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高温气冷堆用石墨摩擦性能研究

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摘要 采用标准摩擦试验机研究了3种石墨(兰州石墨、上海三高石墨和IG-11)的摩擦性能,并用电子扫描显微镜分析了摩擦表面。试验的环境气氛为氦气和空气。研究表明:在相同载荷作用下,3种石墨在不同环境气氛中表现出不同的摩擦性能。当滑动速度较大时,在空气环境中的摩擦系数高低依次为兰州石墨>上海三高石墨>IG-11;在氦气环境中的摩擦系数则为上海三高石墨>IG-11>兰州石墨。

关键词 [石墨](#) [摩擦性能](#) [10 MW高温气冷堆](#)

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Tribological Properties Differences of Various Graphite Used in 10 MW High Temperature Gas-cooled Reactor

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Abstract The tribological behaviors of three grades of graphite, Lanzhou graphite, Shanghai Sangao graphite and IG--11, are investigated by the normal friction tester SRV. And the friction surfaces are analyzed by a scanning electron microscope. The experimental environments are selected as helium and air. The results show that the friction behaviors are different in different gas environments with the same load for all graphite. At the large sliding velocities, the order of friction coefficient is Lanzhou graphite>Shanghai Sangao graphite>IG--11 in air, and in helium the order is Shanghai Sangao graphite>IG--11> Lanzhou graphite.

Key words [graphite](#) [friction behavior](#) [10 MW high temperature gas-cooled reactor](#)

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扩展功能

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