

# Thermal Response Test Equipment Data

Fill-in Date: 11-2010

Country: Japan

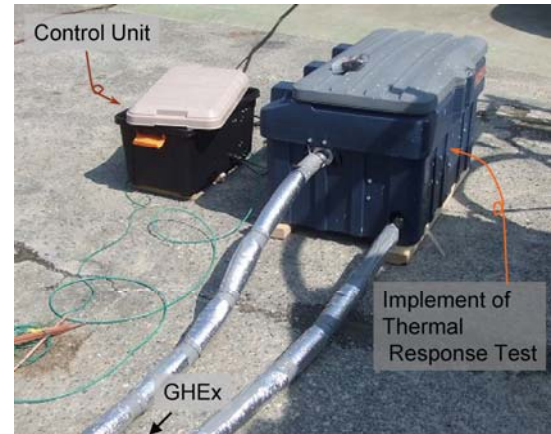
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## GENERAL TRT DATA

Type: <i>Heat injection</i>	No TRTs: 1	Size, weight: 925 + 615 + 530 mm <sup>3</sup> , 60 kg
Aim: <i>Research</i>		Pump: <i>Canned-rotor, 0 – 80 l/min</i>
Powered by: <i>Electricity</i>		Heater: <i>Plug, 2, 4 kW (3φAC200V)</i>
Built on/in: <i>portable</i>		HP/Cooler: <i>Nothing</i>
<p>Principle outline</p>		Temperature measurements: - <i>Pt-100 sensor, (<math>\pm(0.3+0.005 t )</math>, t: measured temperature)</i>
		Flow rate measurements: - <i>Vortex flow-meter (Tokyo Keiso Co., Ltd.)</i>
		Voltage stabilization: <i>No</i>
		Supply Power Monitoring: <i>Yes</i>
		GPS: <i>No</i>
		Remote Control of Operation: <i>No</i>
		Remote Data Collection: <i>No</i>
	Logger: <i>KEYENCE GR-3500</i>	

## TRT EXPERIENCE

Years of operation: 2010

Number of performed measurements: 2 *Research*

Typical borehole depths: 50 – 100 m, 1.5 m (*Horizontal*)

Applications: *BHE, Horizontal GHEx*

Typical collector type: 1U, 2U, *Slinky-coil*, type of filling: *Silica sand, Water, Backfill (Horizontal)*

Typical fluid type: *Water*

Typical groundwater temperature: 15 – 20 °C

Geographical area: *Kyushu (Japan)*

Analysis Method: *Numerical, Line source, Cylindrical Heat Source Function*