

Occurrence and genetic process of Miocene peperite in the Tanzawa area, South Fossa Magna, central Japan

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Three types of peperites related to the Miocene subaqueous volcanism of the paleo-Izu-Bonin arc in the Tanzawa area are found. Peperite A is a fluidal peperite which is composed of globular andesite clasts. Peperite B is also a fluidal peperite, however clasts are basalt. It is characteristic that the host of these two fluidal peperites is coarse grained sediments like lapilli tuff. Busby-Spera and White(1987) proposes that coarse grain size, high permeability and poor sorting of the host sediment favor blocky clast development. This idea is not consistent with our A and B type peperites facies. We can explain the genetic process of them by insulation depending on the formation of stable vapour films at the magma host sediment interface(Kokelaar, 1982). On the other hand, the facies of blocky peperite C with volcanic mud host suggests the low temperature and high viscosity magma origin.