

Method for determination of necessary corrosion allowance on steel piles

Long term exposures of steel piles in soil, performed in USA, Norway, Japan and Sweden, have shown very low corrosion rates below the ground water table. It has also been shown that the correlation between the corrosion rate and different soil parameters are poor. However, in some cases an enhanced corrosion is observed in the area around the ground water table, known as “necking”. The aim of the project is to develop a probe which can, already after a limited time of exposure, indicate if there exists a risk for locally enhanced corrosion in the region around the ground water table. By installing probes at a field station, we aim to correlate the measurements with the results from long term exposures carried out at the same field stations. The results will hopefully reveal if the method can be used to predict the risk of “necking” on pilings, as well as how long the probe needs to be installed before accurate results can be obtained. It is anticipated that the results obtained will be applicable to other buried structures not only steel pilings. The project is ongoing and preliminary results will be presented as well as an overview of the experimental concept.

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