ADVANCED SURFACES AND COATINGS

Advanced Surfaces and Coatings will solve industrial problems as wear, fatigue, ageing, corrosion or resistivity, through the correct selection of materials, the development/optimization of coatings and surface treatments processes, the characterization of surface properties and the design and industrial scale up of different coating and surface modification techniques.

OUR CAPABILITIES

- Developing coating and surface modification processes, specifically for each industrial need
- Assisting companies in the correct material selection and the application of heat treatments and surface treatments or coatings
- Evaluating the behaviour of materials under “laboratory” and “industrial” conditions
- Collaborating in the development of specialised equipment or helping in its selection
- Providing coating and surface modification services & provides technology transfer

APPLICATIONS

- **Corrosion protection**
  - corrosion resistant coatings for metallic substrates (e.g. aerospace, automotive applications)

- **Aesthetic and staining protection**
  - pickling, surface cleaning solutions, decorative

- **Tribology**
  - solid lubricant films, multilayer hard coatings (e.g. space applications, engines, machining)

- **Optical Properties**
  - tailored properties of reflectance, transmittance and absorbance (e.g. for solar energy)

- **Surface modification and functionalization**
  - self-cleaning, hydrophobic/hydrophilic surfaces for several applications

- **Wear**
  - anti-abrasion, anti-erosion, hard coatings, scratch resistance coatings

- **Electrical Properties**
  - insulators, conductive and dielectric coatings, prevention of corona effects

- **Biomedical properties**
  - e.g. antimicrobial coatings
The Surface Technology Laboratory has resources for a wide range of surface treatment technologies and environmentally friendly coatings deposition, including pilot plants for scale-up coating processes; facilities to perform surface characterization (e.g. SEM, XPS, scratch tester, microhardness, profilometers); equipment to simulate operation conditions adapted to the requirements of each component (e.g. climatic chambers, corrosion test chambers, wear and erosion equipment).

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We can do so much together
Our work is not understood without yours; we want to work together so your company can compete better. Because together, we can develop technologies that transform the present.

The future is technological, let’s share it!