ination of shocked specimens; they also influence macroscopic properties.

Figure 11 illustrates how the Vickers hardness of many metals increases as a function of shock pressure. Although hardness in the pressure range shown increases monotonically with pressure, it would be misleading to leave you with the thought that this can be extrapolated *ad infinitum*. Ultimately the curves must reverse in slope because of the annealing effect that would be produced by a rapid rise in heating induced by shock.

Another lively area of application of the shock wave art is one we mentioned earlier, bonding of dissimilar metals. Figure 12 shows an interface between hardened and annealed aluminum alloys, which was produced by firing the upper plate against the lower. Both atomic diffusion and simple mechanical locking probably play a role in this kind of bond.

The appearance of these Proceedings and the work which led to it are evidence that the application of shock wave techniques to geological studies is of far greater importance than was realized five years ago. It is not likely that the Conference reported here will be the last such. It and others to follow will be firm evidence of the broad utility of new techniques in science which extend our abilities to influence the states of matter.

Besides these geological applications, it may be expected that shock wave research will continue to contribute to the understanding of solid state and metallurgical processes which are influenced by rapid changes in stress, volume, and temperature. The applications of such research will be limited only by the imagination and pocketbook of the scientist and by the hard facts of nature.

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