MOUNT APO GEOTHERMAL POWER PLANT SCADA APPLICATION

USING MOXA MGATE MB3170 AND MGATE 5109

APPLICATION: SCADA Integration

INDUSTRY: Renewable Energy

REGION: Philippines

SYSTEM REQUIREMENTS

- Protocol converters that can handle multiple communication protocols (Modbus RTU, Modbus TCP, DNP3).
- Capability to support up to 26,600 points in DNP3 master mode for extensive data monitoring.
- Robust design to withstand the operational conditions within a geothermal power environment.

INTRODUCTION

Mount Apo Geothermal Power Plant harnesses geothermal energy to produce electricity, playing a crucial role in the Philippines' renewable energy sector. The plant aims to optimize operations and enhance monitoring capabilities by integrating its diverse industrial devices with a Supervisory Control and Data Acquisition (SCADA) system, ensuring efficient data acquisition and real-time monitoring.

MOXA SOLUTION

The MGate MB3170 and MGate 5109 were implemented for seamless protocol conversion and SCADA integration.

MGate MB3170: Facilitates conversion between Modbus RTU and Modbus TCP, allowing legacy devices to communicate over Ethernet. It supports up to 16 simultaneous Modbus TCP masters with 31 RTU/ASCII slaves per serial port.

MGate 5109: Supports Modbus RTU/ASCII/TCP master/client and slave/server modes, as well as DNP3 in serial/TCP/UDP master and outstation modes (Level 2). The DNP3 master mode can handle up to 26,600 points and provides time synchronization capabilities.

Both devices allow for easy routing of data and have been configured to streamline communication between field devices and the SCADA system.

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WHY MOXA?

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