

APPLICATION OF WAXES AND CORROSION INHIBITORS ON METALS

Martina Brázdová, Jiří Příhoda, Jaromír Tulka

The corrosion of metals means usually degradation of a material and formation of the corrosion products as the result of spontaneous interaction between metals with the environment. As regard the preservation of objects of cultural heritage, their treatment can comprise only protective coatings very often containing a corrosion inhibitor, not damaging the object itself and not changing its external appearance.

Among classical methods, how to protect metal objects against corrosion, is the application of waxes. This work deals with the anticorrosive influence of natural and synthetic waxes on steel and copper samples. This study comprises the results of our investigations with pure waxes at the one hand and with mixtures of wax with corrosion inhibitor on the other hand, e.g. salt nitrites for steel samples and 1,2,3-benzotriazole for copper ones. Natural beeswax and carnauba wax, further synthetic waxes (PP wax, PE wax and ester of montanic acid) were chosen for our comparative studies. Metal samples, covered with wax films, were investigated by atmospheric experiments.