

The brittle failure behaviour of two isotropic granitic rocks.

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Brittle failure behaviour of two granite rocks, having more or less the same mineralogy, but differing in grain size, were investigated under uniaxial compressive loading. White, medium-grained granite behaved as a purely elastic material during initial loading, becoming plastic before final brittle failure. Pink, coarse-grained granite showed the same characteristics as the white granite during initial loading, however, during the advance stage of loading, it showed strain hardening behaviour before brittle failure.

Furthermore, the white granite showed a negative volumetric strain during maximum compressive stress, whereas, the pink granite indicated a zero volumetric strain during maximum compressive stress.
