

Characterization of Materials by Non-Destructive Methods

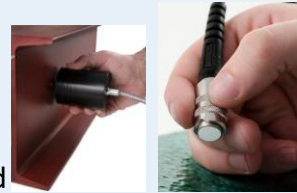
Electrical Properties

Ferromagnetic steels: Fe - C and special alloys

Non-magnetic steels: Stainless steels, Al, Cu, Sn, Gold alloys, others

Standard non-contact measurements:

- Conductivity (σ) in %IACS or MS/m and electrical resistivity (ρ) on materials, parts with or without coating (evaluation of its influence), dielectric permittivity ϵ , dielectric strength**



E1004-99
EC, ASTM
B203
Standards

Special measures of these quantities:

- At High temperature: from 50 ° C to 250 ° C
- After corrosion according to the NF ISO 9227 test standard
- After mechanical wear / vibration / endurance tests
- Under stress (traction, other)

Coatings - Polymers - Carbon composites - Dielectrics - Liquids

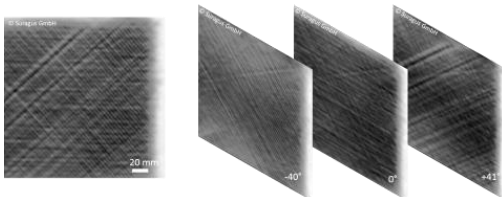
Standard non-contact measurements:

- Conductivity (σ) in MS / m and electrical resistivity (ρ) on materials, in ionic solutions, dielectric permittivity ϵ**
- Dielectric quantities and constants, contact resistance (Ω / cm^2)**

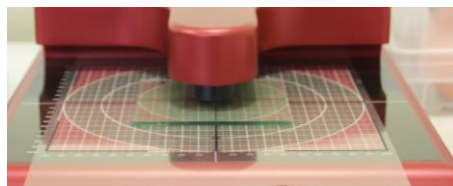
E1004-99 EC,
EN ISO
15091,
ASTM B203
Standards

Special measures of these quantities:

- At Low and High temperatures (to be defined according to the nature of the material)
- Under mechanical stress



Fiber orientation / carbon density testing



Resistance test of a dielectric film / layer

