RESEARCH ON DETAILED IMAGING AND MODELING OF ACTIVE FAULTING STRUCTURE

Active faults which have the potential to cause disastrous earthquake in the near future are widely distributed in Japan. As well known, faulting structure recorded in the near surface layer is the key to reveal the behavioral pattern of each fault and evaluate the potential activity. High resolution seismic reflection method using Land Streamer developed by PWRI was successfully applied to image the near-surface detailed structure of active faults. During the research period, the method and the tool was tested at 7 sites, 14 survey lines, and a total of 5,400 m profiles were obtained as a fruitful result. It was proven that high-resolution shallow seismic reflection surveying using Land Streamer was helpful to provide valuable information regarding seismic zoning near an active fault for earthquake disaster prevention of infrastructures.

Key words : active fault, Land Streamer, seismic reflection surveying, near-surface faulting structure.