Abstract

In this research, we try to develop methods to vary the steel surface parameters, deviating from the standard $PSPC_{15}$, before a protective coating is applied, but in a constant and predictable way. The parameters we will vary with are the surface roughness, and the presence of dust and salt-remains.

For the contaminating with dust and salt we need a reliable method giving consistent results, because whilst testing the presence of salt and dust on a surface is partially or completely removed. Consequently, these samples can then no longer be used in further research. If we can develop a method of contamination which gives steady and predictable results, this method can be used for further research without having to use destructive tests repeatedly. Furthermore, we investigate how to vary the surface roughness of steel in a controlled manner.

Afterwards these obtained methods are used to contaminate steel samples to different degrees before applying a protective coating and submitting the samples to an accelerated corrosion process. The goal of this research is to evaluate the effects of different levels of contamination on the performance of the coating.