

Earth, air, water and fire: the elements of a sustainable factory

- SEAT has reduced its environmental impact by 34% since 2010 and aims to achieve 50% by 2025
- Pavement that reduces pollution, efficient chimneys or the largest solar plant of Europe's automotive industry are just some of the projects
- Reducing polluting emission and waste even more is on the horizon thanks to the circular economy

Martorell, 05/06/2019. The fight against climate change is a global movement with contributions also being made by car factories. For example, SEAT has reduced the environmental impact of its Martorell factory by 34% since 2010. On occasion of World Environment Day, we take a look at the company's major initiatives to look after the planet.

Earth: pollution-reducing pavement. The pavement at the SEAT Technical Centre reduces pollution. It is called photocatalytic pavement, and it is made with cement slabs applied with titanium dioxide. The curious property of this element is that when it comes into contact with pollutants, light and oxygen at the same time, it triggers a chemical reaction that decomposes the pollutants in the air, turning them into nitrates that dissolve with water. So, it decontaminates, cleans itself and has a bactericidal effect.

SEAT currently has 4,000 square metres of photocatalytic pavement, which reduces air pollution by 40%. The company is studying their installation on a further 26,000 square metres of walkways within the entire business complex in Martorell. **“This project is framed in the Ecomotive Factory initiative and aims to improve air quality and reduce pollution by 40%. There is an extremely high potential for reducing nitrogen oxide (NO_x) emissions, as the first phase alone at the Technical Centre enables reducing 0.8 tonnes annually. If it were implemented in the rest of the factory the potential would amount to 5.2 tonnes per year.”**, explains SEAT Engineering Processes manager Dr. Joan Carles Casas.

Air: sustainable chimneys. An annual savings of 11.7 GWh in natural gas consumption, equivalent to the needs of about 2,400 Spanish households every year. This is what SEAT has achieved thanks to a new installation that recovers the energy emitted by the bodywork drying ovens in one of the workshops. The hot air rising up the chimneys heats a water circuit, which is later used in the car body paint processes.

By way of this initiative, 2,400 tonnes of CO₂ are prevented from entering the atmosphere annually, the equivalent of 2,200 flights from Madrid to New York.

Water: an ocean of paint. The paint workshop features the processes that consume the most water, more than half the total. Chassis surface treatments, wash booths and final painting booth are all processes and facilities that require a lot of water, but this workshop is precisely where efforts are being made to save this resource. When cars are spray painted, a small amount is lost in the process and falls into a treatment vat. **“The necessary chemical products are added**

here to separate the paint from the water, and one cleaned, it is returned to the process in a completely closed circuit”, explains Dr. Casas.

Another area that is water-intensive is the rain test, which verifies the water-tightness of all vehicles by spraying them with more than 150 litres of water per square metre for six minutes. This process also uses a closed circuit. **“All the water is collected and sent through a treatment circuit prior to returning it to the process”,** explains Dr. Casas.

Fire: the sun as a source of energy. For many years people thought the sun was a ball of fire. That myth has of course long been dispelled, but luckily the sun's energy potential still remains. A good example of this is SEAT al Sol, the biggest solar plant in the automotive industry in Europe: it features a total of 53,000 panels on the roofs of the factory workshops and covered parking lots for export vehicles, covering an area of 276,000 m², the equivalent of 40 football fields, and generates more than 17 million kWh annually with no polluting emissions. **“This prevents the emission of 4,250 tonnes of CO₂ annually, the same amount which is absorbed by around 700,000 trees”,** explains Dr. Casas.

On a related topic, SEAT has also replaced conventional lightbulbs with high efficiency LED bulbs in the interior and exterior of its production centres. This is an annual energy reduction equivalent to the consumption of 1,000 households.

In addition, the SEAT forest: company employees contributed to creating a botanical garden in Martorell's Can Casas park by planting 80 trees of different native species, as well a space for the protection of the Hyla Meridionalis frog. Each tree is tagged with a QR code which can be scanned by a mobile phone to obtain information about each species.

In figures...

Reduction of environmental impact 2010-2018: 34%

In energy: 22%

In water: 31%

In CO₂: 63%

In waste: 34%

In solvents: 22%

SEAT is the only company that designs, develops, manufactures and markets cars in Spain. A member of the Volkswagen Group, the multinational has its headquarters in Martorell (Barcelona), exporting 80% of its vehicles, and is present in 80 countries on all five continents. In 2018, SEAT sold 517,600 cars, the highest figure in the 68-year history of the brand, posted a profit after tax of 294 million euros and a record turnover of close to 10 billion euros.

The SEAT Group employs more than 15,000 professionals and has three production centres – Barcelona, El Prat de Llobregat and Martorell, where it manufactures the highly successful Ibiza, Arona and Leon. Additionally, the company produces the Ateca in the Czech Republic, the Tarraco in Germany, the Alhambra in Portugal and the Mii in Slovakia.

The multinational has a Technical Centre, which operates as a knowledge hub that brings together 1,000 engineers who are focussed on developing innovation for Spain's largest industrial investor in R&D. SEAT already features the latest connectivity technology in its vehicle range and is currently engaged in the company's global digitalisation process to promote the mobility of the future.

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