**Simulation of high temperature corrosion and deposit formation in gas turbines**

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Hot corrosion and deposit formation in sulfur dioxide containing combustion gases can result in heavy attack of combustor parts and front stage blading of stationary gas turbines. These unfavorable effects are caused by trace elements brought into the turbine by (primarily liquid) fuels or by gas turbine operation in industrial or marine environments.

ChemApp/ ChemSheet based simulation software allows calculation of local thermodynamic equilibria of the gas composition. This software sets the foundation to predict formation and transport of volatile or solid corrosive species as functions of fuel and air impurities, temperature, gas pressure and air-fuel equivalence ratio of the combustion gas.

The presentation will provide an insight into the calculations that can be conducted and introduce an exemplary use case.