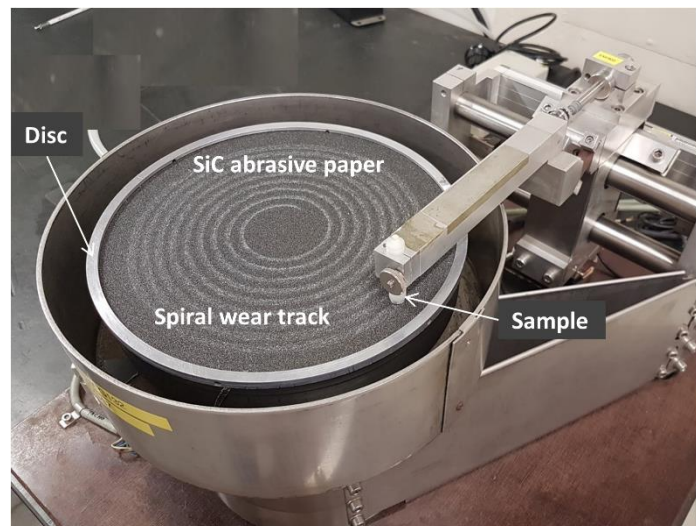


Pin abrasion tester (ASTM G132): Pin abrasion tester is a tribological test rig used to measure the wear resistance of a material against abrasives such as silicon carbide, silica, alumina etc. A cylindrical sample (pin) is mounted on one end of the arm. An abrasive paper (usually SiC) is placed on the disc. Load is applied normal to the specimen using dead weight. During the test, the disc containing the abrasive paper rotates whereas the arm on which the pin is mounted moves horizontally. This simultaneously combined motion results in a spiral sliding path (see figure) and ensures that the specimen is continuously in contact with fresh abrasive, leading to two-body abrasive wear. The vertical displacement of the sample and the tangential load can also be monitored during the test to measure the wear and friction coefficient, respectively.



TEST RIG CHARACTERISTICS

Property	Modified FZG
Normal load	15 N (max)
Sliding speed	10 – 150 mm/s
Rotational speed	6 – 60 rpm
Sliding distance per abrasive paper	3000 mm (max)
Sample dimensions	Φ4 – 10 mm
Abrasive paper dimensions	Φ230 mm
Wear	± 1 mm
Frictional force	15 N (max)