ROLL-TO-ROLL METALLIZATION PVD/PE-CVD

Specially adapted to flexible substrates

We develop technologies and processes for coating, under vacuum, flexible products such as polymer films, thin metal sheets or any type of substrate on a roll. PVD metallization allows the deposition of a large variety of materials. Some examples are chrome based layers, titanium, aluminum and also the deposition of copper, gold, silver or ITO.

The PE-CVD process also allows us to carry out coatings in TiO2, SiO, SiN, DLC.

The metallization can be made on just one side or on both sides of the products and in widths up to 120cm and several hundred meters long.

PHYSICAL VAPOR DEPOSITION (PVD) – MAGNETRON SPUTTERING

Magnetron Sputtering is a Physical Vapor Deposition (PVD) process.

Parts to coat are placed in a vacuum machine. After introducing a gaz, a plasma is created, and positively charged ions are accelerated by an electrical field on the negatively charged electrode or « target ». the ions strike the target with sufficient force to eject atoms. This atoms will condense on surfaces placed in proximity and constitute the coating.

The targets are fixed on a magnetron : a magnetic field trap electrons close to the target, enhancing the efficiency of the process, and making it industrial.

This low temperature process allows the coating of any type of materials on a wide range of substrates.

AVAILABLE VACUUM TREATMENTS

- Reflectivity
- Absorption/Opacity
- Decoration / Identification
- Galvanic replacement
- Conductivity

PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION (PE-CVD)

PE-CVD is a process by which thin films of various materials can be deposited on substrates at lower temperature than the standard Chemical Vapor Deposition (CVD).

In PE-CVD processes, deposition is achieved by introducing reactant gases between two electrodes, a grounded electrode and an RF-energized electrode. The capacitive coupling between the electrodes excites the reactant gases into a plasma, which induces a chemical reaction and results in the reaction product being deposited on the substrate.

AVAILABLE VACUUM TREATMENTS

- Barrier coatings
- Optical filter
- Anti-finger print
- Low friction
- Antimicrobic

OUR SERVICE

We are able to take care on a project from the design phase right through to the final industrial solution. This can include the feasibility study, development of the various deposition layers, subcontracting and technology transfer.

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