QUANTITATIVE COATING QUALITY

PURPOSE OF INSPECTION

Providing producers and owners of coated metallic products and structures with information on coating impedance as an indicator of the paint system protective ability. The inspection serves for detecting early degradation signs and indicating critical coating quality areas and is best suited for coatings without significant paint degradation. It may be used for rating the coating serviceability and supporting the decisions on system renewal, repair or lifecycle extension. Also, it is appropriate for newly applied systems to confirm the coating quality and the application practice standard.

Coating Inspection with ReCorr[®] QCQ



CORRQCO



INSPECTION PLAN

The inspection plan is agreed between the client and the inspector. Sample areas are identified, the number of these areas depending on the overall total area and the specific exposure conditions of the structure components. Typically, single frequency measurements are done while the entire spectra are collected at critical locations detected by the single frequency measurements. Typical single frequency measurements (five points average), and of a spectrum ranging from 10 kHz to 10 mHz, is 6.5 minutes.

FIELD MEASUREMENTS

The two-electrode arrangement ensures accurate measurements on the completely coated and/or grounded structures, as the measurement electrical circuit closes between the sensor electrodes keeping the battery powered instrument in the "floating" condition.



INSPECTION RESULTS

- coating impedance @0.1 Hz at a single or multiple locations
- contour map of the coating impedance @0.1 Hz recorded at sample areas of the structure
- statistical analysis of the impedances acquired @0.1 Hz data, measurement uncertainty and compliance with the specification
- Bode impedance spectra and detection of areas with corrosion under the coating







INSPECTION REPORT

The Inspection Report typically contains details of the measurement method, details of the structure paint system, the inspection plan, measurement results per location, paint system critical locations and compliance with the specification.

The report may be supplemented by the rating of paint defects, measurements of adhesion, porosity, hardness, gloss, Fourier transform infrared spectroscopy, differential scanning calorimetry and other complementary methods.

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