

Tribological characteristics of high strength low alloy steel under various environmental conditions

ABSTRACT

High strength low alloy steel has excellent heat resistance and high strength. As it is commonly used as gun barrel material, a long service life and superior wear resistance are necessary for steel components. Here we investigated the wear characteristics of high strength low alloy steel surfaces under various environmental conditions, using a pin-on-disk wear test. Oxidation and wear debris effects on the coefficient of friction (COF) of the alloy steel were examined under air and argon (Ar) gas flow at atmospheric conditions.