Formation process of Taisho second stage secondary lava flow at Sakurajima volcano

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In January 1914, a large eruption occurred at Sakurajima volcano with the issues of lava flows. They can be divided into two stages; the first stage lava flow and the second stage. In spring 1915, a new lava flow was found to issue from the second stage lava flow. Fukuyama (1978) called this new lava flow as "secondary lava flow".

The most characteristic feature of the secondary lava flow is the presence of fissures distributed along the flow direction. The formation process of fissure was discussed based on the observation of wall rock of the fissures. Geological and petrological characters suggested that the secondary lava flow was not the product of insitu-differentiation within the second stage lava flow but a new lava issued using the second stage lava flow as a lava tunnel.

In January 1914, a large eruption occurred at Sakurajima volcano with large quantities of pumice release, and it was followed by the issues of lava flow. The issues of lava flow can be divided into two stages; the first stage lava flow and the second stage. The volcanic activity was considered to be over by the summer of 1914, however, in the next spring, a new lava flow was found to issue from the second stage lava flow. Fukuyama (1978) called this new lava flow as "secondary lava flow" and distinguished it from the second stage lava flow.

The purpose of this study is to clear the morphology and origin of secondary lava flow based on geology and petrology. The most characteristic feature of the secondary lava flow is the presence of fissures distributed along the flow direction. The formation process of fissure was discussed below based on the observation of wall rock of the fissures. Geological and petrological characters suggested that the secondary lava flow was not the product of insitu-differentiation within the second stage lava flow but a new lava issued using the second stage lava flow as a lava tunnel.