

and Application of Explosion Records for Engineering Seismology Tasks

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At the present moment, for many regions of the world, one of the topical issues is the prediction of industrial blasts seismic effects on the infrastructure and adjacent settlements. The IGR conducts this kind of work using the historical records of explosions and description of its effect on constructions as well as using the data of field experiments on mining explosions recording at the region of mineral deposits production quarries. The records of large chemical and nuclear explosions were collected; for these explosions, the typical buildings were especially constructed at the near zone, and strong-motion accelerometers were installed at different floors. In Kazakhstan, for instance, such investigations were conducted for large chemical explosions at the construction of the mudflow dam near Almaty, at the Medeo mountain area (1966, 1967), and for a peaceful nuclear explosion Lazurit (1974) at the Semipalatinsk Test Site. In recent years, using the data of the field seismic stations installed at copper and rock phosphate deposits, the effect of different yield explosions on the infrastructure of quarries and constructions in the nearest settlements was studied in quantitative oscillation parameters and in seismic intensity units. The values of seismic effect on the constructions depending on the distance and explosive mass were calculated.

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Promotional text

We considered the problem of prediction of industrial blasts seismic effects on the infrastructure and adjacent settlements using historical and modern data.

Oral preference format

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