

REMARKS BY J.K. MINAMI<sup>1</sup>, CHAIRMAN OF THEME 4B

Appreciation is expressed to Prof. M. Novak for preparing his excellent theme report on Topic 4, Foundation and Soil - Structure Interaction based on his review of many papers submitted on this subject.

The large number of papers dealing with various aspects of soil - foundation - structure interaction submitted to this Conference is indicative of growing interest and involvement in the solution of this important problem.

Some strongly entrenched concepts, such as the traditional idea that low buildings supported by hard soils is more earthquake resistant than the same buildings supported by softer soils, is being questioned. There exists some confusion relating to earthquake damage of buildings and damaging deformation of soft soils and instability of loose, unconfined sands. Our thinking on structural damage and soil (not foundation) failure should be clearly differentiated and not confused. Sound foundation construction (basements, piles, piers and caissons) is necessary in the case of soft soils for adequate support and stability of buildings and if this is provided, the greater cushioning effect of softer soils will likely attract less earthquake forces than when built on harder soils with less cushioning effect.

The effects of soil - pile foundation interaction on the seismic response of buildings must be clarified so their influence may be considered rationally in the design of earthquake resistant design and notable progress has been made.

Efforts to include soil - foundation - building interaction effects in the earthquake resistant provisions of building codes are evident world - wide. It is hoped that through

---

<sup>1</sup> Professor, Dept. of Architecture, Waseda University, Tokyo, JAPAN.

exchange of information and in the spirit of international cooperation, meaningful advances may be realized in the near future to minimize loss of life and property from earthquake.