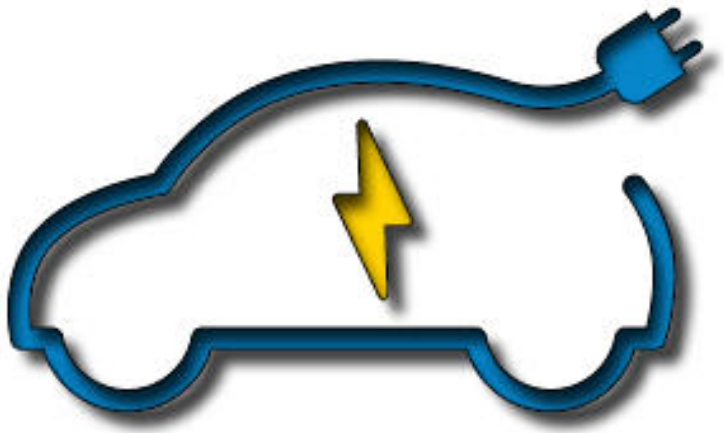
Gender equality and diversity

The creation of the equality plan is a reality for our organisation, through this the existence of equal opportunities regardless of gender is assured, therefore, we are reflecting what has been a basic principle since the group's constitution. But we do not stop there, we partake in assessing people on their talent regardless of their gender or ethnicity, we focus on their skills, experience and what each person can bring to the table.

Materiality: Our contribution to trending topics

Climate change

A key aspect which we have taken as a starting point is the analysis of our products' life cycle, measuring their carbon footprint and identifying where improvements can be made to reduce our CO_2 emissions. This analysis has been carried out by an independent body since 2016. While we do not just want to stop here, the next step over this time period will be to analyse our water footprint and also to assess the limited resources which we use on our production lines.



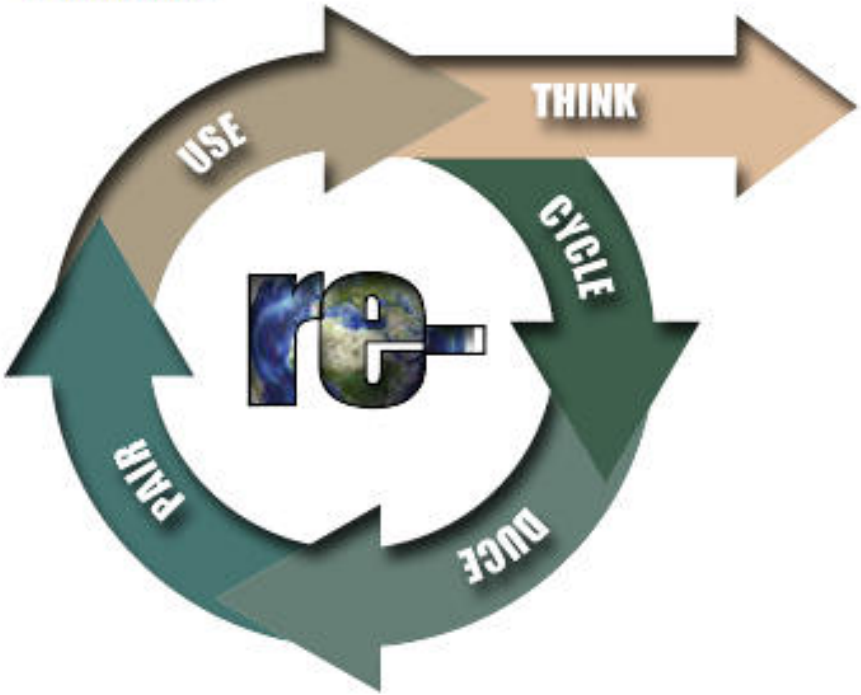
Sustainable mobility

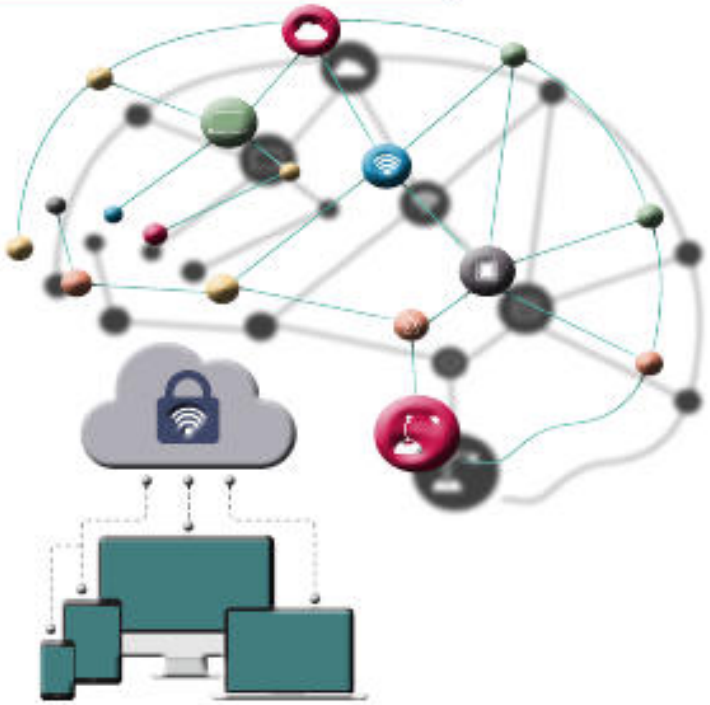
We participate in projects to provide electric car recharging points, as well as alternative fuel and natural gas vehicle refuelling stations in our industrial and urban surroundings. We also collaborate actively in requesting local authorities create and maintain infrastructures so that people can move around in a sustainable manner, asking for the installation of bike lanes, pavements and other structures that guarantee the safety and comfort of the users of such services.

Materiality: Our contribution to trending topics

Steel and its contribution to the circular economy

Steel is a fundamental part of our lives and as the processors of steel, endowing it with superior properties, we contribute to the circular economy by extending its life and reducing the use of other materials. Apart from that, due to its characteristics, it is reusable, repairable and most importantly 100% recyclable.





Others: Industry 4.0 and cybersecurity

In the wake of the recent health crisis, the European Union launched an unprecedented economic package to modernise and strengthen the industrial fabric, making the industrial economy more resilient and tailoring it to withstand future crises. The adoption of systems that adapt production processes to Industry 4.0 and create a cybersecurity network which protects the digital environment of companies, is one of the challenges we face in the coming years.

Materiality: Stakeholders selection

Once we have chosen the currently trending topics of interest, as well as those specific to our activity, we define our interest groups as the ones involved in the day-to-day goings-on in the company's surroundings. This strategy makes it possible to consult on upcoming sustainability plans and actions through surveys and interviews in order to best adapt to their needs. The main group we consider when devising actions is the society around us. We collaborate in social inclusion projects, we make donations to food banks in the areas of our plants and also, during the pandemic, we donated health material to look after everyone around us.

Employees: They are the most valuable asset, what drives our company forward. We ensure the development of our people's skills, training and retaining talent.

Customers: In the face of market needs due to the demand for more sustainable products, we are committed to working together, creating added value, achieving common goals and products of outstanding quality.

Suppliers: A close relationship with suppliers enables us to mutually develop more sustainable products. We choose our suppliers not only from an economic viewpoint but also from a socio-environmental viewpoint. We are also committed to local suppliers.

Partners: Strategic alliances with our partners represent an incredibly significant part of the great challenge of sustainability. This is a shared challenge to be taken on together, one which will enable us to create great opportunities for a better future for society.

Investors: To thank our investors for the trust placed in our company, for allocating resources to projects and businesses that are committed to being responsible with regards society and the environment surrounding us, generating the greatest profit without risking the development of generations still to come.

Subcontractors: We believe in the contracting of companies that share our values and policies on putting goods and services to good use.

Materiality: Our topics of interest

The choice of topics of interest accommodates both the needs derived from the steel industry itself and the subject matter covered by the ***World Business Council for Sustainable Development*** **(WBCSD)**[1]. Part of this plan and future strategy for the construction of sustainability policies, plans and reports, sets lines to establish the needs of society around us, suppliers, customers, investors and determine the stakeholders around which the company is built..

[1] World Bussines Council for Sustainable Development

People

Employees

Our employees are our most valuable asset and the key to achieving and implementing our sustainability plan. Since 2012, when Aranda Coated Solutions was created, the number of Coated Solutions plants has increased with the facilities in Santander, Aveiro and León. Consequently our family has grown in terms of employee numbers, creating quality, stable and long-term employment, generating both direct and indirect jobs in the areas where they are established. Furthermore, an imminent increase is foreseeable in the facilities in León with the start-up at 100% of its capacity.

Training and development

We believe in retaining our employees' talent, in training and developing their professional skills and abilities, not only those skills which are sector-specific, but also those which we believe are necessary in each job. In 2021, the implementation of training schools prior to taking on new employees is a reality. The people selected are trained for more than 50 hours so that they learn about what is to be carried out and about the work environment, the company's values, our quality system, environmental and sustainability policies, health and safety and everything they need for our production system, and it is highlighted that employees come first. We developped this training system in order to cover the needs demanded by our professional market, given that there is limited number of professionals with the characteristics our industry demands. The aim was to speed up this qualification process and to enhance the level of quality of our employee´s work.

Gender equality

The equality plan will come into being in 2021. Within it, the commitment to ensure this basic principle will be made visible, it will implement a monitoring and control system to ensure compliance with the principles and policies acquired by the group in this area.

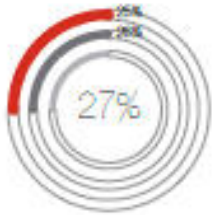
Health and safety

We strive to make sure there are zero accidents at our facilities, which is why, in addition to our own safety mechanisms, we are ISO 45001 certified. We provide a safe working environment, reinforcing our commitment in this area with training which is specific, and other training sessions which are fully customised and suited to each job.

People

In order to materialise and measure our degree of involvement with the people who make up our organisation, we have selected the following indicators:

	Employees	Training hours (h per employee)	Gender equality (women rate)	Occupational accidents (per 100 employees)
2019	172	20	24%	9
2020	**190**	**24**	**24%**	**6**
2021	240	40		0
2022	340	42		0
2023	460	45		0



Environment

Emissions

We carry out regulatory measurements, in addition to having a periodic check for internal control which verifies that these values are at all times below the limits we set ourselves and well below those required by current legislation. We have a regenerative thermal oxidiser (RTO) in all our prepainted plants that enables industrial air quality control, designed to break down hazardous air pollutants, volatile organic compounds (VOCs) and other atmospheric emissions into CO_2 and water vapour by heating exhaust air to high temperatures. This technology is highly efficient in destroying these polluting elements and enables us to reuse most of the thermal heat generated during the destruction of VOCs.

Carbon footprint

Our commitment to global warming is at its highest level, it is key in the effort to bring down our greenhouse gas emissions because of their high global warming potential. Since 2016, we have been analysing the life cycle and carbon footprint of our products through the independent institution which is the University of Cantabria. All our efforts go into identifying where we can improve and, as much as possible, into adopting measures to reduce our CO_2 emissions. It is a set of holistic measures ranging from the choice of suppliers and services, the selection of the latter not only from an economic point of view but also assessing them from the point of view of sustainability, right up to our own production process. The continuous improvements in our production process, such as the replacement of items for other more efficient equipment, the adaptation of our facilities to industry 4.0, the digitalisation and automation of systems and the use of artificial intelligence, put us at the forefront of the prepainted industry. The research and development of new, more sustainable products with the collaboration of suppliers and customers is another of our improvement targets regarding our emissions in the entire value chain of our products.

Water

To obtain water with the characteristics required by the process, we use a reverse osmosis system that enable us to purify water at a much lower level of energy consumption than other existing technologies. We minimise water consumption by using it in a closed cycle, subjecting it to continuous filtering, purification and reuse. On the other hand, the possibility of using rainwater is being considered in order to continue minimising industrial water consumption.

Environment

Sustainable transport

Transporting goods by ship generates up to **20 times less CO_2 emissions** per tonne than road transport; while rail transport generates **3 times less**.



In order to reinforce the idea that products enter and exit by ship or rail, when selecting road transport, we have decided to choose companies that are committed to using natural gas powered vehicles (NGV). The use of this fuel enables a 25-30% reduction to be made in CO_2 emissions compared to conventional EURO truck 5 diesel. Our annual target is to increase the number of trucks powered by these fuels by 5% until they represent the majority over the next few years.

As far as the internal mobility of goods is concerned, we promote the use of electric machinery that does not generate emissions of particles or other polluting gases, as well as the possibility of adapting existing machinery to use biofuels or natural gas for vehicles. Moreover, for port to facilities transport, we use large capacity vehicles of up to 60 t, thus minimising the number of transfers. The group has created companies for the promotion of *intermodal* rail transport (Aranda de Duero / Villadangos del Páramo) in collaboration with other companies, for the use of rail as a sustainable means of transport.

Environment

We make a difference in transport

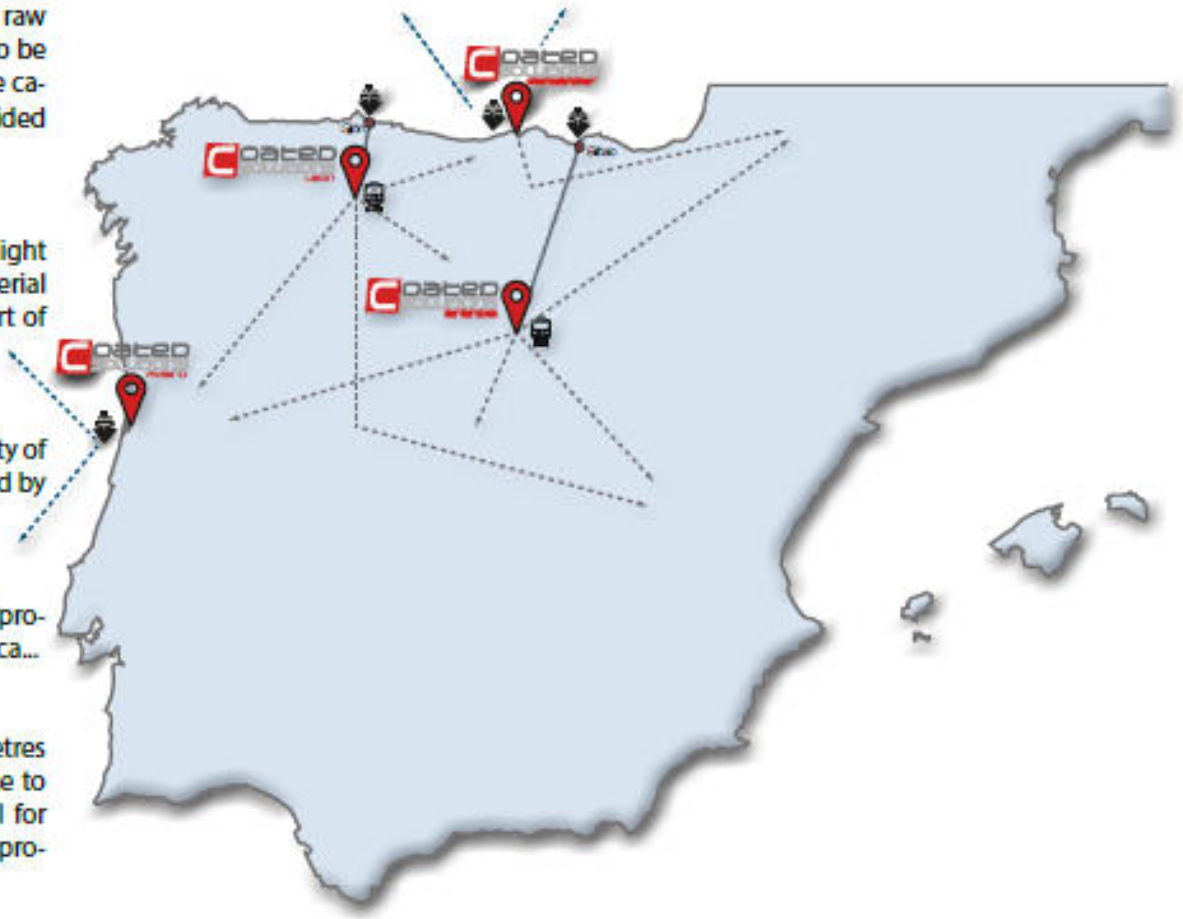
The strategic location of our plants enables raw materials to be supplied and our products to be transported in a sustainable way, using large capacity transportation such as THE ONE provided by ship and train.

Aranda Coated Solutions
Connected by a railway which comes straight into our facilities, the massive supply of material is enabled by a direct connection to the port of Bilbao.

Santander Coated Solutions
Its location on Raos quay in the port in the city of Santander, means that we are well connected by sea to northern Europe.

Aveiro Coated Solutions
Also with an Atlantic Ocean connection, it provides connections to all parts of Europe, Africa...

León Coated Solutions
We have a provisional dry dock a few metres from our facilities, with a railway branch line to go right inside the warehouses with a hall for unloading and another for the shipment of products.



Environment

International markets

We offer our customers the necessary support to access a wide range of products and the opportunity to become strategic partners in the international markets of Spain, Portugal, Germany, Benelux, France, Poland, Ireland, Sweden, Romania and Africa.

Environment

Environmental indicators have traditionally been used to make sustainability visible and are a good tool for quantifying our environmental performance:

	VOCs Emissions (mg/m^3)	Water (m^3/t)	Carbon footprint ($t\ CO_2/t$)	Transport ($t\ CO_2/t$)
2019	12	0,28	2,72	60,09
2020	**10**	**0,25**	**2,76**	**54,61**
2021	9,7	0,24	2,68	54
2022	9,5	0,23	2,60	53
2023	9,3	0,22	2,52	52
Sector reference	14,4[2]	0,28[2]	2,65[3]	

[2] Best Available Techniques (BAT) Reference Document on Surface Treatment Using Organic Solvents including Preservation of Wood and Wood Products with Chemicals

[3] ecoinvent database

Waste

Waste management

All our waste is processed by authorised waste managers who guarantee that as far as possible it is recovered, either for recycling into other products or by-products, or for energy use. Alternatively, if due to its nature it cannot be used, its stabilisation and reduction is guaranteed before it is definitively disposed of in a landfill site.

Valorization

The correct management of waste allows environmental benefits to be obtained, thus reducing the impact that such waste would generate if it were disposed of directly in landfill, saving atmospheric CO_2 emissions of 20 kt per year.

Material efficiency

The correct use of raw materials means less waste is generated, which saves on management costs, emissions and possible environmental dumping. All our efforts at making better use of our two main raw materials, galvanised steel and paint have yielded results, reducing the consumption of these inputs and optimising the process.

Sustainable workplaces

Not only do we practice waste segregation during our process, but we also have a waste separation, recycling and minimisation system in place at our work centres. We carry out education and awareness measures so that each of the individuals that make up the group puts this into practice at home.

Steel efficiency and the circular economy

The main waste we generate is steel scrap, which although we are committed to generating as little as possible, it is true that given its nature and composition, which is mostly steel, we manage to recycle 100% of it into new products, which once again become part of the never-ending steel cycle.

Waste

In order to adapt to the new circular economy model we have chosen, we want to give visibility to our achievements in terms of waste generation and management.

	Hazardous (kg/t)	Valorized (%)	Steel efficiency (%)	CO_2 saved (kt de CO_2)
2019	2,59	93,56	99,03	26,84
2020	3,19	99,57	98,97%	22,08
2021	3,00	99,00%	99,05%	23
2022	2,95			24
2023	2,90			25
Sector reference	4,85[2]	98[2]		

[2] Best Available Techniques (BAT) Reference Document on Surface Treatment Using Organic Solvents including Preservation of Wood and Wood Products with Chemicals

Value chain

Ever since the industrial revolution, we have lived in a carbon society. Large scale steel production would not be possible without the use of coal, which plays especially important roles in the production of crude iron as a reducing agent and heat source among others. Steel revolutionised the way we live, travel and ultimately our world. Nowadays, we are living a new age of iron and the products derived from it. It is likely that the next decade will be marked by the use of hydrogen.

The need to reduce CO_2 emissions coupled with ambitious challenges and our commitment as a company to increase the sustainability of our production cycle, has obliged us to develop new technologies that do not generate greenhouse gases. This is where hydrogen comes into play, known as a significant energy vector, technologies are being developed for the direct reduction of iron oxides, using a hydrogen stream to produce sponge iron without the need for traditional coke.

As steel processors, this is where we need to create links with primary producers to get products with lower emissions and move hand-in-hand towards the creation of products that get to end users with the maximum features and while respecting our commitment to sustainability. What all these technologies aimed at the production of steel with low carbon emissions have in common is the way in which hydrogen is obtained for its use in the different roles played by the production process, since the different names it is called depend on the way in which it is produced. Blue hydrogen, green hydrogen, hydrogen, grey hydrogen, brown or black hydrogen. The main differences are whether water hydrolysis or natural gas reforming is used to obtain it, whether the energy used comes from renewable sources or not, and whether there is CO_2 capture and storage during the process.

According to publications by the world steel association[4], there is a commitment on the part of some primary steel producers to a low carbon pathway that sets out a roadmap for 2025, reducing carbon emissions by more than 10% with respect to 2022, when they would reach their peak. By 2030, they will be reduced to 30% and by 2050, there will be net zero carbon emissions.

Such steps forward and being able to count on these committed producers will enable us to reduce our carbon footprint and at the same time place our bets on sustainability in our production process.

[4] World steel association

Value chain

R&D projects

To remain at the forefront of Industry 4.0, we need to make constant modifications to our production system. Artificial intelligence, automation and digitisation of processes are part of our daily lives and part of the future in order to create a more efficient, resilient and competitive company, which develops products that have better features and less of an environmental cost. Collaboration agreements with other entities in areas where our different plants are located, will enable us to participate directly in first line research. We are committed also through the close link that unites us with suppliers and customers with whom we work on the creation of new cleaner products and ones without harmful components (red list free). Projects range from improvements in the production process, less waste generation and emissions, never forgetting to carry out research aimed at developing new products which perform better and have better features because they are sustainable and preserve the environment.

Certifications and accreditations

Our certifications and accreditations are hallmarks of sustainability and reinforce our commitment. We possess certification ISO 9001 (quality management system) for the registration of our suppliers' labels, statements and certifications and thus select from these on the basis of these criteria. In addition to the aforementioned, we also hold the ISO 45001 (occupational health and safety management system) and ISO 14001 certifications (environmental management system). Our urge to improve means we are engaged in obtaining energy certifications, statements of responsible production of products and the ECCA seal of quality and sustainability for prepainted products. Our criteria for the evaluation of suppliers is not only based on an economic standpoint, but also considers other criteria such as those related to the environment.

Value chain

Transport

When we cannot transport our products using formats suitable for exceptionally large tonnages and we have to use road transport, we maintain strict logistical control over the planning of the shipment, during which we adjust the weight of the products shipped as much as possible to the load capacity of each of the lorries because every tonne counts in our effort to reduce our carbon footprint.

Productivity

As a key objective in the 2030 agenda, responsible production for us is a fundamental part of our factories, where we transform and add value to raw materials. Responsible consumption and production in order to manage our planet's natural resources is for us a priority. A good production schedule not only has economic benefits, if we reduce unscheduled downtime and optimise periods of machinery start-up and shut-down which generate exceedingly high avoidable consumption, it allows us to carry out responsible production and to optimise the use of resources and materials.

Value chain

As a living entity, the company has to adapt to changing market conditions and the changing state-of-the-art and do so in a sustainable way in order to adapt to customer needs. This is why we involve in the whole supply chain, developping products with the best features through close cooperation with suppliers and customers.

	R&D projects	Certified suppliers (%)	Productivity (%)	Dead freight (t/truck)
2019	9	99	95,67	22,67
2020	7	99	97,16	22,67
2021	9	99,00%	95,00%	22,84
2022	10			22,84
2023	12			22,84

Energy

Energy efficiency

We are aware of how technical assessment relates to our production systems, so we are committed to replacing equipment with more efficient versions that generate savings in energy consumption which result in a more sustainable product.

Indirect energy

As a measure to reduce emissions associated with electrical energy generated in the production centres, we are studying the possibility of varying the generation mix by purchasing green energy from our marketer, which will allow us to achieve even further reductions in our emissions.

Renewable energies

Over the next few years, we plan to install more than 4 MWp of photovoltaic solar energy for our own consumption, which, in terms of electricity consumption, will reduce our indirect CO_2 emissions by up to 2,000 tCO_2 per year.

Carbon sinks

Carbon sinks are another mechanism we will use to offset our CO_2 emissions as much as possible. We will look for projects in the vicinity of our factories to plant native species that mitigate this effect and contribute to renewing the carbon cycle.

Energy

Regenerative thermal oxidizer

All our prepainting plants are equipped with an regenerative thermal oxidizer (RTO) system that enables energy recovery from exhaust gases and also oxidises hazardous air pollutants and volatile organic compounds (VOCs), generating a reduction thereof and heat that is used to heat the gas stream entering the furnaces.

RTO ARANDA COATED SOLUTIONS

RTO SANTANDER COATED SOLUTIONS

The basic concept behind the design of thermal oxidation is to promote a chemical reaction in the air pollutant with oxygen at high temperatures. This reaction destroys the VOC emission in the air stream by converting it into CO_2, H_2O and heat.

Energy

Another of the key indicators when it comes to measuring our sustainability, as it is something that can easily be measured and against which very realistic goals can be set to provide us with energy savings and environmental benefits.

	Direct energy (kWh/t)	Indirect energy (kWh/t)	Energy intensity (kWh/t)	Renewable energy (MWp)
2019	191	66	257	0
2020	**181**	**62**	**243**	**0**
2021	180	56	236	1
2022	178	50	228	2
2023	176	45	221	3

Summary

Materiality summary 2021-2023

People	2019	2020	2021	2022	2023
Employees	172	190	240	340	460
Training hour (h per employee)	20	24	40	42	45
Gender equality (women rate)	24%	24%	25%	26%	27%
Occupational accidents (per 100 employees)	9	6	0	0	0

Environment	2019	2020	2021	2022	2023
VOCs emissions (mg/m³)	12	10	9,7	9,5	9,3
Water (m³/t)	0,28	0,25	0,24	0,23	0,22
Carbon footprint (t CO_2/t)	2,72	2,76	2,68	2,60	2,52
Transport (t CO_2/t)	60,09	54,61	54,00	53,00	52,00

Waste	2019	2020	2021	2022	2023
Hazardous (kg/t)	2,59	3,19	3,00	2,95	2,90
Valorized (%)	93,56	99,57	99,00	99,00	99,00
Steel efficiency (%)	99,03	98,97	99,05	99,05	99,05
CO_2 Saved (kt de CO_2)	26,84	22,08	23,00	24,00	25,00

Value chain	2019	2020	2021	2022	2023
R&D projects	9	7	9	10	12
Certified supplier (%)	99,00	99,00	99,00	99,00	99,00
Productivity (%)	95,67	97,16	95,00	95,00	95,00
Dead freight (t/truck)	22,67	22,67	22,84	22,84	22,84

Energy	2019	2020	2021	2022	2023
Direct energy (kWh/t)	191	181	180	178	176
Indirect energy (kWh/t)	66	62	56	50	45
Energy intensity (kWh/t)	257	243	236	228	221
Renewable energy (MWp)	0	0	1	2	3

Coming soon ...

Coated Solutions León

- Located in Villadangos del Páramo - León
- Declared as a priority industrial project in the region
- Operations to start in 2019
- Total surface: 110.000 m² / 50.000 m² of factories
- Logistics: guaranteed rail access to seaport (Gijón - Nord of Spain)
- Pickling, cold rolled and hot dip galvanized lines
- Development of Acid recovery plant (ARP)
- Capacity: 520.000 t/year

Coming soon ...

Acid regeneration plant

The residual acid from the pickling line enters our regeneration plant (ARP) and through a process of separation and concentration, we manage to regenerate the used acid which will be reused to cover the demand for fresh acid. This process minimises environmental impact and eliminates any hazardous waste. Furthermore, most of the effluent from the pickling line can be sold as raw materials for other industries. With the acid regeneration plant we manage to close the circle and thus move towards circular production.

Acid pickling line

This is a hydrochloric acid (HCl) pickling line with which we remove the oxides that form on the surface of hot-rolled coils during cooling. This acid penetrates through the cracks in the surface layers of rust and scale, dissolving the wüstite layer that forms on the base metal. This reaction with the metal generates free H_2 which helps to wash away the remaining acid-insoluble oxide layers leaving a clean surface ready for further processing. In addition, the line is equipped with an electrostatic oiler that protects the surface of the belt from corrosion after processing and thus preserves its properties.

Coming soon ...

Cold rolled line

In order to keep up with the thicknesses demanded by some industries, we have to submit the coils to a cold rolling process in which the strip is passed between heavy rollers that exert great pressure, achieving a reduction in thickness. This process serves as a previous step to hot dip galvanising and continuous galvanising with which we feed our next line in the production process. After this process, it is subjected to a trim to achieve the desired width.

Continous hot dip galvanizing line

Once the coils have been rolled, they are subjected to a hot-dip galvanising process in which the coil is covered in a metallic coating. This metallic coating comprises metals or alloys that give it some corrosion resistant characteristics. Additionally, we have a continuous annealing furnace so that in each case the required mechanical properties are achieved. The production of hot dip galvanised coils will enable the opening up of new markets and feed our prepainting plants, which use these coils as substrate, reducing material delivery times for our customers.

Coming soon ...

Best Available Techniques (BAT)

When designing our new facilities in León Coated Solutions, we relied on the most cutting-edge and innovative engineering systems to design and optimise the facilities and production lines from the point of view of efficiency. The plant, which is currently in the construction phase for the cold rolling and continuous hot dip galvanising lines, was designed from the outset with sustainable production in mind.

Part of these installations, which are auxiliary to the production process, are already in operation, supporting the pickling line that began its testing and production phase in 2020. The BATs implemented seek to optimise the resources necessary for the operation of our production processes, aiming to save primary energy, electricity and water in order to achieve a rational use of resources and ensure their preservation.

Steam boilers

Steam boilers incorporate heat recuperators in the chimneys, revaporisers and associated heat exchangers, which transfer heat to the boiler feed water. Moreover, the boilers incorporate modulating gas burners that regulate the combustion air, increasing its energy efficiency, adapting the inlet air flow to meet the real needs for heat.

Regenerative burners

Regenerative burners will be installed in the galvanising line, which recover waste heat from the furnace exhaust gases and preheat the combustion air to significantly increase efficiency compared to conventional burners or recuperators. They also reduce NO_x emissions.

Compressed air installation

A heat recovery installation is carried out, to recover heat from the compressors in support of the boilers of our liquefied natural gas plant and also to support another part as a contribution to heat the soft water which is fed into the boilers.

Coming soon ...

Always at the forefront with BATs: Present and future

Reverse osmosis system

We have a highly efficient system for the production of demineralised water that does not use any type of chemical component in obtaining the process water.

Waste-water treatment plant

We already have an acid water treatment plant for the treatment of water from the pickling line and we will install a complementary one for the treatment of oily water in order to return this water in optimum conditions to the wastewater collector system.

Purge water

A system has been designed to recover and treat the purge water from the cooling pond coming from the laminating and galvanising lines for other uses in the process and to thus have a closed circuit to reuse and minimise the use of fresh water.

Reject water recovery system

The reject water resulting from the demineralised water production process is employed in various productive uses: Pre-washing stage prior to stripping, washing and other cleaning in order to make maximum use of this resource.

Pumping control systems

We have a pressure control system in the water pumping circuit so it can be adjusted to the needs of the process without causing excess consumption. Besides, all these pumps are equipped with frequency variators that enable the optimisation of electrical energy consumption in their power supply.

Coming soon ...

eco steel solutions

- Located in Aranda de Duero - Burgos
- Hot rolled coils pickling line
- Tecnologies:
  - Eco Pickled Surface (EPS)

  Frist line in Spain able to pickling above 8 mm up to 15 mm. Ecological system

  Impact pickling with "slurry", a mixture of water and metallic particles "grit"
  - Smooth Clean Surface (SCS)

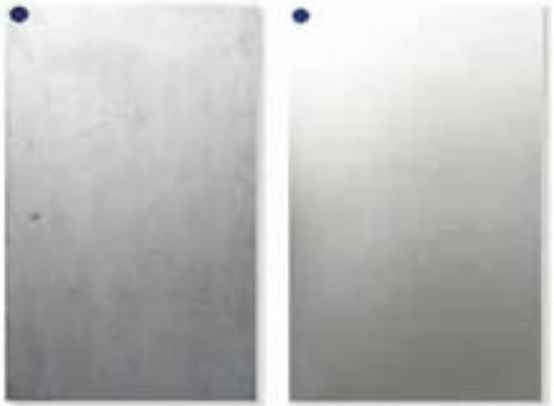
  Rust and scale are removed from the surface without the use of acids and oil used in the abrasive roller system

  Clean, dry and corrosion-resistant product
- Capacity: 150.000 t/year

Coming soon ...

Ecological pickling (Steel coils and plates)

Our ecological pickling system consist of passing the previously flattened and tension-free strip-through a cell where it is put under the impact on its entire surface homogeneously and with various angles of incidence of a mixture called "slurry" composed by water and metallic particles of irregular shapes known as "grit". This process allows to obtain a product with an exceptional surface finish that is comparable to the conventional pickling without modifying any of its mechanical or hardness properties. Nevertheless, the TDE product offers its users may advantage compared to acid pickling.



The TDM coils have much more resistance to oxidation then the acid pickled ones. They have an improved performance when submitted to industrial processes such as laser cut, welding, painting and galvanization. When using TDM coils, there is no need for blasting and degreasing processes, which in turn means significant savings.

Mechanical pickling

Acid- and oil-free steel coil pickling process using an abrasive roller system.
Clean, dry and corrosion resistant product.

Appendix

The results and targets set are part of the measurements carried out in the prepainted product plants. The indicators set out in the document are the result of the mean value obtained from the individual indicators in each one of the plants; Aranda Coated Solutions, Santander Coated Solutions and Aveiro Coated Solutions during years 2019 and 2020. On preparing this document, scopes 1, 2 and 3 have been considered in the product life cycle analysis.

Sustainability contact

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Certifications

Coated Solutions has obtained the ISO 9001 (Quality Management System), the ISO 14001 (Environmental Management System) and the OHSAS 18001 (Occupational Health and Safety Management System) certificates awarded by Lloyd's Register Quality Assurance (LRQA).

With these certifications, our company demonstrates its commitment to achieving full customer satisfaction, as well as superior management systems in all areas of the organisation.

More information in our website

https://www.coatedsolutions.com

Coated Solutions