

NE-22-28066 Deployment of Advanced Electroanalytical Sensors in the Kairos Power Engineering Test Unit (ETU)

Founded in 2016, Kairos Power is a nuclear energy technology and engineering company based in Alameda, CA. Their mission is to enable the world's transition to clean energy, with the ultimate goal to dramatically improve people's quality of life while protecting the environment.

Chemistry monitoring and control systems for molten salt is necessary to prevent undesired phenomena. Kairos seeks to optimize electroanalytical sensors to enable stable measurements of industrial scale FLIBE salt in the Kairos Power Engineering Test Unit (ETU). As part of this work, an existing tool for the automation of electroanalytical measurements will be extended to be suitable for use with the Kairos system.

Argonne National Laboratory's existing electroanalytical sensor will be optimized to provide stable measurements of corrosion products and impurities at the industrial scale in the Kairos ETU. The work proposed would provide a direct benefit to the development of the HERMES reactor.