

Disaster prevention issues of sulfur lava

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1. Introduction

In Japan, around 1960 all of many sulfur mine sites in craters and geothermal zones of active volcanoes were closed . However, in the the sulfur mine sites, there are many cases that sulfur material has been deposited around the fumarole. Meanwhile, in the case of temperature of the fumarolic gas is increased , it is not a rare case that liquid lava flows out. During the lava flows, there are dangerous cases to generate wildfire and a large amount of sulfur dioxide gas . In this poster , based on the examples of lava flows in active volcanoes in Japan, we discuss the problems against volcano disaster prevention. Meanwhile, we introduce morphological characteristics of sulfur lava flow compared with the case of basaltic lava flow.

2. The case of Tateyama Jigokudani

In Jigokudani of Midagahara volcano , fumarolic activity has been increased recently. Due to that, trail has been closed in 2012 then . In May of 2010, due to sulfur lava flow, wildfire was generated (Masubuchi , 2013) . In this site, it is clear that sulfur lava flows had been repeatedly occurred according to reports and geological observation.

The sulfur lava flow in this site, shows variation of color coordination such as black , yellow and and green. Although the thickness of the lava flows is only about 1 to 10 cm, the flows show morphological characteristics of aa lava flow , pahoehoe flow , columnar joints , and pillow -like lava. In this poster, we will show photos and videos , as well as the real samples .

Analogue model of basaltic lava flow is also interesting.

3. Summary

In Shiretoko Iozan eruption during 1935 and 1936, a large amount of sulfur was erupted. The erupted amount was reached several thousands tons per day in max, the total amount of erupted volume reached about 200,000 tons. Due to the eruption, Kamuiwakka river and beach was covered with yellow sulfur (Watanabe et al , 1937) . In the case of Tateyama , although the scale is different , it is possible to conduct detailed discussion, and also will be an important step to consider the disaster prevention measures against such sulfur lava flow .

Keywords: Tateyama, Sulfer, pillow lava, aa lava, pa-hoe-hoe lava, disaster prevention