

Remote monitoring of water supply shafts

Case

Most power and heating plants need a constant supply of water for cooling and operation. There are usually shafts at several locations on water supply lines with technology for venting or desludging. The smooth operation of these technologies is important not only for the actual operation of the plant, but also for the surroundings of the shafts, so that in the event of a malfunction, the entire area around the shaft, farmland or surrounding villages is not flooded.



How it was done in the past

Most of the shafts on the feeders are unmanned and without remote monitoring, the technologies are generally mechanical, requiring no power source. The plant operation engineer usually checks the status of the individual technologies once a month. However, if a malfunction occurs between these checks, it can only be detected when a flood of water affects the surrounding area and causes damage.

What it looks like today

After the experience of dealing with the consequences of the flooding, a simple and reliable solution for remote monitoring of the shafts was chosen for the nuclear power plant, which does not require mains power supply (it works for years on battery) and sends an immediate signal as soon as the water level rises. A system of 3-6 simple floats is installed in the shafts, placed at different shaft heights. The SENSECOM-DI6 communication device constantly monitors the status of each float and sends an alarm message to the control room when the position of any of them changes. The plant control room is able to immediately stop the feeder, send a service crew to the site and have the technology repaired.



Conclusion

Preventing more extensive damage in time in the event of a technology failure on the water supply lines located in the shafts can be achieved with the simple SENSECOM-DI6 device, which detects changes in the water level in the shaft and also helps to monitor the rate of filling the shaft with water. The control room receives immediate alarms by SMS to prevent a large-scale accident by timely intervention.

Use of the equipment in other areas

The SENSECOM-DI6 can monitor changes on up to 6 digital inputs, so it can be used in many other applications that require maintenance-free operation for several years and immediate transmission of information (alarm) in case of a change on any input, such as opening/closing of covers, doors, signal outputs of technologies, etc.