Thermal Response Test Equipment Data

Country: Germany

Contact Person: Dipl. Geophys. Gregor Bussmann

Organisation/Company: Institut für Geothermie und Umwelt der Hochschule Bochum / Geothermiezentrum Bochum (GZB)

Address: Lennershofstraße 140; 44801 Bochum; Deutschland

Phone: +49 (0) 234/3210794

Email: gregor.bussmann@hs-bochum.de
henry.tuente@hs-bochum.de

General TRT data

Type: *Heat injection*

No TRTs: *1*

Size, weight: *80 x 80 x 70 cm, ca. 50 kg*

Aim: *Research, development (for practical work), commercial*

Pump: *diverse (Standard:* WILO STAR RS 25/6)

Powered by: *Electricity threephase current (400V/220V)*

Heater: *screw-in heater(power 1,5-12 kW)*

Built on/in: *Trailer, portable*

HP/Cooler: *no*

Principle outline

Temperature measurements:
1. inside devicePT1000
2. profile measurement in BHE up to 200m
- temperature (PT 1000)-pressure sensor
- light plummet
3. Nimo-T data logger

Flow rate measurements:
Axial flow turbine – flow rate sensor

Voltage stabilization: *No*

Electricity measurement: *No*

GPS: *No*

Remote Control: *No*

Remote Data Collection: *Yes*

Logger: *bus-system*

TRT Experience

Years of operation: *3*

Number of performed measurements: *> 50*

Typical borehole depths: *20 – 300m*

Applications: *BHE, energy piles*

Typical collector type: *1U, 2U*

Typical fluid type: *water*

Typical groundwater temperature: *10 – 15°C*

Geographical area: *Nordrhein-Westfalen, Niedersachsen, Rheinland-Pfalz*

Analysis Method: *Numerical / Line source*