

Influence of arc duration and current on contact welding in low power switches

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Abstract – A model switch has been developed to investigate the influence of kinetic parameters (as contact velocity and contact force) on contact welding under conditions prevailing in relays, micro switches etc. Both frequency and intensity of the statistically scattering weld forces increased with increasing arc duration and current. Pre-strike and bounce arcs show identical results under corresponding conditions. Therefore the configuration of the load circuit determining the actual arc current curve essentially influences the weld force values.

Keywords – Contact welding, arc duration, current.