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(57) Abstract :

The invention relates to a structure of an EDM head (100) for a portable type Maglev EDM. The structure comprises a top fixture (101), a bottom fixture (102), and a front cover (103). The top fixture (101) is able to hold the electromagnet in a proper slot. The size of the top fixture (101) is adjusted in such a way that the tooling arrangement including the plunger system and disk can be accommodated with proper clearance. The bottom fixture (102) comprises a cylindrical slot in the bottom which allows favorable vertical movement of the tooling system with the shaft connected to it upto the electromagnet. The front cover (103) provides cover from the front side. The structure of the EDM head (100) can be mounted in any machine structure or CNC operated linear stages. Additionally, it restricts the transverse movement of the tooling arrangement leading to the minimization of the tool vibration during the Maglev EDM process and maintains uniform interelectrode gap between the tool (T) and workpiece (W) and creates controlled sized crater on the workpiece during EDM process.

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