

What are the applications of spray cooling in electronic industry?

Secondly, recent advances of spray cooling in electronic industry are summarized, especially the system configurations, installation methods and more efficient system designs. Then, typical applications of spray cooling in energy storage, thermal power plant, nuclear power plant and other energy conversion industries are overviewed.

What is a large-scale spray cooling system for containment studies?

Large-scale devices using spray cooling systems for containment studies are limited to the system complexity and high cost. For example, TOSQAN device in France is a typical RPV with water spray cooling. As presented in Fig. 24 (a), TOSQAN device is 4 m in height and 1.5 m in internal diameter.

Is spray cooling a promising technology for server electronics?

Kheirabadi presented heat transfer and flow characteristics of spray cooling system for server electronics. Above comparison researches suggested spray cooling to be one of the most promising cooling technologies. Several researches fully devoted to spray cooling review.

What are the application prospects of spray cooling?

The application prospects of spray cooling in energy storage, thermal power plant, nuclear power plant and other energy conversion industries are overviewed. Main challenges for more efficient application of spray cooling systems and future efforts to facilitate this promising cooling technology are discussed.

What are the practical concerns of spray cooling application?

Though there have been extensive experimental and numerical researches on the heat transfer mechanism, predictive method, optimizing strategy and system configuration of spray cooling, many practical concerns of spray cooling application have not been completely solved owing to the complexity of spray cooling process.

What is spray cooling system configuration?

A comprehensive system configuration is crucial to the spray cooling performance in practical application. According to the spray mode and system flow organization, spray cooling systems are classified into different types. According to the coolant supply mode, spray cooling is divided into continuous and intermittent spray cooling.

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1 Introduction. With the development of modern electronic and electrical systems, electrostatic dielectric capacitors have attracted extensive attention for their superior power ...

Jian Jiang [email protected] Chongqing Key Lab for Advanced Materials and Clean Energies of Technologies, School of Materials and Energy, Southwest University, Chongqing, China ... [84-90] This concept gives birth to viable ...

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Among these technologies, thermal energy storage (TES) has a significant role to play in future zero-carbon energy systems due to the following reasons: 1) thermal energy is at the heart of the energy supply chain, with about 90 % of ...

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