

Geological characteristics of depression structures distributed off the coast of the Habu-port, Izu-Oshima Is.

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Izu-Oshima volcano is an active volcano locating on about 100km south-southwest of Tokyo, about 12km east offing sea of Izu Peninsula. Fissure emission occurred in 1986, and all islanders took refuge. The observation of Oshima volcano activity is performed around the land, and there are little observation examples in the sea area. In 2010, Tokai Univ. and AIST group performed seafloor topography investigation around the Habu-port. This survey was performed in West costal area and East sea area across the Habu-port. Dredge survey and ROV seafloor observation survey by R/V BOSEI-maru were also performed in 2011.

In the West coastal area, many rugged hill structures with 1 to 3m in height formed on the uncurbed seafloor surface. The ropy and tensional cracks like structure were observed on the surface of these hills. So, we estimated that this topographical structure would be lava, which flowed from the land.

In the Eastern area, there are some depression structure, which formed 100-500m in diameter, and 5-10m in height. These depression distributed NNW-SSE trend, which is same as the trend of on land volcanic activity. Some volcanoclastic materials were sampled from this depression. And angular shaped rocks that over 50cm size were observed by ROV survey carried out around the wall of depression. We also estimated that the depression would be a scoria cone, which formed by the phreatic explosion.

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