GRADHERMETIC®

Barcelona 15-01-2017

COMPANY POLICY

INDUSTRIAL GRADHERMETIC is concerned about the environment and therefore engages in active policies to improve the energy efficiency of the company's processes and reduce CO_2 emissions.

These policies consist mainly of the following:

Recycling

We remove tonnes of recyclable aluminium material from our environment and transform it into high quality end products.

10,000,000 kg per year

Efficiency and optimization of the production process

From the recycled material we obtain second-fusion aluminium, thus saving the energy and reducing the emissions that would have been generated by using primary aluminium.

30,000 tonnes of CO_2 per year

Total elimination of waste, taking advantage of the excess energy (incineration, purifying, reusing) generated in the aluminium painting process (coil coating system).

346 tonnes of CO_2 per year

Renewable energies

In our central plant we have installed a photovoltaic roof of 200 kWp that produces emission-free electricity which we supply to the main network, consequently reducing the emissions that would have been generated by conventional electrical power.

237 tonnes of CO_2 per year

Product range

We manufacture products designed to protect buildings from the sun, which involves significant energy savings (500,000 m2 of installed solar protection per year).

18,800 tonnes of CO_2 per year

GRADHERMETIC, S.A.E
GRADHERMETIC
TERRASSA

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SOLAR PROTECTION AND ENERGY SAVINGS

The sun is a source of energy that provides the earth's surface with approximately 1000 W/m². This energy affects our buildings by providing heat and light every day. In principle this is extremely positive for the energy efficiency of the building, given that it is a clean source of energy (i.e. non-polluting) as well as free. However, in practice it has been proven that if we do not control the building's exposure to this energy, instead of contributing to energy efficiency the sun considerably increases its energy consumption.

In order to control this consumption adequately, GRADHERMETIC solar protection systems offer the ideal solution as they easily regulate the sunlight that penetrates the building.

Adjustment of the slats means that in winter you can reduce the consumption of central heating because during the day the slats are opened to increase the amount of sunlight that penetrates the building. At night, closing the slats helps to keep the warmth inside.

In summer, the control strategy should change so that the slats are directed to stop the sun's rays entering the building to keep a pleasant ambient temperature and make considerable savings on air-conditioning costs. At night, opening the slats and windows allows the air to circulate, once again minimizing the need for air-conditioning.

The solution of directional slats also allows users to regulate the amount of light that enters the building, enhancing visual comfort and avoiding uncomfortable glare. When combined with automated regulation systems that control the direction of the slats and artificial lighting devices, the use of natural lighting can be optimized to save energy.

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LEGISLATION AND USEFUL DOCUMENTS

European directive 2010/13/EC on the energy efficiency of buildings, passed on 19 May, considers the following aspects, amongst others:

- Buildings are responsible for 40% of energy consumption in the EU.

- The European Council proposes to reduce energy consumption by 20% by 2020 and ensure that renewable energies supply 20% of the total consumption.

- The member states undertake to implement the following:

a) By 31 December 2020 at the latest, ensure that energy consumption in all new buildings is almost zero.

b) After 31 December 2018, new buildings that are occupied and owned by the public authorities should have almost zero energy consumption.

- The application of minimum energy efficiency requirements for buildings and the units and elements of existing buildings that are undergoing major reforms. "Major reforms" are regarded as the renovation of a building when:

a) The total cost of the renovation of the building envelope or its technical installations is higher than 25% of the value of the building, excluding the value of the land on which it is built, or

b) more than 25% of the surface area of the building envelope is renovated.

- The potential buyer or renter of the building must be given an energy certificate showing the correct information about the energy efficiency of the building and practical advice on how to improve energy consumption.

Current European legislation demands that very exacting energy efficiency criteria are met to achieve the targets set for 2020. The current technical building code also lays down stringent levels of energy demand to ensure the energy efficiency of buildings.

Bearing in mind the importance of energy efficiency in buildings in the short and medium term, the solar protection systems made by GRADHERMETIC are the ideal solution for helping to significantly increase energy efficiency in both new and existing buildings (renovations).

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PRODUCTION PROCESS

INDUSTRIAL GRADHERMETIC has an industrial facility of 40,000 m2 for manufacturing its products.

The integrated production process of INDUSTRIAL GRADHERMETIC facilitates control of the entire value chain of products, thus guaranteeing the very highest quality standards.

Starting with stock aluminium and after a comprehensive manufacturing process (melting furnaces, casting, hot-rolling, cold-rolling, tension levelling, continuous painting lines, cutting lines, profiling and assembly), we obtain the end product, whose quality is controlled and verified by our approved laboratories.

SMELTING

This is the installation for manufacturing aluminium alloy sheets for subsequent rolling, shaped by a tilting melting furnace with a capacity of 30 MT and semi-continuous casting.

The facility is rounded off by a spectrographic analysis laboratory which allows exhaustive control of both the raw materials and the alloy of the finished sheets.

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ROLLING

This installation comprises:

Processing kilns for partly-finished aluminium goods, reversible hot-tandem rolling, reversible IV cold-rolling with hydraulic clamping and automatic thickness control.

This installation allows the manufacture of aluminium spools with thicknesses ranging between 0.25 and 1.5 mm.

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FINISHING MILLS

A series of COIL COATING lines where the aluminium spools are pre-treated prior to the application of the relevant finish (oven-polymerised paints, decorative film for special finishes, protective film, etc.) depending on the requirements of the finished product for which the aluminium is to be used.

INDUSTRIAL GRADHERMETIC, S.A.E. markets its pre-lacquered strips under the brand names of Prelac, Rollicolor and Rolliplast

PROFILING LINES

Cold profiling machines that transform the aluminium spools into profiles which then make up the products marketed by INDUSTRIAL GRADHERMETIC, S.A.E. under the brand names of Persistem and Prelac.

The coil coating process consists of applying organic products (paints, plastics or laminated film) to a continuous metal strip under strict quality controls.

This process results in a superior quality, invariable precoated product with excellent characteristics for subsequent transformation: tough, durable and resistant to corrosion and weather.

It is possible to produce infinite colour variations, finishes, gloss levels and textures with the guarantee of completely uniform properties in every batch.

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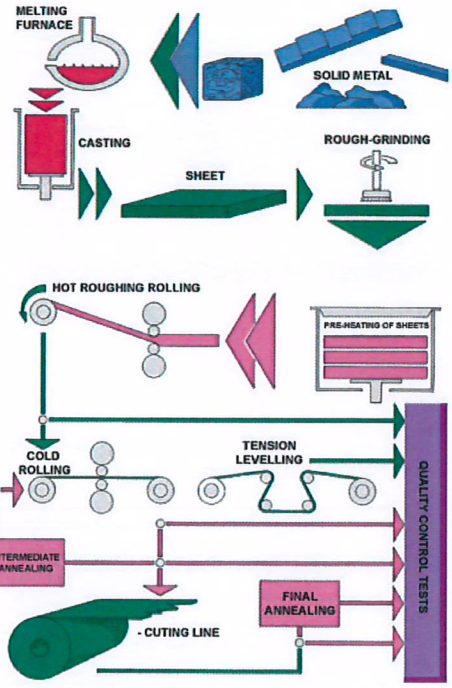
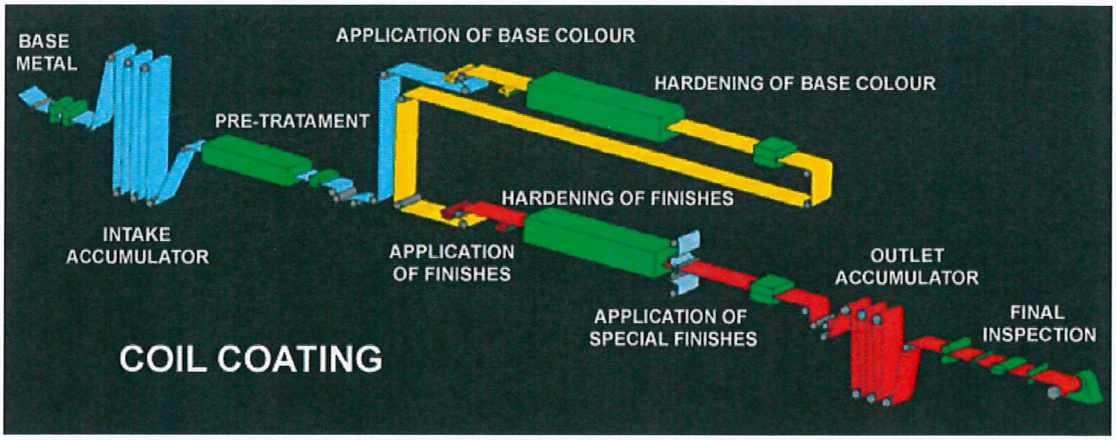
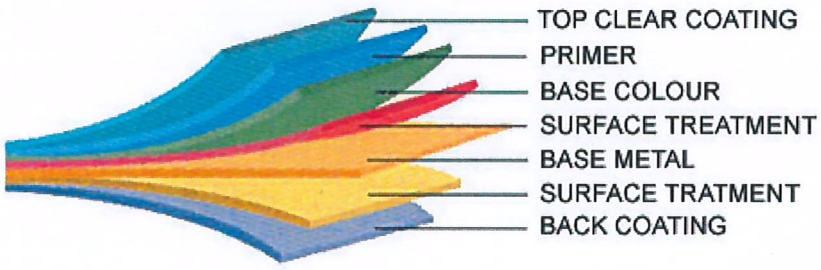
Details of the smelting and rolling process:



Coil Coating:



COMPOSITION OF SPECIAL FINISHES



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