

DISCUSSION

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I would like to ask the following three questions of the authors:

1 In computation of $\bar{\sigma}$, the authors have not taken into account the contribution due to the nonuniform normal stress that is known to accompany the shear stress. How much error in $\bar{\sigma}$ can be expected because of this?

2 Since, as reported by the authors, the strains and strain rates in metal cutting are significantly higher than those found in the materials tests presently in use, what correlation is expected between the metal-cutting property test suggested by the authors and the materials tests presently in use?

3 Where and how will the information gained in the metal-cutting property test be used?

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Authors' Closure

The authors wish to thank Mr. Tipnis for his interest in the paper and give the following answers to his queries.

1 The normal stress distribution has no influence on $\bar{\sigma}$, since it is assumed that the shear stress is a maximum and, hence, the normal stress is a mean hydrostatic pressure which cancels from the expression for the effective stress.

2 As far as the expected correlation of strain, strain rate, and temperature is concerned it is difficult to offer any prognostication, but it is hoped that the conditions required by an equation of state are approximately fulfilled.

3 We expect that the properties evaluated by a metal cutting test could be used in the prediction of the forming variables in all forming processes in which high strain rates and large strains are encountered.