

AMT resistivity soundings across the Kamogawa-teichi fault zone, Boso Peninsula

YAMAYA, Yusuke^{1*} ; ITO, Shinobu¹ ; MIYAKAWA, Ayumu¹ ; SUMITA, Tatsuya¹ ; KOMORI, Shogo¹

¹Geological Survey of Japan, AIST

We conducted resistivity soundings across the Kamogawa-teichi fault zone, Boso Peninsula, using the audio-frequency-magnetotelluric (AMT) method, in order to obtain a subsurface structure to discuss the existence and past activities of the fault zone. The observed apparent resistivity and impedance phase were inverted to a resistivity section. The preliminary estimated resistivity section is consistent with the geological age, which is categorized to three groups; Miura Group: $<3 \Omega\text{m}$, Hota Group: $\sim 10 \Omega\text{m}$ and Mineoka Group: $>30 \Omega\text{m}$. In general, an active fault is identified as a conductive zone due to saturated water into a fractured zone. However, no significant conductor is found beneath the estimated faults and resistivity boundaries. This implies that there are no fluids relating to fault activities in this area. We suggest possibilities that this "fault zone" has never experienced any fault activities or that it has spent a long time since the last active term, which cannot be resolved only by this survey.

Keywords: resistivity, active fault, Kamogawa teichi fault zone, magnetotellurics