

Heat Pipe Technology

The Westinghouse Solution

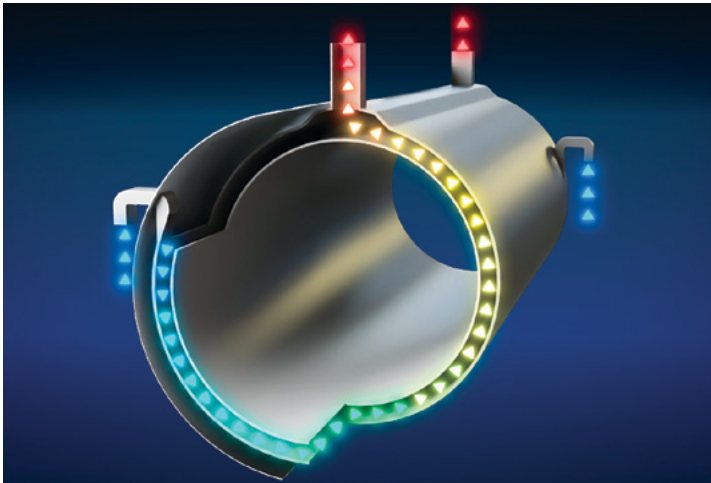
Westinghouse is best positioned to execute a new nuclear technology development, from design, licensing, plant startup and commissioning and ongoing technical support for plant operations.

As Westinghouse continues the development of eVinci based on heat pipe technology, the advancements being made continue to reinforce how versatile heat pipe-based reactor technology is when compared to competing ideas for mobile nuclear power. Heat pipe technology has been applied for the past 60 years with millions of operating hours in aerospace and other industries in high temperature applications which rely on the passive and simplified component design for nuclear application development.

Customer Benefits

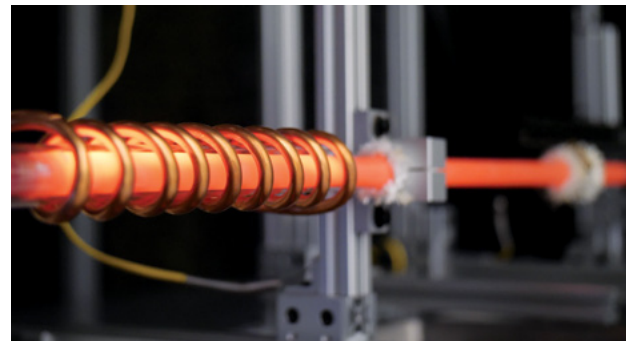
Westinghouse has developed and continues to advance heat pipe technology and manufacturing processes through design, analysis tools and test capabilities, with our recent success of manufacturing the first ever 12 foot nuclear grade heat pipe. Westinghouse has also developed proprietary manufacturing processes for high performance heat pipes based on strict quality-controlled techniques, procedures, and tooling.

Westinghouse's heat pipe technology has set performance records during long-term testing.



Heat Pipe Design Benefits

- Allows for greatly simplified design and eliminates numerous components needed in active systems
- Significantly increased reliability and eliminates failure modes and additional systems associated with active systems
- Eliminates risk from high system pressures and loss of coolant accidents
- Eliminates flow induced corrosion and vibration typical of forced flow systems
- Enables prototypic life testing at operating temperatures



www.westinghousenuclear.com/evinci

eVinci™ Microreactor

Emissions Free Heat and Power

The Westinghouse Solution

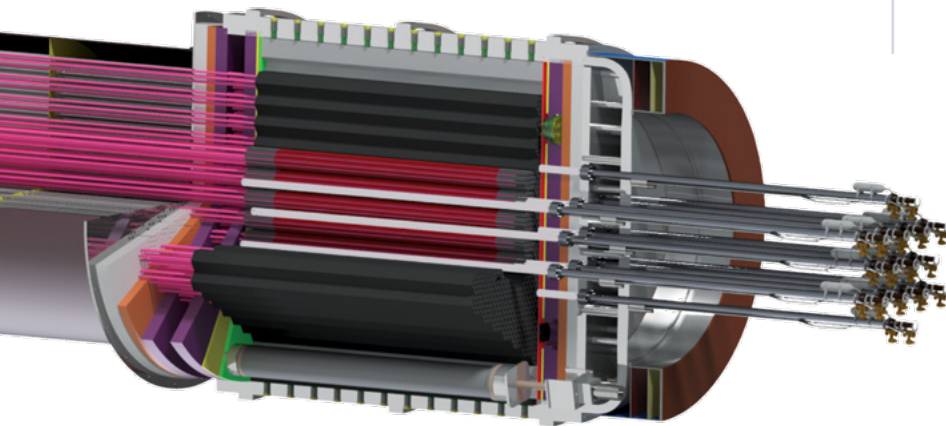
The eVinci microreactor's innovative design combines new technologies with 60+ years of commercial nuclear design and engineering and creates a cost competitive and resilient source of power with superior reliability and minimal maintenance. Its small size allows for transportability and rapid, on-site deployment in contrast to plants requiring large amounts of construction. eVinci can produce **5MWe with a 13MWth core design**. The reactor core is designed to run for **eight or more full power years before refueling**.

The key benefits of the eVinci microreactor are attributed to its advanced heat pipe technology. The heat pipes enable passive heat transfer, eliminating the complexity of a forced flow reactor coolant system. Westinghouse is building on decades of nuclear instrument and control experience to support capability for fully autonomous operation with remote monitoring.

Customer Benefits

eVinci offers many benefits and can support achievement of global net zero carbon goals.

eVinci minimizes construction costs and labor and can be installed and placed into operation in less than 30 days. It is designed for safe and reliable electricity and heat generation and is the most advanced nuclear technology solution that provides invaluable benefits to both industry and communities.



eVinci Microreactor Key Benefits

- **Reliable** energy source in all weather conditions, temperatures and locations
- Immediate **load-following and load-shed** capabilities
- Flexible energy with **scale-up and scale-down** capabilities as mining operation grows or reaches end of life
- Eliminates commodity risk from diesel fuel as well as interruptions because of seasonal challenges of transport to remote communities
- **Above-ground installation** requires minimum ground disruption with less than a 2 acre footprint
- Seamless, reliable pairing with wind, solar and hydro
- **Transportability** in shipping containers via rail, barge, truck

www.westinghousenuclear.com/evinci



Scan to take
a virtual tour

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