

## 국내 암석 열전도도 범위와 공간적인 분포

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### Spatial analysis and ranges of thermal conductivity of rocks

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**Abstract** : A web GIS based database system of thermophysical property of rocks in Korea is under construction. Rock samples were randomly collected over the whole country and sample spacings were generally 1 to 10 km. Thermal diffusivity, specific heat, thermal conductivity, specific heat, density and porosity were measured on a collection of 1,560 rock samples in the laboratory. The sampled rocks were classified into igneous, metamorphic and sedimentary rock types and the variables were statistically studied. The thermal conductivity were compared with thermal diffusivity, porosity and dry density to define any correlations and the distribution of thermal conductivity is characterized by the geostatistical analysis. The optimal mapping of thermal conductivity is very useful as a practical design component for any geothermal systems.

**Key words** : Thermal conductivity(열전도도), rock(암석), statistical analysis(통계해석), geothermal(지열), data base(데이터 베이스)

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