OBJECTIVES AND TASKS OF SEISMIC MICROZONING

by

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INTRODUCTION

Most frequently the problem of seismic microzoning is considered only from the aspect of precise definition of earthquake effect and earthquake ground motion using contemporary techniques. Usually, only analytical methods idealized and inadequate are taken into account causing extense discussions and even their denial.

The seismic microzoning maps are also considered only from the aspect of accurate definition of the distribution of expected earthquake effects and presentation a larger number of useful data required for planning and design aiming in better protection of people and properties against destructive earthquake effects.

In this paper the experience gathered from seismic microzoning investigations carried out after the earthquakes of Skopje (1963), Debar (1967), Leskovac (1968), Ulcinj (1968) and Banja Luka (1969), as well as from detailed investigations of the seismicity is presented and definition of the earthquake effect parameters for sites of nuclear power plants, thermoelectrical plants and large industrial buildings.

CONCLUSIONS

The seismic microzoning enables a wide application of contemporary knowledge in the field of earthquake engineering, engineering seismology, associate sciences, social, economic and technical conditions for planning and design in seismic areas. It also enables organisation of all kinds of collective low-cost protection of people and properties in well-developed urban areas against destructive earthquakes. Then, seismic microzoning enables elaboration of space, general and detail urban plans as well as solution of many engineering problems which can be adapted to the seismic conditions of the site. Finally, it enables definition of corresponding prevention measures and their technical-economical criteria, as well as definition of parameters for rational planning and design of different types of structures, particularly large and important ones from national economy point of view.

It is obvious that the existing technical and analytical methods for definition of future earthquake effects and earthquake ground motions are inadequate in solving this very complex problem. However, they are based on the correlations between regional and local seismogeological parameters with occured earthquake effects giving valid values under certain conditions. Supplemented by empirical experience concerning the influence of geological, soil, architectural and other conditions, these basic problems can be successfully solved.

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