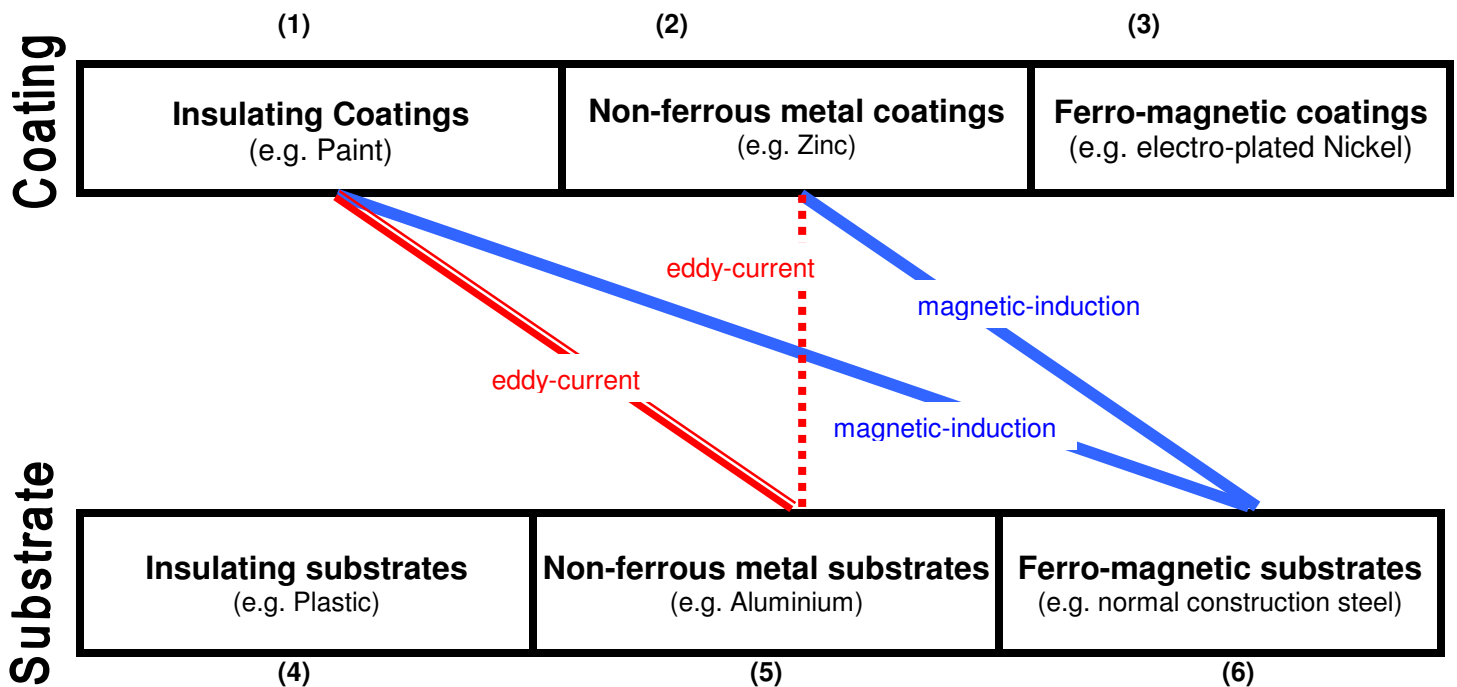


## Typical application for coating thickness measurements using the magnetic-induction and the eddy-current principle with the gauges Surfix® and Pocket-Surfix®

The picture below shows the various Coating / Substrate – combinations and the necessary measuring principle.

The lines between the upper and lower boxes indicates the measuring principles to be used.



### Remarks:

eddy-current \*



: Restricted application!

With the eddy current principle of Surfix or Pocket-Surfix the following Coating / Substrate – combinations only are measurable:

- Chromium on copper, maximum coating thickness 40µm / 1.6mils
- Chromium on aluminium, maximum coating thickness 40µm / 1.6mils
- Tin on copper, maximum coating thickness 40µm / 1.6mils

Note: for the above Coating / Substrate – combinations special marked calibration are necessary



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### Typical coating materials:

#### (1) Insulating coatings

- Paint
- Plastic
- Enamel
- Anodising (on Alum.)
- Ceramic

#### (2) non-ferrous coatings

- Brass
- Bronze
- Chromium
- Copper
- Lead
- electroless Nickel (with more than 10% phosphor)
- Tin
- Zinc

#### (3) ferro-magnetic coatings

- Electro-plated Nickel

### Typical substrate materials:

#### (4) Insulating substrates

- Plastic
- Ceramic
- Epoxy
- Glass

#### (5) non-ferrous substrates

- Aluminium
- Brass
- Bronze
- Copper
- Lead
- Titan
- Zinc

#### (6) ferro-magnetic substrates

- Steel (St33 – St60 or C15 - C45)
- some kind of stainless steel, which are ferrous

### **Special Coating / Substrate – combinations**

- Paint over zinc over steel (multi layer system): see “Compendium to Coating thickness measurement”
- Chromium on copper or on aluminium: see remarks under the picture on page 1.
- Tin over copper: see footnote under the picture on page 1
- Micaceous iron ore coatings (ferromagnetic) over steel: see “Compendium to Coating thickness measurement”

### **Surfix and Pocket-Surfix cannot measure!**

- Electro-plated Nickel on steel or on non-ferrous metal substrates or on insulating substrates
- insulating coatings (as paint) on insulating substrates (as plastic)
- non-ferrous metal coatings on non-ferrous metal substrates, exceptions see remarks on page 1
- non-ferrous metal coatings (as copper) on insulating substrate (as epoxy)