

SSS032-08

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Analyses of GPR and bed-distribution discontinuity along the Wadamisaki fault in the mouth of the Togagawa River, Kobe

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Active faults are well known in the northern Osaka Bay and the Rokko Mountains. However, the fault linkage between the two areas is not yet known, except for the Gosukebashi fault. Hitherto, we analyzed the bed-distribution discontinuity for the marine Ma 13 bed (Holocene) using the database, Kobe JIBANKUN (Kobe City), in order to grasp a hidden fault in the mouth of the Togagawa River, Kobe. In addition, we carried out the ground-penetrating radar (GPR) investigation along three survey lines in the mouth of the Togagawa River, Kobe, showing the discontinuity of the Ma13 bed.

Detection of an anomalous reflector was found along the three GPR survey lines in the mouth of the Togagawa River. This result is well consistent with that from discontinuity analysis of the Ma13-bed distribution. This anomalous part distributes along two lines; one corresponds to the Wadamisaki fault, and the other can be interpreted as a hidden fault branching from the Wadamisaki fault. Therefore a combined use of the GPR and discontinuity analysis of bed distribution is very useful for grasping a hidden fault in the urban area of a mega-city.

Keywords: Ground-penetrating Radar Survey, discontinuity analysis of bed distribution, hidden fault, Wadamisaki fault, Ma13 marine bed (Holocene), Togagawa River, Kobe