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# APPLICATION OF PYROLYTIC GRAPHITE GRIDS FOR A 20 MN ION THRUSTER

**Abstract**

However, SLATS-2, a practical super low altitude satellite, requires the ion thruster of longer lifetime. The endurance test of the KIKU-8 ion thruster shows that its lifetime is restricted by erosion of grids which are made of ceramic coating molybdenum. Therefore, to extend its lifetime, the use of pyrolytic graphite (PG) grids was considered. PG grids, because of their low sputter yields, provide an attractive means to increase the thruster lifetime without requiring significant changes in well-characterized operating conditions. Vibration tests of PG grids and thruster performance tests using PG grids were conducted. PG is used for both grids of the accelerator grid and the screen grid. The diameter is 12cm not to change the thruster main structure design. The test results show good performance from 12mN through 26mN.