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Research and Application of Automatic Monitoring Technology of Groundwater

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China's water shortage, which is more evident in the northwest region. Groundwater monitoring information is an important basis for groundwater rational development, ecological protection and water management. Monitoring technology of groundwater in China are still many problems, such as obsolete monitoring equipment, monitoring systems are imperfect. For these deficiencies, research and development of a series of groundwater monitoring equipment suitable for China's national conditions through study of groundwater dynamic data acquisition and transmission technology. Development of multi-level and multi-source remote management software base on network, build a set of groundwater dynamic data acquisition, storage, transmission, management, and remote control of the information service platform. It has been applied in a number of major projects for the construction and operation of the groundwater monitoring network in China to provide reliable monitoring equipment and management service software.

Key words: water resources, groundwater dynamic monitoring, multi-level multi-source, remote access

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Table1 Technical indicators of groundwater remote transmission analyzer

Parameter	Range	Type	Resolution	Accuracy
Barometric pressure	10-1100mbar	Absolute pressure	0.1mbar	±1mbar
Air temperature	-40-85 ?	Digital signal	0.01?	±3? (Maximum)
Power Supply: 1.5V alkaline batteries				
Memory: 8000 records (pressure, temperature parameters), up to 16,000 times records.				
Operating temperature: -20 ? - +85 ?				
Sampling frequency: 5 minutes / records (minimum), can be set based on the actual application.				
Data transmission frequency: 5 minutes / time, related to the state of the signal when the transmission data.				

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