

Non contacting surface resistivity testing

Associate Professor Toshiyuki Sugimoto



Spray

Paste, Glue

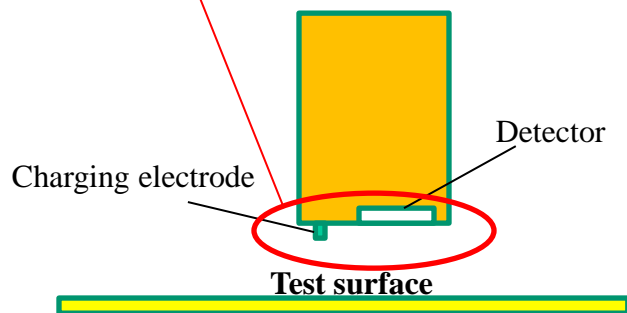
Powder

Uniformity, Degree of chemical reaction,
Curing state, Water, Moisture content,
Surface pollutant, Charge ability



Characterize these quantity
from the surface resistivity by non contacting method

Non contacting surface resistivity tester



Content:

Conventional surface resistivity tester require the contact of two or more electrodes onto the test surface to apply dc voltage and to measure the leakage current through the surface. It can not measure the fresh painting surface, paste or glue, powders due to the difficulty of contacting electrodes onto the surface.

Our unique tester can measure the surface resistivity from the time variation of the surface potential at the test surface where the corona charges are supplied by the charging electrode. There is no requirement of the electrode contact onto the surface. Because of this advantage, we are trying to measure the surface that have never measured so far such as the surface including paints, pastes, glues, powders, waters and so on. The measured surface resistivity will characterize uniformity of paint pigment, degree of chemical reaction at painted surface, curing state of paste or glues, moisture content of powders, surface pollute density of insulators, charge ability of sheets, and many others.

Currently the measuring range is from 10^6 to $10^{13} \Omega$. We are trying to extend the measuring range.

Yamagata University Graduate School of Science and Engineering
Research Interest : Electrostatics, High voltage

E-mail : toshi@yz.yamagata-u.ac.jp
Tel : +81-238-26-3280
Fax : +81-238-26-3280

