

Abstract Submitted
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Longitudinal and Lateral Stress Measurements in Stainless Steel 304 Under 1D Shock Loading G. WHITEMAN, J.C.F. MILLETT, R.E. WINTER, AWE, Aldermaston, Reading, RG7 4PR, UK, N.K. BOURNE — Interest in the behaviour of the common stainless steel grade 304 at high rates of strain is always high due to the materials regular use in industry. Longitudinal and lateral stresses during the shock loading of stainless steel 304 have been measured using manganin stress gauges. The shear strength has been shown to increase with impact stress. Comparison with a pure fcc metal (nickel) shows a significant increase in strength. Strengths are similar to those of mild steel, but the rate of increase with impact stress is much greater in SS304. These results are discussed in terms of structure and degree of alloying.

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