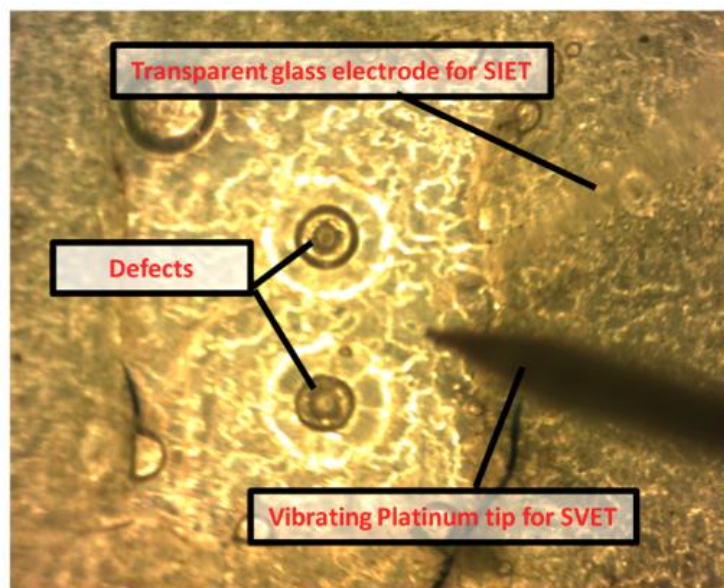


Scanning Ionselective Electrode Technique - SIET

SIET is a micro-amperometric analysis method meaning that the electrons transferred at the electrode are counted. The electrode has a tip diameter of about 2 μm . In the tip there is an ionselective membrane which hinders all but one single ionic species from entering the microelectrode. This way the registered signal comes from only one ionic species. Consequently the measured current can be converted into the concentration of this ionic species. The typical output is an ionconcentration map on top of a surface.

SIET can be combined with SVET and simultaneous mappings of e.g. the pH and the ionic potential can be carried out giving a more detailed view on corrosion processes. Mostly Hydrogen and Chloride concentrations are measured.



Optical image of a SVET/SIET measurement with two 500 μ defects in a coating on HDG steel