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TAILORING SURFACES FOR TRIBOCORROSION SYSTEMS

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Engineering surfaces and materials in tribological contact, in many situations, operate in presence of a corrosive environment (i.e. biomedical and off-shore applications, power plants, chemical industry among others). This means they will be subjected to the interaction between wear and corrosion during the operating conditions, thus degrading through a tribocorrosion mechanism. Mechanistic approach of tribocorrosion has led to the development of new models for describing this interaction. Consideration of corrosion principles together with tribological laws has allowed establishing the basis for new tools in tribocorrosion modeling. The adequate use of predictive models together with the fundamental understanding of the involved phenomena should constitute the tools for developing tailored surfaces for tribocorrosion applications and will be discussed.