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Agglutinate in the Sennin lava group of Asama-Kurofu volcano

Masaki Takahashi^{1*}, Maya Yasui¹, Mitsuhiro Maseguchi¹, Tatsuo Kanamaru¹

¹College of Humanities and Sciences

The Sennin lava group, the latest lavas of the Asama-Kurofu volcano, comprises silicic pyroxene andesite with 61 to 64wt.% SiO2. The volcanic activity of the Sennin lava group began at ca.30ka and continued to ca.26ka. Lavas of the Sennin lava group at the horseshoe-shaped caldera wall of the Kurofu volcano is distributed on the ridge near Mt. Jakotsudake and at the cliff of Sennin-iwa. At the cliff of Sennin-iwa, the Sennin lava group is underlain by the Gippa-Kengamine lava groups with angular unconformity, and the 13 units of Sennin lava group (from Unit-A to -M) are exposed on the caldera wall. The uppermost Unit-A exposed on the ridge near the Sennin-iwa cliff comprises the lower non-welded pumice fall deposit continuously grades into the upper densely welded lava-like agglutinate. The units on the caldera wall are composed of the alternation of weakly welded pyroclastic rocks and densely welded lava-like agglutinate, the thickness of each unit being ca.3 to 4m. The lava-like agglutinate consists of black glassy lens and reddish oxidized matrix. The lithofacies of Sennin lava group are very similar to those of agglutinate exposed on the wall of Maekake and Kamayama craters, which was produced by the Plinian to sub-Plinian eruptions. The eruption style of Asama-Kurofu volcano changed from the Strombolian to Vulcanian eruptions giving rise to the Gippa-Kengamine and Mitsuone lava groups to the Plinian to sub-Plinian eruptions yielding the Sennin lava group.

Keywords: Asama volcano, Kurofu volcano, andesite, welded structure, air-fall pumice, aggulutinate