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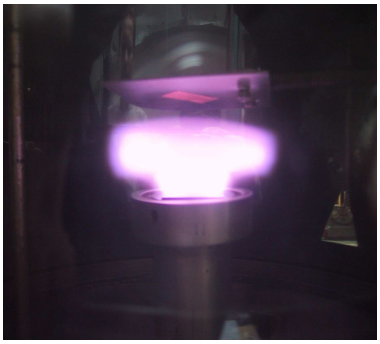
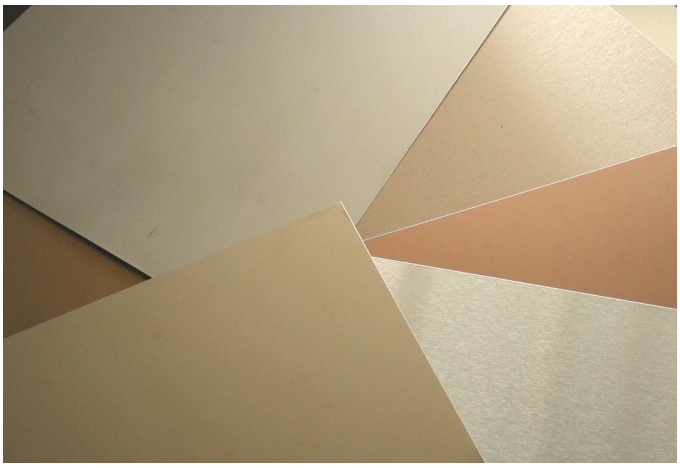
As a world première, vacuum plasma technology can now be used to apply a wide range of coating materials to stainless steel as it passes through a coating line. Professionals in the world of design and interior decoration now have a new exclusive range of attractive colours and finishes for steel at their disposal.



Vacuum plasma coatings: Ambient®



New attractive surfaces for stainless steel Ambient®

Plasma is the fourth state of matter, after solid, liquid and gas. 99% of our universe is composed of plasma. The interior of the sun, for example, interstellar gases and the protective layers around our planet. On earth, we only encounter plasma in the natural state in the form of lightning and aurora borealis or Northern Lights.
But thanks to technological advances, plasma techniques are playing an ever greater role in our daily life: just think of fluorescent tubes and flatscreen televisions, for example.
At pressures 10 million times lower than atmospheric pressure, plasma has opened the way to new coating techniques.
Products created by means of these new technologies are now among the solutions offered to steel users looking for new purposes or new, attractive surfaces.

Aesthetic qualities

Colours now available from the AMBIENT range on stainless steel are :

- ✓ Ti- Gold
- ✓ Ti Light (light gold)

Other colour are under development.

Ambient range allows combinations of colouring and stainless steel finishes as : UGIBRIGHT, UGITOP, MATUGINOX, UGITEX, UGIPASS, or any other finishes available on coil.

Respect for the environment

The coating process employs plasma, which is a clean, purely physical phenomenon. The process produces no effluents which would need treatment and does not require the use of solvents. Furthermore, Ambient® coated steel is entirely recyclable.

Architecture

Ambient® can be used for the interior of buildings as a cladding for walls, partitions, false ceilings, lifts etc. The attractive colours and finishes which can be obtained with vacuum plasma coatings open up new horizons for interior decoration and a dazzling choice of mix and match combinations.

Furniture

Ambient® also opens up new aesthetic possibilities for metal furniture and interior design. An exciting new palette of exclusive colours and finishes is now available for design professionals.

Electrical appliances

Ambient® is available in a wide range of colours and finishes, while also providing the mechanical characteristics and performance necessary for applications in the field of electronic and electrical equipment and domestic appliances.

Vacuum plasma technology

Arcelor World wide leader in coted steels, has now equiped its branch, Arceo, with an industrial vacuum plasma plant.

Using this technology, Arcelor wants to expand its range of functional surface coatings with aesthetic qualities, anti corrosion, self-cleaning or antibacterial properties.

Thus, the Ambient range is born.

Because it operates at extremely low pressure (in the order of 10-5 mbar), this coating technology is referred to as vacuum

plasma technology. When pressure is as low as this, the atmosphere becomes rarefied and it is easy to ignite a plasma, like those used in fluorescent lamps.
The energy released by this plasma can atomise a wide variety of materials which are sprayed on to the surface of the steel to form a dense, unbroken, homogeneous film.
The type of material to be applied is selected according to the required function of the coating.

The stainless steel

The stainless steel substrate may be up to 1500 mm wide for thicknesses between 0.15 and 1 mm (for other thicknesses, please consult us).

The coating

Vacuum plasma coating technology allows us to apply a wide variety of coatings.
A large number of the elements in the Periodic Table can be applied to the surface of the steel by this method, either pure or as a derivate (copper or copper oxide, titanium or titanium nitride, aluminium or aluminium oxide, agnesium, silver, tin, zinc, zirconium oxide etc).
The selection of the coating depends on the required function of the surface of the steel. According to what is required, the thickness of the coating may be from a few nanometres to several microns (1 mm = 1,000 microns = 1,000,000 nanometres).

Maintenance

Taking into account the surface condition and properties of the coloured stainless steel, it is sufficient to follow the following simple instructions for maintenance :

- The frequency of cleaning depends on the degree of soiling and individual assessment ;
- It is normally sufficient to wipe with a clen , soft rag, or to use water first, possibility adding soap later;

NB : Never use abrasive product, a product intended for the maintenance of copper or chromium, or a product designed for polishing furniture.