



Kinectrics' Nuclear Newsletter – Summer 2021

Innovation Corner: Helius – A World-Class Campus for Innovation

Kinectrics is bringing Canada's leading research universities together with energy industry and technology development pioneers to create Helius, a world-class campus for innovation.



Helius will unite top-tier Canadian academic institutions, industrial leaders, small modular reactor developers, and utilities to advance clean energy technologies that combat climate change and alleviate global energy poverty. The cornerstone of this innovation campus is a 10 MW, electrically heated, helium test loop for the development, testing, and qualification of materials, components, and systems utilized in high temperature gas reactors. Secondary loops mimic the actual usage of technologies to be married with advanced nuclear reactors, including:

- Thermal Energy Storage (molten solar salt)
- Hydrogen Generation
- Industrial/District Heating
- Niche Applications (e.g., water treatment, advanced materials)

[Learn more.](#)

Featured Insight: Newly Designed & Manufactured Electromechanical Relays

Kinectrics' Reverse Engineering team recreates obsolete parts and components from first principles - saving its clients time and money.

Kinectrics has designed and manufactured new electromechanical relays that are nuclear qualified, as well as form, fit and functional replacements for the ITE/Gould J13/J14 relay models utilized in back-up diesel generators at various nuclear stations. Use of these highly reliable equivalents allows customers to back up safety related systems and avoid unnecessary re-wiring costs.



[Download our catalogue to learn more.](#)

Kinectrics' Virtual World: Irradiated Material Testing Lab

The warm cell at Kinectrics was built to conduct various mechanical property tests and examinations on highly radioactive, irradiated pressure tube material.

Capabilities include:

- KIH testing facility
- Radial and axial DHCR testing facility
- Tensile testing facility
- Fracture toughness testing facility
- Overload crack initiation testing facility
- Fatigue crack initiation and growth testing facility
- DSC facility for measurement of hydrogen concentration



Take a self-guided tour of this lab [here](#) today!

Cooperation Agreement with Silver Fir Software



Kinectrics Inc. and Silver Fire Software Inc. have signed a cooperation agreement that will establish Kinectrics as a preferred training partner and user for the Attila software suite for the North American nuclear industry.

Silver Fir Software is the developer of the Attila software suite, which enables users to rapidly calculate radiation dose fields from solid model CAD data. Kinectrics' extensive experience supporting the nuclear industry in advanced nuclear technology, licensing, design, safety analysis, radiation shielding assessments and dose rate field analysis make Kinectrics an ideal collaborator. Through Attila's unified, CAD integrated environment, users can rapidly perform independent shielding calculations from native CAD data, improving analysis productivity and streamlining integration into the product design cycle.

"Kinectrics is excited to work with Silver Fir Software to advance the use of Attila in the North American nuclear industry", said David Harris, President and CEO of Kinectrics. "The use of the Attila coding software will enable us to better serve our customers, while exploring other exciting opportunities such as innovative virtual reality dose planning technologies as our relationship continues to evolve".

Read full news release [here](#).