Morrie Letters

September 2019

Morrie reports you the environmental policy and activities of the Oji Group in a simple, comprehensible way.

Management of Environmental Interlocks

In addition to the alarms described in the August issue, interlocking systems linked to continuous measuring instruments or detectors are also effective means to prevent environmental incidents. This issue explains the function and the management of environmental interlocks.

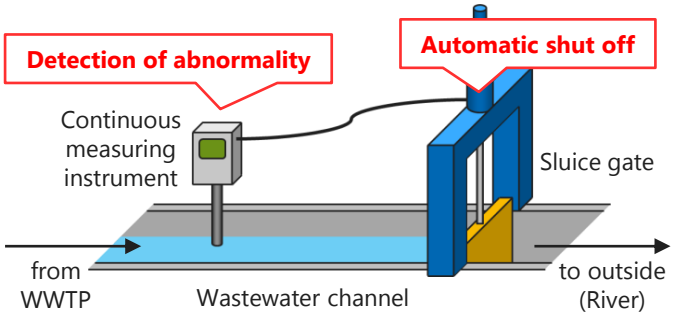
Function of Environmental Interlocks

When an abnormal condition is detected by a continuous measuring instrument or a detector, interlocking system resolve the abnormality by automatically stopping the equipment, or prevent expansion of the adverse impact by automatically shutting off the discharge.

Example: interlock linked to continuous measuring instruments for wastewater

When a measured value such as pH exceeds the threshold, the sluice gate is automatically closed to prevent the outflow of abnormal wastewater.

At the same time, the alarm is activated to notify operators of the abnormality. Operators must investigate the cause and take measures to resolve it, because outflow prevention is just a temporary measure.



Management of Environmental Interlocks

In addition to proper management of measuring instruments and detectors (see the July issue), we should check the operating conditions of interlocks and test the operation periodically.

e.g. – Is the condition such as threshold which activates interlock appropriate?
– Isn't the condition changed or disabled without permission?
– Is the procedure after interlock operates (response to abnormality) determined?

Please keep interlocks available in an emergency by managing properly.

Example: environmental incident caused by improper management

Leaked alkaline chemicals flowed into wastewater and pH exceeded the voluntary standard. However, the interlock for automatically diverting abnormal wastewater failed to operate. As a result, pH in final effluent exceeded the regulation standard.

Cause: The operator disabled the interlock for maintenance of the pH meter, and didn't enable it after the work.

Measure: Disabling and enabling of interlock were added to the SOP and the checklist for maintenance.

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