

Slicing of silicon wafers for PV applications using Wire Electric Discharge Machining (Wire-EDM)

Abstract:

An electrical discharge machining apparatus and a process for slicing one or more slices from a block of silicon are disclosed. The apparatus comprises a platform for mounting the block of silicon and a molybdenum wire having a diameter range between 39μ and 101μ . When the apparatus is used, either the silicon block and/or the wire is moved towards one another for slicing. The power supply for the apparatus is a MOSFET type generator. The process of slicing one or more slices from the block of silicon comprises mounting the block of silicon with reference to the apparatus, coupling the molybdenum wire having a diameter range between 39μ and 101μ and slicing one or more slices from the block of silicon by electrical discharge between the molybdenum wire and the block of silicon.

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