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Coating thickness measurement – state of the art:
Paint and corrosion protection measurements using innovative technology

Part 7:

Corrosion protection in accordance with standards

The cost of corrosion protection is relatively low when compared to the possible obsolescence of the structure that is to be protected and the cost caused by a possible operation shut down. In the US for instance, the annual cost of damages due to corrosion are estimated at 4% of the US' gross national product (515 billion US-Dollars). (*Source: Fraunhofer Institut für Fertigungstechnik, brochure 2804*) This enormous sum includes - within the limits of the study - in some branches of industry primary corrosion damage (cost of general overhauls and ongoing repairs due to corrosion) as well as secondary damages (such as breaking of pylons and the power outage caused by it) and the cost of the corrosion protection and its inspections. In Germany, the cost of damages caused by corrosion also amount to billions. 20 years ago, the cost of corrosion damage was reported to amount to about 70 billion DM (without secondary damages) which was about 4.5% of Germans gross national product of that time. Today the cost is significantly higher. At 4% of German's GDP which is about 70 billion Euros (*Source: Flyer Corrosion Protection of the University of Applied Science Ostwestfalen, Iserlohn*). Therefore, the issue of corrosion protection and its inspection using modern coating thickness gauges is increasingly important to the industry worldwide. Numerous rules and regulations support the constant effort to avoid and minimize corrosion damage for instance with the DIN EN ISO 12944. Corrosion protection measuring devices have to work in complete accordance with these standards.

Standards for inspecting coating thickness serve to protect steel structures

As many steel structures have such an important function, the DIN EN ISO 12944 Part 7 „Corrosion protection of steel structures using coating systems“ regulates the completion and monitoring of coating procedures, including, under item 6.3, the inspection of dry coating thickness with measuring procedures or principles according to EN ISO 2808. This standards includes, under item 5.5.6, the magnetic measuring principles of AUTOMATION Dr. Nix based on the measurement of magnetic field variances with Hall-sensors as well as eddy-current measurement principles. Furthermore, such corrosion protection and coating thickness gauges are particularly advantageous and practical when easy to calibrate and to use. The easy and reliable operation of rugged hand-held coating thickness gauges from AUTOMAION Dr. Nix for the use in everyday situations, is only one of the important features that guarantee a reasonable use in quality management of major projects.

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