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Engineering-geologic conditions of terrain on seismic maps

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Seismic danger as presented on seismic maps is represented by seismic degrees, and sometimes by designed size of anticipated acceleration. Seismic degree is not an engineering measurement unit, yet for design purposes the same is transformed into parameters. Designed acceleration which is presented on the map should be modified in most cases for a specific terrain.

The impact of terrain onto the level of damage within the framework of earthquake conditions is generally accepted fact. On seismic maps bearing the usual scales 1:1 000 000 or 1: 500 000 the terrain is being presented in fictitious way along with utilizing the systematization based upon the soil mechanics.

The authors are revealing the issues encountered in the presentation of terrain on maps with small scales and argue in favor of resorting to the classification of terrains being applied in the preparation of engineering-geologic maps. Particular emphasis is awarded to the issues of non-linear behavior of terrain at high seismic degrees, and warnings to the designer to pay adequate attention on the potential occurrences.