Simplified Shock Conditions for Finite Elastoplasticity BRADLEY
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we consider shock loading of an elastoplastic material; the strain is not restricted
to be small. We show how to reduce the Rankine-Hugoniot jump conditions to a
simplified form analogous to that used in fluid dynamics. Just as for fluids, the
shock conditions can be separated into a thermodynamic condition (the Hugoniot
condition), a condition determining the velocity, and a condition determining the
strain, which can be solved sequentially to determine the shock wave.

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Date submitted: 08 Apr 2005   Electronic form version 1.4