



Review on the evaluating methods of paleo-earthquake magnitudes from fault parameters in Korean

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The evaluating methods of the potential earthquake magnitudes from seismic faults are very important in determining the design earthquakes of the major industrial facilities and structures such as nuclear power plants and life-line facilities in many countries.

Generally, the historical earthquake records and documents are limited within several hundreds years. The earthquake data are absolutely insufficient because seismic safety for their facilities and structures must be evaluated for more than ten thousands years. Thus we need to evaluate the potential earthquakes that have much longer recurrence intervals than the historical records.

In Korea, it has been debated whether some of the Quaternary faults near the nuclear power plant sites are capable fault or not. In case of capable faults near the plant, evaluation of maximum potential earthquake is one of the most important issues in the seismic hazard analysis.

In this study, we reviewed the various empirical methods for the potential earthquakes from fault parameters such as fault displacement, slip rate, rupture length, and so on. And then we compared the each estimating results of the potential earthquakes from the fault parameters, and discussed the most reasonable methods on estimating of maximum potential earthquakes for design earthquakes of Korea nuclear power plants.