

DISCUSSION

*J. H. Brunton*¹ (*written discussion*)—The results presented in Fig. 6 of the paper show that the erosion resistance of alloys of the same base metal lie on the same curve which is itself distinct and separate from the curves for alloys of other metals. This suggests that erosion behavior is linked more closely with the physical or structure-insensitive properties rather than the mechanical structure-sensitive properties. If this is so, one might look for a simple relation between erosion and, say, the elastic moduli, perhaps the shear modulus. The explanation of the relation, however, could, be more complicated and involve physical effects such as the influence of the interatomic bond on mechanical behavior at very high strain rates.

Concerning the electron microscopy studies of eroded surfaces, it might be of interest to use the scanning electron microscope to study the erosion fragments—a case where the replica technique would be difficult. We have found the instrument to be extremely versatile. It is possible to resolve features such as ripple markings and crack networks even when these are positioned at the bottom of a deep erosion groove.²

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² Thomas, G. P. and Brunton, J. H., "Turbine Erosion," *Technical Memorandum 33-354*, National Aeronautics and Space Administration, Jet Propulsion Laboratory Meeting, Dec. 1966, Hays, L. G., ed.