

Thermal Conductivity Course

Practical Testing and Data Acquisition for Optimizing GeoExchange Systems



Course Length: 1 day

Course Date: By Request

Class Hours: 8:30 am to 5:00 pm

Cost: \$750

Summary

Design assumptions are often all that are available for designing and bidding a loopfield project. This course will prepare participants to perform real-world tests on a (GHX or Vertical Loop). You will learn about actual formation thermal conductivity testing and how to produce clean, clear and accurate reports for clients. Actual data can greatly improve the design efficiency of any installation and can make the difference in final decisions on design implementation. During the class, participants will become familiar with industry leading test equipment and options to produce meaningful data after testing in hours, not weeks.

Who Should Attend

This course is designed for GSHP developers, manufacturers, installers, trenching/drilling contractors, engineers and anyone who desires a working knowledge of practical and efficient loopfield testing and data acquisition. Using information gathered from the course, instructors can help you to increase your business capabilities to successfully compete on commercial installations requiring higher levels of design verification without the need for additional subcontractors.

Objectives

Learn and understand the tools and techniques for loopfield design verification; data acquisition and data reporting. After this course you will feel comfortable taking advantage of the growth opportunities for qualified thermal conductivity testing companies in the geothermal industry.

Prerequisites

It is recommended that the student have the following minimum prerequisites:

- (2) Years Industry Experience.
- Laptop computer for work with data acquisition and reporting tools for industry standard thermal conductivity data analysis.

Each Student Receives

- Lunch and snacks
- Course materials
- GLD2016 Groundloop Design trial software
- Certificate of Course Completion

Topics Covered*

The course is broken into sections to facilitate a practical approach to establishing a baseline for each successive topic. The sessions are interactive and are intended to promote discussion between participants and the instructor.

Course Outline

Class Starts: 8:30 AM

- Conductivity test and equipment overview
- Review of pre-test checklists
- Test setup**
- Testing Procedure
- Test takedown
- Data analysis***
- Report Generation

* Note: The course outline is guidance only. The specifics may be modified by the instructor based upon the class flow.

** We utilize a GeoCube from [Precision Geothermal](#) for our demonstrations. The principles of performing TC testing are relevant to other commercial or custom fixtures, as well.

*** Data analysis and software demonstrations use [Groundloop Design](#) software, the leading commercial software package for designing and optimizing loopfield heat exchangers. This software features direct import capabilities for data acquired by a geothermal test fixture and provides an excellent demonstration platform.

Course length and cost are based on a minimum of number of attendees. Precision Geothermal reserves the right to cancel or reschedule classes.