

Reinforcement corrosion is one of the main phenomena determining the life of a structure. It can be tracked using methods based on several indicators of the probability of corrosion. These measures can be more or less lengthy and can require very specific equipment. In recent years, several non-destructive tests have been developed that are relatively fast and less costly based on the measurement of corrosion potential. In this study, a statistical analysis is performed, using a multiple linear regression, to test the reliability of the data obtained by experimental measurement of the corrosion potential. Artificial neural networks (ANN) are then used to develop a model to predict the corrosion potential of reinforcement in a concrete or mortar. The results indicate that the artificial neural network can predict corrosion potential with an acceptable degree of accuracy.