

## Construction of a system for calibrating strainmeters

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Tono Research Institute of Earthquake Science (TRIES) have developed multi-component borehole instruments, multi-component strainmeter, intelligent strainmeter and so on, by cooperating with Nagoya University and Earthquake Research Institute, the University of Tokyo. By using these instrument installed in deep boreholes, we have been studied crustal activities. This time we have developed a calibration system of these instruments. The system was constructed in an observation vault. The vault keeps a constant temperature through a year so that it is the best place for geophysical experiment like calibration.

The longest multi-component borehole instrument is about 7 meter length. Therefore we constructed a system to be able to calibrate instrument of 10m length. A borehole with length of 10.2m and diameter of 220mm was digged and a container with inner diameter 136.6 and thickness 14.3 was inserted. We can pressurize by 200kg using water pump. This corresponds to 2000m depth.

We introduce the details of this system and some calibration results.