Department of Materials Science and Engineering

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Tel Aviv University

הפקולטה להנדסה ע"ש איבי ואלדר פליישמן
אוניברסיטת תל אביב

המחלקה למדע והנדסה של חומרים

You are cordially invited to attend this seminar to be held on

Wednesday, November 23rd, 16:00
Room 206, Wolfson Mechanical Engineering Building

Low temperature stress corrosion cracking of stainless steel under chloride deposits

Dr. Tomas Prosek

University of Chemistry and Technology in Prague, Czech Republic

Abstract

For decades, it was believed that stress corrosion cracking (SCC) of stainless steels in presence of chloride cannot take place at temperatures below about 60 °C. Several cases of roof collapses in swimming pools proved that austenitic stainless steel grades are prone to SCC at temperatures as low as 20 °C if covered with deposits of highly soluble chloride salts. A large systematic study including a number of austenitic and austenitic-ferritic (duplex) stainless steel grades will be presented and the mechanism of SCC, pitting and selective corrosion under given conditions discussed. Results of laboratory experiments will be compared to field exposures and data on formation of deposits in different environments.

Biosketch

Tomas Prosek graduated at the University of Chemistry and Technology in Prague in 1996. From 2001 until 2015, he worked at Swedish Corrosion Institute in Stockholm, Sweden and at Institut de la Corrosion in Brest, France. He was responsible for construction, building and infrastructure activities with focus on atmospheric corrosion of coil-coated steel materials, outdoor and accelerated corrosion testing and corrosion monitoring. From January 2016, he is leading the Department of Metallic Construction Materials in Technopark Kralupy of the University of Chemistry and Technology in Prague.