2.2 - BEHAVIOUR AS RELATED TO DESIGN CRITARIA: MATERIALS

by M.A. Sozen[1]

(The panel speaker Dr. Sozen gave an oral presentation and written discussions received on the talk are printed below).

DISCUSSIONS

M.G. Joseph (India)

In the case of dynamic design against the earthquake, how important would you consider the rotational capacity of R.C.C. members ?

Mazumdar (India)

As a designer of structures we are interested normally in the modulus of elasticity and the damping value for all dynamic analysis. When you look into the Code we find different values and we are utterly confused. If we see the modular ratio in the Codes and try to device the modulus of steel by the modular ratio we get one modulus elasticity of concrete. Sometimes people refer to dynamic modulus elasticity for dynamic computation. Damping ratio may vary anywhere between 5% of the critical to 0.5% of the critical if one is doing linear analysis.

P. Dayaratnam (India)

Professor Sozen has given an encouraging picture of the stress-strain relation of concrete. He has proved his point that we should not spend too much (or infact no more) time on stress-strain curves of concrete. Youngs modulus of the material has considerable influence on the magnitude of deflection. Each code gives a relation between the Youngs modulus and ultimate strength of concrete and the variation from one code to another is considerable. Even ACI code has changed the relation while revising the code. There is a dimensional incompatibility. I request Prof. Sozen to comment on 'E' and suggest a rational value with certain bounds.

Author' Closure Not received.

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1. Prof. of Civil Engg., University of Illinois, Urbana