

6kW HIPIMS power source

Product Code: HIPIMS Power Supply

Weight: 0.00kg

Dimensions: 0.00cm x 0.00cm x 0.00cm

Short Description

HIPIMS power source is used for magnetron sputtering process to obtain high quality coatings.

Description

In view of the process defects of uneven coating thickness distribution and poor plating performance of coating particles in the magnetron sputtering ion plating technology developed on the basis of DC gas discharge volt-ampere characteristic curve, this project plans to use high-frequency pulsed electric field to introduce the gas discharge state from normal glow discharge to micro-arc discharge state between abnormal glow discharge and arc discharge. The conversion of the output mechanism of plating material particles from cascade collision to thermal vibration evaporation is realized through the thermal effect generated by instantaneous high-power discharge on the cathode target surface, so that the ionization rate of the plating material particles is improved, and the effect of preparing a plating layer with uniform thickness at different space positions in a vacuum cavity is achieved. Due to the unsteady characteristics of gas micro-arc discharge, the high-frequency pulsed electric field mainly plays a role in maintaining the unsteady process stably, and the purpose of controlling the intensity and size of the arc spot is achieved by adjusting factors such as pulse amplitude, width and frequency, so that the high ionization rate of plating material particles is ensured, and large droplets which affect the quality of the coating are prevented.

The core micro-arc control technology in the micro-arc ion plating technology, which integrates the advantages of compact and smooth sputtering ion plating layer, uniform multi-arc ion plating, good winding plating and the like, is applied to a typical liquid-solid interface gas discharge environment of a micro-arc oxidation process, so that the high-frequency pulse electric field of two micro-arc discharge conditions is unified in theory, and hardware equipment can be used for two purposes.

Specification

Technical parameters

Output Power	3 phases 380V
Output Power	6kW
Output voltage	0-1200V
Working frequency	50Hz~5Khz