

ABSTRACT

Systems and methods for characterizing an electrical discharge drilling process using ultrasound are provided. The characterization of the electrical discharge drilling process facilitates estimating cycle times and electrode consumptions for future electrical discharge drilling tasks. An electrical discharge drilling machine includes a base for supporting a workpiece, an electrode operable to drill a hole in the workpiece using an electrical discharge, and an ultrasonic probe installed on the base and oriented toward the workpiece when the workpiece is supported by the base.

Figure 1