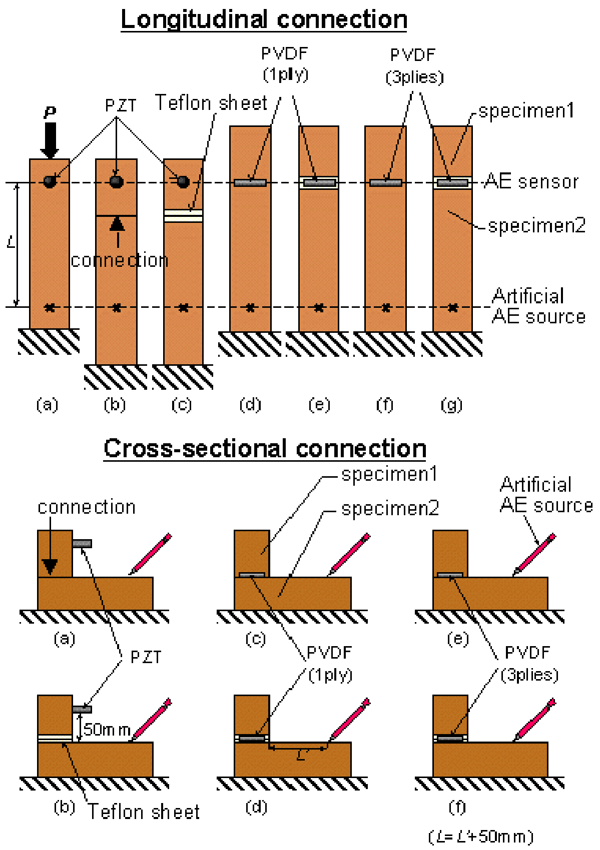
Detection of Termite Attack Using PVDF Film as AE Sensor

- Inserting PVDF Film to the Construction Members of the Wooden House -

The termite bites and chews the wood and this causes microfractures in the wood. The acoustic emission (AE) generated by the microfractures was detected and the feasibility of AE monitoring as a nondestructive inspection method to detect termite attack in wooden houses was confirmed. Flexible PVDF (polyvinylidene fluoride) film of 40 m inserted between the jointing surfaces of wooden posts of 105mm by 45mm in square could detect the artificial AEs generated by the breaking of pencil lead and the AEs generated by termite attack.



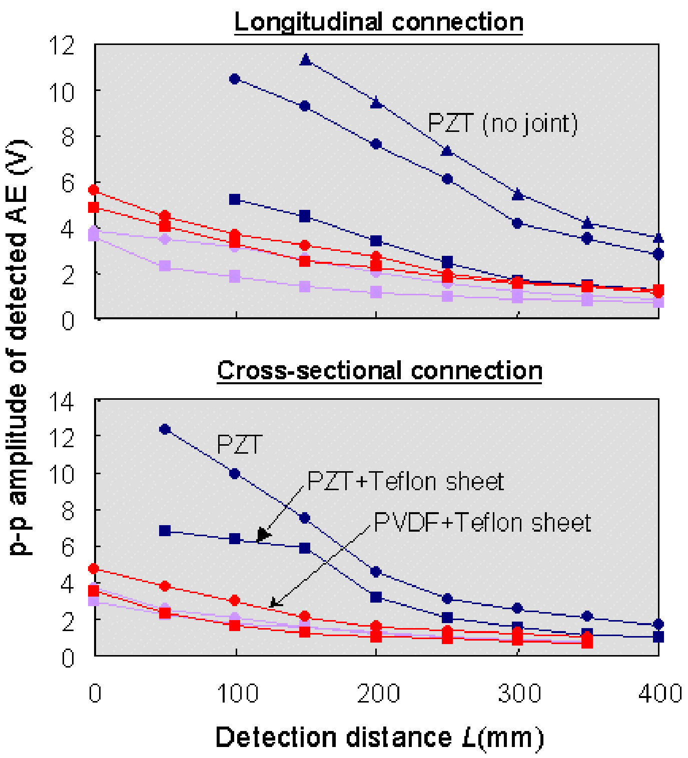


Fig. **Relationship between detection distance *L* and p-p amplitude of detected AE**