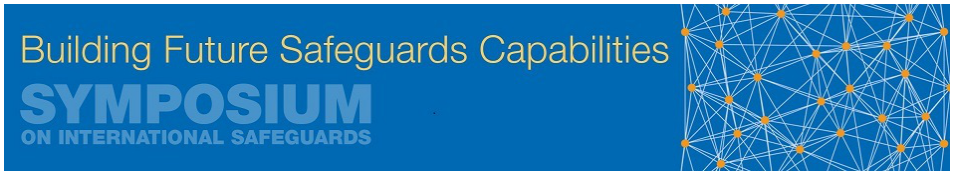

Contribution ID: **299** Type: **Wedge Participant**

Potentiality of simulation tools for NRTA

For the design of purification cycles using liquid liquid extraction techniques, a process development approach based on process modelling was chosen. This approach allowed the production a qualified simulation tool that has been succesfully used for process flowsheet design of industrial plants, safety analysis of plant operation. Possible software applications for plant operation aid using this qualified simulation code for plant operation aid was also proposed : automatic flowsheet calculations, simulation tools for process monitoring or control, diagnosis tool. This latter application allows process malfunction occurrence detection using the monitoring data of process state parameters and was able by a combination of calculations using the process simulation code and neural networks techniques to determine the nature (which operating parameters are concerned), the amplitude of the parameter change, and the time at which the malfunction has occured. Such application was possible thanks to the reliability and the quickness of the process simulation. The tool ability after malfunction detection, to find the operating changes causing the malfunction using suitable process monitoring treatment could be an example of feature of interest for NRTA purpose. This paper will present the process simulation tool and the diagnosis tool, to illustrate what coul be achieved using existing qualified simulation tools. There will still be much development to be achieved, but it could be a track worth to be further explored.

Which ”Key Question” does your Abstract address?

TEC2.8

Topics

TEC2

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Session Classification: [SGI] Improvements in the Field: Enhancements to Measurement Techniques

Track Classification: Shaping the future of safeguards implementation (SGI)