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Antigravity arc welding processes and the weld geometry

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ABSTRACT

An important weld quality parameter is the *geometry,* because the antigravity welding positions may cause incorrect and unacceptable weld geometry. There are a number of reasons why *mechanized antigravity welding* should be preferred: higher productivity, better quality etc. It was necessary to determine *theoretical* and *experimental limits* for the *mechanized position welding parameters,* in order to achieve a *maximum productivity* while meeting the desired quality criteria. A theoretical connection between the *weld geometry* and the *power introduced* in the welding processes was, therefore, established and experimentally verified. The main goal was to avoid the geometrical weld defects. The research outcomes were helpful in developing a theory about the overall equilibrium of the welding pool applicable to any welding position, no matter how difficult (antigravity welding).

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