

The Western Boundary Fault System of the Nagaoka Plain, the whole faults is not moved simultaneously.

Toshiaki Sakai[1], Makoto Takao[1], Toshimichi Kaneto[1], Hiroshi Yokota[2], Riichiro Miyawaki[2]

[1] TEPCO, [2] Hanshin Consultants Co.,Ltd.

The Western Boundary Fault System of the Nagaoka Plain is composed of three active fault zones as thrust fault. These are the Torigoe Fault Zone, the Kamitomioka Fault, and the Katagai Fault Zone from north. In order to evaluate these faults continuity, we examined on the basis of P-wave or S-wave seismic reflection and drilling surveys across the fault traces.

As a result, we made it appear that the timing of faultings on these fault zones is different from each other.

The reasons are as follows: 1) In the Torigoe Fault Zone and the Katagai Fault Zone, the structure of Green Tuff surface differs from each other at least. 2) The Kamitomioka Fault does not exist. 3) The flexure of terrace used as the basis of the Katagai Fault has a high possibility of being made by creep without an earthquake.

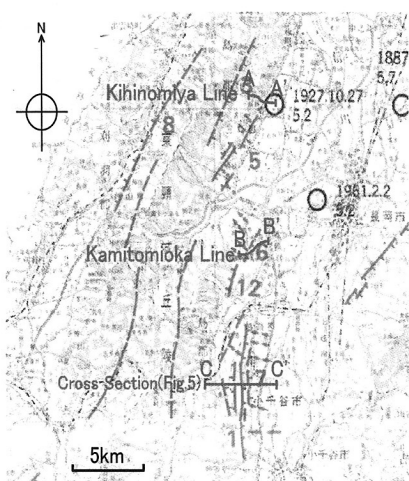


Fig. 1 Localities of three seismic survey lines and a bench mark route

Base map: Active faults in Japan, "Nagaoka" and "Takada"

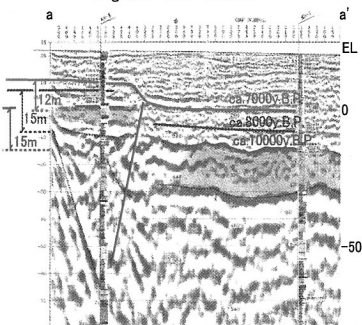


Fig. 3 Results of seismic survey (S-wave) and drilling survey along the Kihinomiya line.

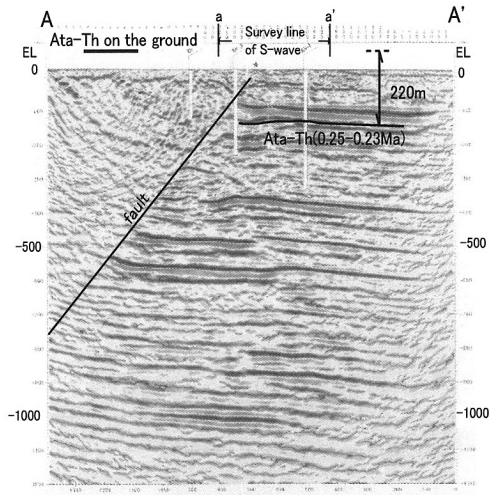


Fig. 2 Results of seismic survey (P-wave) along the Kihinomiya line.

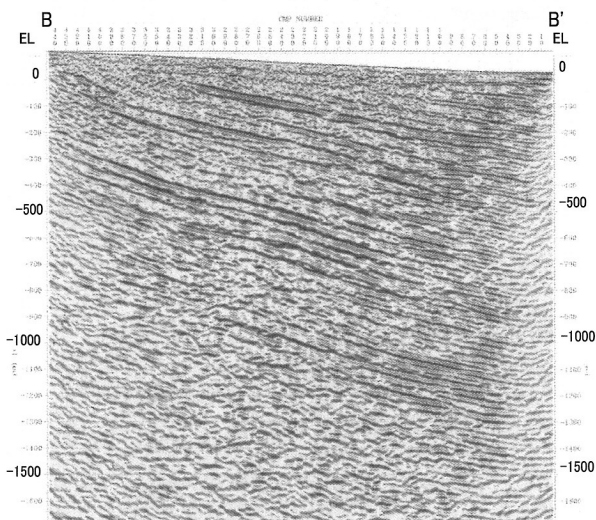


Fig. 4 Results of seismic survey (P-wave) along the Kamitomioka line.

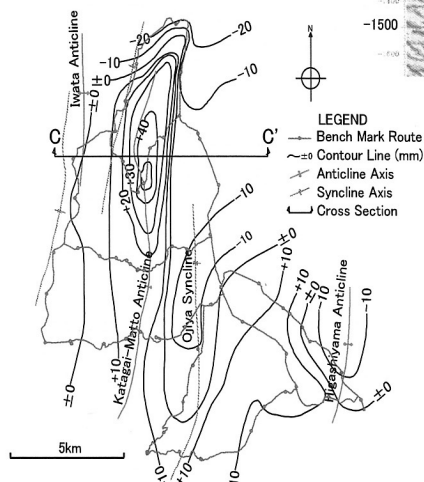


Fig. 5 Contour Line of Crustal Movement Detected by Geodetic Means (1978-1988)

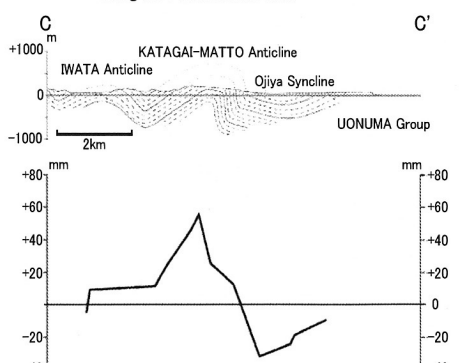


Fig. 6 Geological Section and Crustal Movement along the C-C'